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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 29.25 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 |
| 29.50 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 29.75 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 |
| 30.00 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 |
| 30.25 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 38 |
| 30.50 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 |
| 30.75 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 |
| 31.00 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 |
| 31.25 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 |
| 31.50 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 |
| 31.75 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 |
| 32.00 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 |
| 32.25 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 |
| 32.50 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 41 |
| 32.75 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 |
| 33.00 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 |
| 33.25 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 42 |
| 33.50 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 |
| 33.75 | 44 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 |
| 34.00 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 |
| 34.25 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 |
| 34.50 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 44 | 43 | 43 |
| 34.75 | 46 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 44 | 43 |
| 35.00 | 46 | 46 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 44 |
| 35.25 | 46 | 46 | 46 | 45 | 45 | 45 | 45 | 44 | 44 | 44 |

Table A20.2. Body Fat Percent Tables (Male) Continued.

| CIRCUM | HEIGHT (INCHES) | | | | | | | | | |
|--------|-----------------|------|----|------|----|------|----|------|----|------|
| | 65 | 65.5 | 66 | 66.5 | 67 | 67.5 | 68 | 68.5 | 69 | 69.5 |
| 11.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.50 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.75 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 |
| 12.00 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 |
| 12.25 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 |
| 12.50 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| 12.75 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 |
| 13.00 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 4 | 4 |
| 13.25 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| 13.50 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 |
| 13.75 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | 6 |
| 14.00 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 |
| 14.25 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 |
| 14.50 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 |
| 14.75 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 |
| 15.00 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 9 | 9 |
| 15.25 | 12 | 11 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 |
| 15.50 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 10 |
| 15.75 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| 16.00 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 11 |
| 16.25 | 14 | 14 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 12 |
| 16.50 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 |
| 16.75 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 13 | 13 | 13 |
| 17.00 | 16 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 |
| 17.25 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 14 | 14 |
| 17.50 | 17 | 16 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 |
| 17.75 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 16 | 15 | 15 |
| 18.00 | 18 | 17 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 16 |
| 18.25 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 17 | 16 | 16 |
| 18.50 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 |
| 18.75 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 |
| 19.00 | 20 | 19 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 |
| 19.25 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 | 18 |
| 19.50 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 |
| 19.75 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 20.00 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 20 |
| 20.25 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 |
| 20.50 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 |
| 20.75 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 |
| 21.00 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 |
| 21.25 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 |
| 21.50 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 |
| 21.75 | 25 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 |
| 22.00 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 23 | 23 |
| 22.25 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 |
| 22.50 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 |
| 22.75 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 |
| 23.00 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 |
| 23.25 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 |
| 23.50 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 26 |
| 23.75 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 |
| 24.00 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 26 |
| 24.25 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 |
| 24.50 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 |
| 24.75 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 28 |
| 25.00 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 25.25 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 |
| 25.50 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 25.75 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 |
| 26.00 | 32 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 |
| 26.25 | 32 | 32 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 |
| 26.50 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 | 30 |
| 26.75 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 31 |
| 27.00 | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 27.25 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 |
| 27.50 | 34 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 |
| 27.75 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 | 32 | 32 |
| 28.00 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 33 | 32 |
| 28.25 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 28.50 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 |
| 28.75 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 33 |
| 29.00 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 |
| 29.25 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 29.50 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 34 |
| 29.75 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 30.00 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 |
| 30.25 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 36 | 35 |
| 30.50 | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 |
| 30.75 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 36 | 36 |
| 31.00 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 37 | 36 |
| 31.25 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 31.50 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 |
| 31.75 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 |
| 32.00 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 38 |
| 32.25 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 32.50 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 |
| 32.75 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 |
| 33.00 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 |
| 33.25 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 |
| 33.50 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 |
| 33.75 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 |
| 34.00 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 |
| 34.25 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 |
| 34.50 | 43 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 41 |
| 34.75 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 |
| 35.00 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 |
| 35.25 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 |

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Table A20.3. Body Fat Percent Tables (Male) Continued.

| CIRCUM VALUE | HEIGHT (INCHES) | | | | | | | | | |
|-----------------|-----------------|------|----|------|----|------|----|------|----|------|
| | 70 | 70.5 | 71 | 71.5 | 72 | 72.5 | 73 | 73.5 | 74 | 74.5 |
| 11.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12.00 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12.25 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 12.50 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 |
| 12.75 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| 13.00 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 |
| 13.25 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| 13.50 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 |
| 13.75 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 |
| 14.00 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| 14.25 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 |
| 14.50 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 |
| 14.75 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 |
| 15.00 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 7 |
| 15.25 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 |
| 15.50 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 8 |
| 15.75 | 11 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 |
| 16.00 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 9 |
| 16.25 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 10 | 10 | 10 |
| 16.50 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 11 |
| 16.75 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| 17.00 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 12 |
| 17.25 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 | 12 | 12 |
| 17.50 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 |
| 17.75 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 13 | 13 |
| 18.00 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 |
| 18.25 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 14 | 14 |
| 18.50 | 16 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 15 |
| 18.75 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 16 | 15 | 15 |
| 19.00 | 17 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 16 |
| 19.25 | 18 | 18 | 17 | 17 | 17 | 17 | 17 | 16 | 16 | 16 |
| 19.50 | 48 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 17 |
| 19.75 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 17 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 20.00 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 17 |
| 20.25 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 | 18 | 18 |
| 20.50 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 |
| 20.75 | 21 | 20 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 |
| 21.00 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 20 | 19 | 19 |
| 21.25 | 22 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 |
| 21.50 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 20 | 20 |
| 21.75 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 |
| 22.00 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 |
| 22.25 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 |
| 22.50 | 24 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 |
| 22.75 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 | 22 |
| 23.00 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 |
| 23.25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 |
| 23.50 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 23 |
| 23.75 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 |
| 24.00 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 24 |
| 24.25 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 |
| 24.50 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 |
| 24.75 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 |
| 25.00 | 28 | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 |
| 25.25 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 26 | 26 |
| 25.50 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 27 |
| 25.75 | 29 | 29 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 27 |
| 26.00 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 |
| 26.25 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 28 |
| 26.50 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 26.75 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 |
| 27.00 | 31 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 27.25 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 |
| 27.50 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 30 | 29 |
| 27.75 | 32 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 |
| 28.00 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 31 | 30 | 30 |
| 28.25 | 32 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 |
| 28.50 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 |
| 28.75 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 31 | 31 |
| 29.00 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 |
| 29.25 | 34 | 34 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 |
| 29.50 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 33 | 32 | 32 |
| 29.75 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 30.00 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 30.25 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 33 | 33 |
| 30.50 | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 33 |
| 30.75 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 |
| 31.00 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 31.25 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 34 |
| 31.50 | 37 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 |
| 31.75 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 |
| 32.00 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 36 | 35 |
| 32.25 | 38 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 36 |
| 32.50 | 38 | 38 | 37 | 37 | 37 | 37 | 37 | 36 | 36 | 36 |
| 32.75 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 36 |
| 33.00 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 37 |
| 33.25 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 33.50 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 38 | 37 | 37 |
| 33.75 | 39 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 |
| 34.00 | 40 | 39 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 38 |
| 34.25 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 |
| 34.50 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 39 | 38 |
| 34.75 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 39 |
| 35.00 | 41 | 41 | 40 | 40 | 40 | 40 | 40 | 39 | 39 | 39 |
| 35.25 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 40 | 39 | 39 |

Attachment 21

BODY FAT PERCENT TABLES

Table A21.1. Body Fat Percent Tables (Female).

| CIRCUM | HEIGHT (INCHES) | | | | | | | | | |
|--------|-----------------|------|----|------|----|------|----|------|----|------|
| | 58 | 58.5 | 59 | 59.5 | 60 | 60.5 | 61 | 61.5 | 62 | 62.5 |
| 34.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34.75 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.00 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.25 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.50 | 3 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 35.75 | 3 | 3 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 36.00 | 4 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 0 | 0 |
| 36.25 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 0 |
| 36.50 | 5 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 1 |
| 36.75 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 |
| 37.00 | 6 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 |
| 37.25 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 3 | 3 | 3 |
| 37.50 | 7 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
| 37.75 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 4 | 4 | 4 |
| 38.00 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 4 |
| 38.25 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 |
| 38.50 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 5 | 5 |
| 38.75 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 |
| 39.00 | 9 | 9 | 9 | 8 | 8 | 7 | 7 | 7 | 6 | 6 |
| 39.25 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 6 |
| 39.50 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 |
| 39.75 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 |
| 40.00 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 8 | 8 | 8 |
| 40.25 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 8 |
| 40.50 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 |
| 40.75 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 9 | 9 |
| 41.00 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 |
| 41.25 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 |
| 41.50 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 11 | 10 |
| 41.75 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 11 |
| 42.00 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 |
| 42.25 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 |
| 42.50 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 42.75 | 16 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 |
| 43.00 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 |
| 43.25 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 |
| 43.50 | 17 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 |
| 43.75 | 17 | 17 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 |
| 44.00 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 |
| 44.25 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 |
| 44.50 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 |
| 44.75 | 19 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 |
| 45.00 | 19 | 19 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | 16 |
| 45.25 | 20 | 19 | 19 | 19 | 18 | 18 | 17 | 17 | 17 | 16 |
| 45.50 | 20 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 17 | 17 |
| 45.75 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 17 |
| 46.00 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 | 18 |
| 46.25 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 |
| 46.50 | 22 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 |
| 46.75 | 22 | 22 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 |
| 47.00 | 22 | 22 | 22 | 21 | 21 | 20 | 20 | 20 | 19 | 19 |
| 47.25 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 19 |
| 47.50 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 |
| 47.75 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 |
| 48.00 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 |
| 48.25 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 |
| 48.50 | 25 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 |
| 48.75 | 25 | 25 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 |
| 49.00 | 25 | 25 | 25 | 24 | 24 | 23 | 23 | 23 | 22 | 22 |
| 49.25 | 26 | 25 | 25 | 25 | 24 | 24 | 23 | 23 | 23 | 22 |
| 49.50 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 |
| 49.75 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 | 23 |
| 50.00 | 27 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 |
| 50.25 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 24 |
| 50.50 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 24 | 24 |
| 50.75 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 24 |
| 51.00 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 25 | 25 | 25 |
| 51.25 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 25 | 25 |
| 51.50 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 25 |
| 51.75 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 |
| 52.00 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 52.25 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 26 |
| 52.50 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 52.75 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 |
| 53.00 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 27 |
| 53.25 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 |
| 53.50 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 28 | 28 |
| 53.75 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 28 |
| 54.00 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 |
| 54.25 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 29 | 29 |
| 54.50 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 29 |
| 54.75 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 30 | 30 | 30 |
| 55.00 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 30 | 30 |
| 55.25 | 34 | 33 | 33 | 33 | 32 | 32 | 31 | 31 | 31 | 30 |
| 55.50 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 31 | 31 | 31 |
| 55.75 | 34 | 34 | 34 | 33 | 33 | 32 | 32 | 32 | 31 | 31 |
| 56.00 | 35 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 |
| 56.25 | 35 | 35 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 56.50 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 |
| 56.75 | 36 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 |
| 57.00 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 57.25 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 |
| 57.50 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |
| 57.75 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 33 |
| 58.00 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| 58.25 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 34 | 34 |
| 58.50 | 38 | 37 | 37 | 37 | 36 | 36 | 35 | 35 | 35 | 34 |
| 58.75 | 38 | 38 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 |
| 59.00 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | 36 | 35 | 35 |
| 59.25 | 39 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 |
| 59.50 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 |
| 59.75 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 |
| 60.00 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 |
| 60.25 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 36 |
| 60.50 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 37 | 37 | 37 |
| 60.75 | 40 | 40 | 40 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 61.00 | 41 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 |
| 61.25 | 41 | 41 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 61.50 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 |
| 61.75 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 |
| 62.00 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 38 |
| 62.25 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 39 | 39 | 39 |
| 62.50 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 40 | 39 | 39 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 62.75 | 43 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 63.00 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 |
| 63.25 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 |
| 63.50 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 40 | 40 |
| 63.75 | 44 | 43 | 43 | 43 | 42 | 42 | 41 | 41 | 41 | 40 |
| 64.00 | 44 | 44 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 |
| 64.25 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 64.50 | 45 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| 64.75 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 65.00 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 42 | 42 | 42 |
| 65.25 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 65.50 | 46 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 |
| 65.75 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 |
| 66.00 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |
| 66.25 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 43 | 43 |
| 66.50 | 47 | 46 | 46 | 46 | 45 | 45 | 44 | 44 | 44 | 43 |
| 66.75 | 47 | 47 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 |
| 67.00 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 |
| 67.25 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 67.50 | 48 | 47 | 47 | 47 | 46 | 46 | 45 | 45 | 45 | 44 |
| 67.75 | 48 | 48 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 68.00 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 |
| 68.25 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 |
| 68.50 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 45 |
| 68.75 | 49 | 49 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 |
| 69.00 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 |
| 69.25 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 |
| 69.50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 46 |
| 69.75 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 47 | 47 | 47 |
| 70.00 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 |
| 70.25 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 |
| 70.50 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 47 |
| 70.75 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 48 | 48 | 48 |
| 71.00 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 |
| 71.25 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 |
| 71.50 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 48 |
| 71.75 | 52 | 52 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 |
| 72.00 | 52 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 |
| 72.25 | 52 | 52 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 |
| 72.50 | 53 | 52 | 52 | 52 | 51 | 51 | 50 | 50 | 50 | 49 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 72.75 | 53 | 53 | 52 | 52 | 51 | 51 | 51 | 50 | 50 | 50 |
| 73.00 | 53 | 53 | 52 | 52 | 52 | 51 | 51 | 51 | 50 | 50 |
| 73.25 | 53 | 53 | 53 | 52 | 52 | 52 | 51 | 51 | 51 | 50 |
| 73.50 | 54 | 53 | 53 | 53 | 52 | 52 | 51 | 51 | 51 | 50 |
| 73.75 | 54 | 54 | 53 | 53 | 52 | 52 | 52 | 51 | 51 | 51 |
| 74.00 | 54 | 54 | 53 | 53 | 53 | 52 | 52 | 52 | 51 | 51 |
| 74.25 | 54 | 54 | 54 | 53 | 53 | 53 | 52 | 52 | 51 | 51 |
| 74.50 | 55 | 54 | 54 | 53 | 53 | 53 | 52 | 52 | 52 | 51 |
| 74.75 | 55 | 54 | 54 | 54 | 53 | 53 | 53 | 52 | 52 | 52 |
| 75.00 | 55 | 55 | 54 | 54 | 54 | 53 | 53 | 53 | 52 | 52 |
| 75.25 | 55 | 55 | 55 | 54 | 54 | 53 | 53 | 53 | 52 | 52 |
| 75.50 | 56 | 55 | 55 | 54 | 54 | 54 | 53 | 53 | 53 | 52 |
| 75.75 | 56 | 55 | 55 | 55 | 54 | 54 | 54 | 53 | 53 | 53 |

Table A21.2. Body Fat Percent Tables (Female) Continued.

| CIRCUM VALUE | HEIGHT (INCHES) | | | | | | | | | |
|-----------------|-----------------|------|----|------|----|------|----|------|----|------|
| | 63 | 63.5 | 64 | 64.5 | 65 | 65.5 | 66 | 66.5 | 67 | 67.5 |
| 34.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.50 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.75 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.00 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.25 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 37.50 | 3 | 3 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 37.75 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 | 0 |
| 38.00 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 |
| 38.25 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 1 |
| 38.50 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 |
| 38.75 | 5 | 5 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 2 |
| 39.00 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 |
| 39.25 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 |
| 39.50 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 |
| 39.75 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 40.00 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 4 |
| 40.25 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 |
| 40.50 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 5 |
| 40.75 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 |
| 41.00 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 |
| 41.25 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 |
| 41.50 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 |
| 41.75 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 |
| 42.00 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 |
| 42.25 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 8 |
| 42.50 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 |
| 42.75 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 |
| 43.00 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 |
| 43.25 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 |
| 43.50 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 |
| 43.75 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 |
| 44.00 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 |
| 44.25 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 |
| 44.50 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 |
| 44.75 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 |
| 45.00 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 |
| 45.25 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 |
| 45.50 | 16 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 |
| 45.75 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 |
| 46.00 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 14 |
| 46.25 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 |
| 46.50 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 |
| 46.75 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 |
| 47.00 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 |
| 47.25 | 19 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 |
| 47.50 | 19 | 19 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 16 |
| 47.75 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 17 | 17 | 17 |
| 48.00 | 20 | 20 | 20 | 19 | 19 | 18 | 18 | 18 | 18 | 17 |
| 48.25 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 | 18 |
| 48.50 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 |
| 48.75 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 18 |
| 49.00 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 19 |
| 49.25 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 |
| 49.50 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 19 |
| 49.75 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 50.00 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 |
| 50.25 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 |
| 50.50 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 |
| 50.75 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 |
| 51.00 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 |
| 51.25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 |
| 51.50 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 |
| 51.75 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 |
| 52.00 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 |
| 52.25 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 |
| 52.50 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 23 |
| 52.75 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 |
| 53.00 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 |
| 53.25 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 |
| 53.50 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 |
| 53.75 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 |
| 54.00 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 |
| 54.25 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 54.50 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 |
| 54.75 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 55.00 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 |
| 55.25 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |
| 55.50 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 |
| 55.75 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 |
| 56.00 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 |
| 56.25 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 56.50 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 |
| 56.75 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 |
| 57.00 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 |
| 57.25 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 |
| 57.50 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 |
| 57.75 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 58.00 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 |
| 58.25 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 |
| 58.50 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 |
| 58.75 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 |
| 59.00 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 59.25 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 |
| 59.50 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 |
| 59.75 | 36 | 35 | 35 | 35 | 34 | 34 | 33 | 33 | 33 | 33 |

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| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 60.00 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 60.25 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 |
| 60.50 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |
| 60.75 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 |
| 61.00 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| 61.25 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 |
| 61.50 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 |
| 61.75 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 |
| 62.00 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 |
| 62.25 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 |
| 62.50 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 |
| 62.75 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 |
| 63.00 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 |
| 63.25 | 40 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 63.50 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 |
| 63.75 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 64.00 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 |
| 64.25 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 64.50 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 |
| 64.75 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 |
| 65.00 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 |
| 65.25 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 |
| 65.50 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 |
| 65.75 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 66.00 | 43 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 66.25 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 |
| 66.50 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 |
| 66.75 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 |
| 67.00 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 |
| 67.25 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 |
| 67.50 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 67.75 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| 68.00 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 68.25 | 45 | 45 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 68.50 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 68.75 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 |
| 69.00 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 |
| 69.25 | 46 | 46 | 45 | 45 | 44 | 44 | 44 | 44 | 43 | 43 |
| 69.50 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |
| 69.75 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 70.00 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 |
| 70.25 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 |
| 70.50 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 |
| 70.75 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 71.00 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 71.25 | 48 | 48 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 71.50 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 |
| 71.75 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 |
| 72.00 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 |
| 72.25 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 |
| 72.50 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 |
| 72.75 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 |
| 73.00 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 |
| 73.25 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 | 47 |
| 73.50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 | 47 |
| 73.75 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 |
| 74.00 | 51 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 | 47 |
| 74.25 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 | 48 |
| 74.50 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 | 48 |
| 74.75 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 |
| 75.00 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 | 48 |
| 75.25 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 | 49 |
| 75.50 | 52 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 |
| 75.75 | 52 | 52 | 51 | 51 | 51 | 50 | 50 | 50 | 49 | 49 |

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Table A21.3. Body Fat Percent Tables (Female) Continued.

| CIRCUM VALUE | HEIGHT (INCHES) | | | | | | | | | |
|-----------------|-----------------|------|----|------|----|------|----|------|----|------|
| | 68 | 68.5 | 69 | 69.5 | 70 | 70.5 | 71 | 71.5 | 72 | 72.5 |
| 34.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.50 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.75 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.00 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 39.25 | 3 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| 39.50 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 | 0 |
| 39.75 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 |
| 40.00 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 1 |
| 40.25 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 1 |
| 40.50 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 |
| 40.75 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| 41.00 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 |
| 41.25 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
| 41.50 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 |
| 41.75 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 4 |
| 42.00 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 |
| 42.25 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 |
| 42.50 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 6 |
| 42.75 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 |
| 43.00 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 |
| 43.25 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 43.50 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 |
| 43.75 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 |
| 44.00 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 |
| 44.25 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 8 |
| 44.50 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 |
| 44.75 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 |
| 45.00 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 10 |
| 45.25 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 10 |
| 45.50 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 10 |
| 45.75 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 |
| 46.00 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 |
| 46.25 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 |
| 46.50 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 |
| 46.75 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 12 |
| 47.00 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 13 |
| 47.25 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 13 | 13 |
| 47.50 | 16 | 16 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 13 |
| 47.75 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 |
| 48.00 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 14 | 14 |
| 48.25 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 14 |
| 48.50 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 |
| 48.75 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 |
| 49.00 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 15 |
| 49.25 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 16 | 16 | 16 |
| 49.50 | 19 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 |
| 49.75 | 19 | 19 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 17 |
| 50.00 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 |
| 50.25 | 20 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 17 |
| 50.50 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 |
| 50.75 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 |
| 51.00 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 18 |
| 51.25 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 |
| 51.50 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 |
| 51.75 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 19 |
| 52.00 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 |
| 52.25 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 |
| 52.50 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 20 |
| 52.75 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 |
| 53.00 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 |
| 53.25 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 21 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 53.50 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 |
| 53.75 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 |
| 54.00 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 22 |
| 54.25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 |
| 54.50 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 |
| 54.75 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 |
| 55.00 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 |
| 55.25 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 |
| 55.50 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 |
| 55.75 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 |
| 56.00 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 |
| 56.25 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 |
| 56.50 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 |
| 56.75 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 57.00 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 |
| 57.25 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 57.50 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 |
| 57.75 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |
| 58.00 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 27 |
| 58.25 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 58.50 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 |
| 58.75 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 |
| 59.00 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 59.25 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 |
| 59.50 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 |
| 59.75 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 |
| 60.00 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 |
| 60.25 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 60.50 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 |
| 60.75 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 31 |
| 61.00 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 |
| 61.25 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 |
| 61.50 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 |
| 61.75 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 62.00 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 |
| 62.25 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 |
| 62.50 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 62.75 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 63.00 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 |
| 63.25 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 63.50 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 63.75 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 |
| 64.00 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 |
| 64.25 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 |
| 64.50 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 |
| 64.75 | 38 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 |
| 65.00 | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 35 |
| 65.25 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 |
| 65.50 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 |
| 65.75 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 |
| 66.00 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 |
| 66.25 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 |
| 66.50 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 |
| 66.75 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 67.00 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 |
| 67.25 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 67.50 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 |
| 67.75 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 |
| 68.00 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 |
| 68.25 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 |
| 68.50 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 |
| 68.75 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 |
| 69.00 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 69.25 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 |
| 69.50 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 |
| 69.75 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 |
| 70.00 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 |
| 70.25 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 |
| 70.50 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 70.75 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 |
| 71.00 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| 71.25 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 71.50 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 |
| 71.75 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 |
| 72.00 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 |
| 72.25 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 |
| 72.50 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 44 | 43 | 43 |
| 72.75 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |
| 73.00 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 |
| 73.25 | 46 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 73.50 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 |
| 73.75 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 |
| 74.00 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 74.25 | 47 | 47 | 47 | 46 | 46 | 46 | 46 | 45 | 45 | 45 |
| 74.50 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 74.75 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 45 | 45 |
| 75.00 | 48 | 48 | 47 | 47 | 47 | 47 | 46 | 46 | 46 | 45 |
| 75.25 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 | 46 |
| 75.50 | 49 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 | 46 |
| 75.75 | 49 | 48 | 48 | 48 | 48 | 47 | 47 | 47 | 46 | 46 |

Table A21.4. Body Fat Percent Tables (Female) Continued.

| CIRCUM | HEIGHT (INCHES) | | | | | | | | | |
|--------|-----------------|------|----|------|----|------|----|------|----|------|
| | 73 | 73.5 | 74 | 74.5 | 75 | 75.5 | 76 | 76.5 | 77 | 77.5 |
| 34.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.25 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.50 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.75 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 41.00 | 3 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 41.25 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 | 0 |
| 41.50 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 0 |
| 41.75 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 1 |
| 42.00 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 |
| 42.25 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 |
| 42.50 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| 42.75 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 |
| 43.00 | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
| 43.25 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 43.50 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 4 |
| 43.75 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| 44.00 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 |
| 44.25 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 5 |
| 44.50 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 |
| 44.75 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 |
| 45.00 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 |
| 45.25 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 |
| 45.50 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 7 |
| 45.75 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 |
| 46.00 | 11 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 8 | 8 |
| 46.25 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 |
| 46.50 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 |
| 46.75 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 9 |
| 47.00 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 10 | 10 |
| 47.25 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 10 |
| 47.50 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 10 |
| 47.75 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 | 11 |
| 48.00 | 14 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 |
| 48.25 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 |
| 48.50 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 |
| 48.75 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 |
| 49.00 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 13 |
| 49.25 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 |
| 49.50 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 13 |
| 49.75 | 16 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 |
| 50.00 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 14 | 14 |
| 50.25 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 14 |
| 50.50 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 |
| 50.75 | 18 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 15 | 15 |
| 51.00 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 15 |
| 51.25 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 |
| 51.50 | 19 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 |
| 51.75 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 16 |
| 52.00 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 | 17 |
| 52.25 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 17 | 17 |
| 52.50 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 17 |
| 52.75 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 |
| 53.00 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 18 | 18 |
| 53.25 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 18 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 53.50 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 |
| 53.75 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 |
| 54.00 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 19 |
| 54.25 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 |
| 54.50 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 |
| 54.75 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 |
| 55.00 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 |
| 55.25 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 |
| 55.50 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 |
| 55.75 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 |
| 56.00 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 |
| 56.25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 |
| 56.50 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 23 |
| 56.75 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 |
| 57.00 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 |
| 57.25 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 23 |
| 57.50 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 |
| 57.75 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 |
| 58.00 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 24 |
| 58.25 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 |
| 58.50 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 |
| 58.75 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 25 |
| 59.00 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 26 |
| 59.25 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 59.50 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 |
| 59.75 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 60.00 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 |
| 60.25 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 |
| 60.50 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 |
| 60.75 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 28 |
| 61.00 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 |
| 61.25 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 |
| 61.50 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 61.75 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 |
| 62.00 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 |
| 62.25 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 |
| 62.50 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 30 |
| 62.75 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 |
| 63.00 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 63.25 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 |

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|-------|----|----|----|----|----|----|----|----|----|----|
| 63.50 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 63.75 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 |
| 64.00 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 |
| 64.25 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 32 |
| 64.50 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 64.75 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 |
| 65.00 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 |
| 65.25 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 65.50 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 65.75 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 |
| 66.00 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |
| 66.25 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 66.50 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 |
| 66.75 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 |
| 67.00 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 |
| 67.25 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 |
| 67.50 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 |
| 67.75 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 |
| 68.00 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 |
| 68.25 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 |
| 68.50 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 | 36 |
| 68.75 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 |
| 69.00 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 69.25 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 |
| 69.50 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 | 37 |
| 69.75 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 38 | 37 |
| 70.00 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 38 |
| 70.25 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 70.50 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 |
| 70.75 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 |
| 71.00 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 39 |
| 71.25 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 |
| 71.50 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 |
| 71.75 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 |
| 72.00 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 |
| 72.25 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 |
| 72.50 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 |
| 72.75 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 |
| 73.00 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 |
| 73.25 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 |

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| 73.50 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 |
| 73.75 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 74.00 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| 74.25 | 44 | 44 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 |
| 74.50 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 74.75 | 45 | 44 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 75.00 | 45 | 45 | 44 | 44 | 44 | 44 | 43 | 43 | 43 | 42 |
| 75.25 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 |
| 75.50 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 |
| 75.75 | 46 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |

AFI36-2905 21 OCTOBER 2013

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Attachment 22

BODY MASS INDEX OR BODY FAT ASSESSMENT EXCEPTION TO POLICY LETTER (TEMPLATE)

Date:

MEMORANDUM FOR AFPC/DPSIM

FROM: (Fitness Assessment Cell Manager)

SUBJECT: Body Mass Index (BMI) or Body Fat Assessment (BFA) Exception to Policy

1. The Airman listed below failed the abdominal circumference measurement during the body composition component of the fitness assessment, achieved a score of 75 points out of the remaining 80 points, and passed either the BMI screen or BFA.

Date of Fitness Assessment: _____

Name: _____

Rank: _____ Gender: _____

Full Social Security Number: _____

BMI: _____ kg/m²

BFA: _____ %

1.5 Mile Run Score: _____

Sit-ups: _____

Push-ups: _____

2. An exemption for the body composition component of the fitness assessment was entered into AFFMS.

(Fitness Assessment Cell Manager)



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON, DC 20350-3000

MCO 6100.13
C461TPS
1 Aug 08

MARINE CORPS ORDER 6100.13 W/CH 1

From: Commandant of the Marine Corps
To: Distribution List

Subj: MARINE CORPS PHYSICAL FITNESS PROGRAM

Ref: (a) DODINST 1308.3, "DoD Physical Fitness and Body Fat Program Procedures," November 5, 2002
(b) MCRP 3-02A
(c) MCO 3500.27B
(d) MCO 5210.11E
(e) MCTFSPRIUM
(f) MCO P1070.12
(g) MCO P1610.7F
(h) MCO P1900.16F
(i) SECNAVINST 1920.6C
(j) MCO P1040.31J
(k) MCO P1400.31C
(l) MCO P1400.32D
(m) MCO 5000.12E
(n) MCO P1326.6D
(o) NavMed P-117
(p) BUMEDINST 6320.66E

Encl: (1) Marine Corps Physical Fitness Program Procedural Guidance

1. Situation. To provide policy and procedural guidance for implementation of the Marine Corps Physical Fitness Program (MCPFP), per the references.

2. Cancellation. MCO P6100.12.

3. Mission. This Order establishes procedures for the effective management of the MCPFP. Commanders will ensure all Marines comply with the requirements and standards contained in this Order. Policy and procedural guidance is contained in enclosure (1).

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Every Marine must be physically fit, regardless of age, grade, or duty assignment, as per reference (a). The MCPFP emphasizes the requirement for all Marines to adopt a healthy lifestyle and a lifelong commitment to fitness. This combination has a direct and positive impact on job performance and combat readiness.

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(2) Concept of Operations

(a) The Marine Corps shall develop a comprehensive combat conditioning program that promotes health and fitness in order to ensure the combat readiness of all Marines.

(b) Commanders shall conduct periodic physical and combat fitness evaluations in accordance with reference (a) and the instructions contained in the enclosure.

b. Subordinate Element Missions

(1) Deputy Commandant for Manpower & Reserve Affairs (DC M&RA)

(a) Ensure promotion, retention, assignment and reporting policies are consistent with the policies established in this Order.

(b) Provide a system capable to report and record individual Physical Fitness Test (PFT) and Combat Fitness Test (CFT) performance data in order to facilitate analysis and modification, as required.

(2) Commanding General, Training & Education Command (TECOM)

(a) Serve as program sponsor and provide subject matter experts in order to ensure the currency and relevance of the MCPFP.

(b) Manage and monitor the MCPFP through development, implementation and interpretation of standards, policies and procedures consistent with the requirements contained in reference (a).

(c) Comply with annual physical fitness reporting requirements contained in reference (a).

(d) No later than 1 October 2008, revise all Programs of Instruction (POI) at leader development courses (TBS, SNCOA, Infantry Unit Leader Course, etc.) in order to institutionalize the actions required by this Order.

(e) No later than 1 October 2008, establish a Combat Conditioning Instructor (CCI) Course, in consonance with this Order.

(3) Director, Safety Division

(a) Provide an annual assessment of PFT/CFT related injuries (Class A-C) to CG, TECOM (461TPS) no later than 28 February for the period 1 January through 31 December in order to analyze and make appropriate adjustments to the MCPFP, as required.

(b) Serve as a repository for PFT and CFT related injuries (Class A-C) via Web Enabled Safety System (WESS).

(4) Inspector General of the Marine Corps (IG)

(a) Review implementation and management of the MCPFP during command inspections.

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1 Aug 08

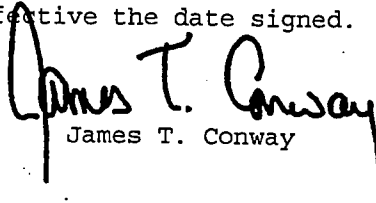
(b) Provide an annual assessment of MCPFP IG inspection results to the Commandant of the Marine Corps no later 31 January for the period 1 January through 31 December.

5. Administration and Logistics. Recommendations concerning the contents of this Order may be forwarded to CMC (C461TPS) via the appropriate chain of command.

6. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

b. Signal. This Order is effective the date signed.


James T. Conway

DISTRIBUTION: PCN 10209350500

Copy to: 7000260 (2)
7000144/8145001 (1)

CHANGE 1 TO MARINE CORPS PHYSICAL FITNESS PROGRAM ORDER AND
IMPLEMENTATION INSTRUCTIONS FOR COMBAT FITNESS TEST SCORING SYSTEM
Date Signed: 8/10/2009
MARADMIN Active Number: 0476/09
R 101359Z AUG 09
UNCLASSIFIED//
MARADMIN 0476/09
MSGID/GENADMIN/CMC WASHINGTON DC CDI//
SUBJ/CHANGE 1 TO MARINE CORPS PHYSICAL FITNESS PROGRAM ORDER AND
IMPLEMENTATION INSTRUCTIONS FOR COMBAT FITNESS TEST SCORING SYSTEM//
REF/A/MSGID:MCO 6100.13/-/-//
REF/B/MSGID:ALMAR 032/08/-//
REF/C/MSGID:MARADMIN 608/08/-//
NARR/REF A IS MARINE CORPS PHYSICAL FITNESS PROGRAM (MCPFP) ORDER.
REF B IS ALMAR THAT ANNOUNCED CHANGES TO THE MCPFP. REF C OUTLINES
COORDINATING INSTRUCTIONS FOR IMPLEMENTATION OF REF A.//
POC/MCGUIRE B./CIV/UNIT:TECOM/NAME: (703) 784-0098 /EMAIL:
BRIAN.J.MCGUIRE@USMC.MIL//
GENTEXT/REMARKS/1. REF A INCLUDED MANY CHANGES TO THE MCPFP,
PRIMARILY INTRODUCTION OF THE COMBAT FITNESS TEST (CFT). BOTH REF B
AND C DIRECTED INITIAL PASS/FAIL GRADING OF THE CFT WITH MIGRATION
TO A SCORED SYSTEM BEGINNING 1 JUL 09. THE PURPOSE OF THIS MARADMIN
IS TO ANNOUNCE CHANGE 1 TO REF A WHICH IS EFFECTIVE IMMEDIATELY.
SUMMARY OF CHANGES:
1.A. IMPLEMENTS THE CFT SCORING SYSTEM.
1.B. ESTABLISHES ONE (1) PHYSICAL FITNESS TEST (PFT) AND ONE (1) CFT
PER YEAR AS THE FITNESS TESTING REQUIREMENT FOR ALL MARINES.
1.C. ALLOWS FOR USE OF TRAINING AIDS IF DUMMY GRENADES NOT
AVAILABLE.
2. APPROVED CFT TABLES, CLASSIFICATION SYSTEM, COMPOSITE SCORE
CONVERSION TABLE AND CFT CALCULATOR CAN BE FOUND AT:
HTTP:SLASHSLASHWWW.TECOM.USMC.MIL/CFT/CFT.HTM
3. MCO 6100.13 W/ CH 1 WILL BE REPUBLISHED AND POSTED ON THE MARINE
CORPS ORDERS AND DIRECTIVES WEBSITE.
4. IMPLEMENTATION INSTRUCTIONS.
4.A. ALL MARINES WILL BE REQUIRED TO RUN A CFT FOR SCORE IN THE
JUL-DEC 09 SEMI-ANNUAL PERIOD.
4.B. BEGINNING CY10, THE PFT WILL BE CONDUCTED IN THE FIRST
SEMI-ANNUAL PERIOD (1 JAN-30 JUN) AND THE CFT WILL BE CONDUCTED IN
THE SECOND SEMI-ANNUAL PERIOD (1 JUL-31 DEC).
4.C. EFFECTIVE IMMEDIATELY, ANY CFTS REPORTED INTO MCTFS WILL BE FOR
RECORD. TO ACCOMMODATE CFT IMPLEMENTATION, THE COMPOSITE SCORE
ROUTINE HAS BEEN MODIFIED. 20 AUG 09 IS THE CUT-OFF DATE FOR MCTFS
DATA ELEMENTS TO COMPUTE COMPOSITE SCORES. ON THAT DATE, MCTFS WILL
QUERY THE RECORDS OF ALL ELIGIBLE CPLS AND LCPLS AND COMPUTE
COMPOSITE SCORES. IF A MARINE HAS RUN THE CFT, IT WILL BE COUNTED
TOWARDS THEIR COMPOSITE SCORE. IF THEY HAVE NOT RUN THE CFT THEY
WILL NOT BE PENALIZED DURING THE COMPUTATION. ON 20 NOV 09, THE NEXT
CUT-OFF FOR MCTFS DATA ELEMENTS, THE COMPOSITE SCORE ROUTINE WILL
TAKE INTO ACCOUNT THE CFT FOR ALL CPLS AND LCPLS AND COMPUTE
COMPOSITE SCORES ACCORDINGLY.
5. THIS MARADMIN IS APPLICABLE TO THE MARINE CORPS TOTAL FORCE.
6. RELEASE AUTHORIZED BY RELEASE BY LTGEN GEORGE J. FLYNN, DEPUTY
COMMANDANT FOR COMBAT DEVELOPMENT AND INTEGRATION.//

PCN 10209350501

DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION
IS UNLIMITED

MCO 6100.13
1 Aug 08

LOCATOR SHEET

Subj: MARINE CORPS PHYSICAL FITNESS PROGRAM

Location: _____
(Indicate the location(s) of the copy(ies) for this Order.)

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1 Aug 08

RECORD OF CHANGES

Log completed change action as indicated.

| Change Number | Date of Change | Date Entered | Signature of Person Incorporated Change |
|---------------|----------------|--------------|---|
| | | | |
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Chapter 1

Combat Conditioning Program

1. Objectives

a. As professional warrior-athletes, every Marine must be physically fit, regardless of age, grade, or duty assignment. Fitness is an essential component of Marine Corps combat readiness. Furthermore, physical fitness is an indispensable aspect of leadership. The habits of self-discipline and personal commitment that are required to gain and maintain a high level of physical fitness are inherent to the Marine Corps way of life and must be a part of the character of every Marine. Marines who are not physically fit are a detriment and detract from the combat readiness of their unit.

b. Marines will participate in an organizational and individual Combat Conditioning Program (CCP). The PFT, CFT and Remedial Conditioning Program (RCP) are components of an effective organizational CCP. Recent trends and advancements in sports training and physiology as well as findings from the Center for Disease Control and the American College of Sports Medicine recommend that aerobic and muscle-strengthening activities be conducted more frequently, under higher intensity and of shorter duration. Doing so provides greater health benefits and results in higher levels of overall physical fitness. Reference (b) has adopted these recommendations and provides Commanders/Officers In Charge (OICs) and Marines a wide variety of options to select from in developing effective organizational and individual CCP. Effective CCPs achieve the following:

(1) Contribute to the overall health and wellness of every Marine through regular exercise, proper nutrition, health education and periodic physical and combat fitness evaluations.

(2) Develop Marines who are physically capable of performing their job requirements in garrison, training and combat.

(3) Develop a reserve level of physical fitness and endurance in all Marines in order to enhance their survivability in a combat environment.

(4) Develop individual self-confidence and a competitive spirit through shared physical challenge and adversity, thereby enhancing organizational discipline, morale, esprit de corps, and combat readiness.

(5) Marine Corps Community Services (MCCS) offer a wide variety of resources through Semper Fit that can greatly enhance the development of effective organizational CCPs. There are more than 64 Semper Fit Fitness Centers located worldwide, staffed by certified professionals who can provide expert assistance and guidance in the following areas:

Fitness and health assessments
Exercise orientation and Semper Fit Toolkits
Group exercise opportunities
Individual instruction and skill development
Health promotion programs and nutritional information
Injury prevention assistance

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(6) Navy Medicine provides care through Medical Treatment Facilities (MTF), local Branch Medical/Health Clinics (BMC/BHC) and Sports Medicine and Reconditioning Centers (SMART). Marines receive quality care and assistance through referral to a sports medicine professional or nutritionist/dietician.

2. Responsibilities

a. Commanding Officers/Officers-In-Charge

(1) Commanders/OICs are responsible for the combat readiness of their organization. Commanders can enhance combat readiness through consistent combat conditioning reflected in annual and pre-deployment training plans and by affording individual Marines the opportunity to achieve a competent level of fitness.

(2) Commanders/OICs will recognize Marines who make substantial improvement to and/or attain an exceptional level of physical fitness.

(3) Commanders/OICs are responsible for the development, implementation and management of the organizational CCP.

(4) Commanders/OICs are required to ensure their Marines comply with the requirements and standards contained in this Order and take appropriate action when required.

(5) Commanders/OICs will ensure Marines perform at least five combat conditioning sessions, of 30 minutes duration, per week. This requirement can be satisfied through combining organizational and individual CCP participation with Marine Corps Martial Arts Program (MCMAP), Marine Corps Water Survival Training (MCWST), or other mission/operational specific training.

(6) Commanders/OICs will select and assign in writing a Combat Conditioning Instructor (CCI) and/or Command Physical Training Representative (CPTR).

(7) Commanders/OICs will periodically assess the effectiveness of their CCP through physical fitness and combat fitness tests.

(8) Commanders/OICs will ensure the timely and accurate recording of performance data in Marine-On-Line (MOL), Unit Diary/Marine Integrated Personnel System (UD/MIPS), and the Marine Corps Training Information Management System (MCTIMS).

(9) Commanders/OICs will ensure the timely and accurate recording, reporting and investigation of all physical training, PFT and CFT Class A-C mishaps via the WESS reporting system.

b. CCI/CPTR

(1) The CCI or CPTR will thoroughly review reference (b) and the contents of this Order, immediately upon assignment.

(2) The CCI or CPTR is responsible to the Commander/OIC for development, implementation, management and supervision of the organizational CCP.

(3) The CCI or CPTR is responsible for coordinating and supervising the execution of regularly scheduled organizational PFTs and CFTs. Responsibilities may include, but not be limited to the following:

- (a) Select and train PFT/CFT monitors, as required.
- (b) Select CFT location.
- (c) Select PFT run route.
- (d) Conduct PFT and CFT Operational Risk Management (ORM) evaluations in accordance with reference (c).
- (e) Document and record PFT/CFT evaluation performance data.
- (f) Manage and maintain PFT/CFT documentation in accordance with reference (d).

c. Individual Marines

(1) Every Marine must be physically fit, regardless of age, grade, or duty assignment.

(2) Every Marine is responsible to comply with the standards and requirements contained in this Order.

(3) Every Marine will participate in an effective organizational and/or individual CCP on a continuing and progressive basis.

3. Components. Organizational CCPs will consist of the following:

a. Commanders will ensure their unit CCP addresses the specific unit METL per reference (b) and consists of five 30 minute sessions per week.

b. Strength training consisting of compound functional movements should be done at least twice a week, in combination with or separate from cardiorespiratory exercise.

c. Exceeding the guidelines above will result in greater fitness and health benefits, but should be done in a manner that is progressive in nature and provides adaptations to additional physical demands.

d. Physical conditioning programs should not be developed solely towards preparation for the PFT or CFT.

e. To the extent possible, commanders will allow Marines to conduct these conditioning sessions within normal working hours.

f. Organizational CCPs will be developed to ensure Marines are able to meet the physical demands of their unit mission and the challenges posed by environmental and operational conditions.

g. Every Marine will develop an individual CCP in order to enhance their ability to meet the physical demands of their military occupational specialty (MOS) while emphasizing the Marine Corps ethos of every Marine a rifleman. The individual CCP is meant to augment not replace the organizational CCP.

4. Reporting

a. PFT/Partial PFT (PPFT) Reporting

(1) Performance. PFT monitors are responsible for completing the PFT/CFT Performance Worksheet found in Figure 1-1. Monitors will ensure PFT performance data is calculated in accordance with Tables 2-3 and 2-4 of this Order. Only a command scheduled and monitored PFT/PPFT satisfies the semi-annual/annual requirement. If more than one CCI or CPTR monitored PFT/PPFT is conducted during a reporting period, only the official PFT/PPFT will be recorded in MCTFS/MOL and item 8b of Section A of the fitness report form. All other tests will be documented as a directed comment in Section I of the fitness report form. However, a failure in any subsequent PFT/PPFT will render a fitness report adverse and have proficiency mark implications. PFTs/PPFTs taken in conjunction with the RCP do not satisfy semi-annual/annual requirements and will not be used for MCTFS/Performance Evaluation reporting purposes.

(2) MCTFS/MOL. PFT monitors will ensure the timely submission of final PFT/CFT Performance Worksheets in accordance with reference (e) and locally established administrative procedures. Only one PFT/PPFT score will be reported on the MOL/Unit Diary per annual period. No retest or remedial PFT scores will be recorded on the MOL/Unit Diary.

(3) Proficiency Marks. For Marines, Corporals and below, Proficiency Marks will be adjusted commensurate with PFT/PPFT performance, in accordance with paragraph 4005 of reference (f).

(4) Performance Evaluation

(a) Fitness Report. For Marines, Sergeants and above, PFT/PPFT scores will be recorded on item 8b of Section A for the respective reporting period, in accordance with paragraph 4003.8b of reference (g). PFT/PPFT failures render a fitness report adverse. PFT/PPFT failures will be addressed within the reporting period which they occur, regardless of performance on a more recent PFT/PPFT.

(b) Directed Comments. A Section I directed comment will be made to address the following circumstances:

1. Score of 285 and above
2. Not Medically Qualified (NMED)
3. Medical basis for PPFT

4. Required/Did Not Take (RDNT). RDNT renders a fitness report adverse if the Reporting Senior (RS) deems the Marine Reported On (MRO) did not exercise due diligence in meeting the PFT/PPFT semiannual/annual requirement.

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5. PFT/PPFT failure. PFT/PPFT failure renders a fitness report adverse.

(5) SRB/OOR. A page 11, 6105 counseling entry is required when a Marine has failed consecutive PFTs or PPFTs and administrative separation is being considered, in accordance with paragraph 6206 of reference (h) for enlisted personnel and enclosure (3) of reference (i) for officers.

b. CFT/Partial CFT (PCFT) Reporting

(1) Performance. CFT monitors are responsible for completing the PFT/CFT Performance Worksheet found in Figure 1-1; copies and instructions regarding use of Figure 1-1 can be found at <https://navalforms.daps.dla.mil>. Monitors will ensure CFT performance data is calculated and a Pass/Fail determination made, in accordance with Table 3-3 of this Order. Only a command scheduled and monitored CFT/PCFT satisfies the annual requirement. If more than one CCI or CPTR monitored CFT/PCFT is conducted during a reporting period, the official CFT/PCFT will be recorded in MCTFS/MOL and Section I of the fitness report form. All other tests will be documented as a directed comment in Section I of the fitness report form. However, a failure in any subsequent CFT/PCFT will render a fitness report adverse and have proficiency mark implications. CFTs/PCFTs taken in conjunction with the RCP do not satisfy annual testing requirements and will not be used for MCTFS/Performance Evaluation purposes.

(2) MCTFS/MOL. CFT monitors will ensure the timely submission of final PFT/CFT Performance Worksheets in accordance with reference (e) and locally established administrative procedures. Only one CFT/PCFT marking will be reported on the MOL/Unit Diary per annual period. No retest or remedial CFT marks will be recorded on the MOL/Unit Diary.

(3) Proficiency Marks. For Marines, corporals and below, Proficiency Marks will be adjusted commensurate with CFT/PCFT performance, in accordance with paragraph 4005 of reference (f).

(4) Performance Evaluation

(a) Fitness Report. For Marines, sergeants and above, CFT scores will be recorded in Section I for the respective reporting period, in accordance with reference (g). CFT/PCFT failures render a fitness report adverse. CFT/PCFT failures will be addressed within the reporting period which they occur, regardless of performance on a more recent CFT/PCFT.

(b) Directed Comments. A Section I directed comment will be made to address the following circumstances:

1. Score of 285 and above
2. Not Medically Qualified (NMED)
3. Medical basis for PCFT
4. Required/Did Not Take (RDNT). RDNT renders a fitness report adverse if the Reporting Senior (RS) deems the Marine Reported On (MRO) did not exercise due diligence in meeting the PCFT/PPCFT semi-annual/annual requirement.
5. PCFT/PPCFT failure. PCFT/PPCFT failure renders a fitness report adverse.

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(5) SRB/OQR. A page 11, 6105 counseling entry is required when a Marine has failed consecutive CFTs or PCFTs and administrative separation is being considered, in accordance with paragraph 6206 of reference (h) for enlisted personnel and enclosure (3) of reference (i) for officers.

5. Administrative Actions. Table 1-1 contains a summary of required administrative actions as a result of PFT/PPFT or CFT/PCFT failure, in accordance with references (e) through (n).

| Administrative Action | PFT Failure | | CFT Failure | |
|--|-------------|-----|-------------|-----|
| | 1st | 2d | 1st | 2d |
| Mandatory RCP | Yes | Yes | Yes | Yes |
| Page 11 6105 Entry | No | Yes | No | Yes |
| Adverse Fitness Report | Yes | Yes | Yes | Yes |
| Substandard Proficiency Mark | Yes | Yes | Yes | Yes |
| Promotion Restriction | Yes | Yes | Yes | Yes |
| Eligible for PCS Transfer | Yes | Yes | Yes | Yes |
| Eligible for Reenlistment | No | No | No | No |
| Eligible for Special School Assignment | No | No | No | No |
| Process for AdSep | No | Yes | No | Yes |

Table 1-1. -- Administrative Summary.

6. Medical Considerations. When a Marine is unable to complete a PFT/CFT due to an underlying physical or medical condition an evaluation by an Appropriately Privileged Health Care Provider (APHCP) must be conducted in accordance with references (o) and (p). The APHCP will make a medical status determination regarding the Marine's ability to complete the PFT/CFT, PPFT/PCFT or if referral to a Medical Evaluation Board (MEB)/Physical Evaluation Board (PEB) is warranted. A medical determination is required to excuse a Marine from participating in a particular event or an entire test, but a PEB finding is required for an exemption. Marines assigned to a light/limited duty status are not exempt from the PFT/CFT requirement and are still required to perform those events not affected by the condition, unless otherwise specified by the APHCP.

If the condition becomes extended or is considered permanent in nature, then a determination by a formal MEB, PEB, or both must be conducted to determine the Marine's medical qualification for continued active service. A Marine may not be repeatedly excused from participation in the PFT/CFT without a MEB determination and is not exempt from the PFT/CFT requirement without a PEB determination.

a. PPFT/PCFT. Marines who are medically excused from performing a particular event of the PFT or CFT as certified by an APHCP, are still required to perform a PPFT/PCFT.

(1) Marines will perform a PPFT/PCFT when an APHCP determines they are physically incapable of performing a particular event of the PFT/CFT. The APHCP will document the medical condition, expiration date, exercise limitations, and PPFT/PCFT events a Marine can perform during the light/limited duty period. For Marines who are incapable of performing any portion of a PFT or CFT, their inability will not be considered a failure and an appropriate fitness report Section I Directed Comment will be made, in accordance with reference (g). Commanders/OICs will ensure assistance is provided to Marines in order to facilitate their return to full duty.

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(2) To meet PPFT requirements, Marines must complete two of the three PFT events. Marines will be required to obtain at least the minimum acceptable performance requirements for the two events, as well as earn the additional points needed to achieve a 3d class PFT score, or better. Event times/repetitions will be awarded points the same way the PFT awards points. As with a PFT, failure to meet the minimum requirements in either event constitutes a test failure. However, no numerical score or classification will be performed for PPFTs. For Marines requiring a composite score for promotion purposes, commands will use the score (points) achieved during the last PFT for the event missed. See Table 2-1 for minimum PFT requirements and table 1-1 for a summary of administrative actions warranted as a result of PFT failure.

(3) To meet PCFT requirements, Marines must complete at least one of the three CFT events. Marines will be required to obtain the minimum acceptable performance requirements for the single event. As with a CFT, failure to meet the minimum requirement will constitute a test failure. In most cases, musculoskeletal limitations will allow for the conduct of either the Movement To Contact (MTC) or Ammunition Lift (AL). Considering the all-encompassing nature of the Maneuver Under Fire (MANUF), musculoskeletal limitations may limit participating in this event as the one selected when performing a PCFT. For Marines requiring a composite score for promotion purposes, commands will use the score (points) achieved during the last CFT for the events missed. In cases where a Marine has not yet run a full CFT for score, commanders may utilize CFT scores on events not taken during a PCFT from inventory or mock CFTs, if available. If scores from a full CFT are not available a PCFT cannot be run. See table 3-3 for minimum CFT requirements and Table 1-1 for a summary of administrative actions warranted as a result of CFT failure.

b. Consecutive PPFT/PCFTs. Marines who perform a PPFT/PCFT for two consecutive periods, for the same injury or disease, will be referred to an APHCP for MEB/PEB evaluation, in accordance with reference (o).

c. Injury. Marines injured while participating in a PFT/CFT may be given credit for a PPFT if two out of three events were completed or for a PCFT if one out of three events were completed prior to the injury. A Marine injured during the conduct of a PFT/CFT may be afforded the opportunity to retake a PFT/CFT once returned to full duty by an APHCP. For Marines who elect to retake the PFT/CFT, their new score will replace the previous score and is final. Only Commanders/OICs can authorize PPFT/PCFT credit or a retest for Marines injured during the conduct of a PFT/CFT. Marines completing only one event prior to the injury will receive neither a PFT score nor PPFT credit. If assigned light duty status as a result of the injury, the Marine will be required to retake the PFT/CFT no earlier than 30 and no later than 90 days from return to full duty status. Marines who are evaluated and not assigned a light duty status, will retake the PFT at the Commander's/OIC's discretion.

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e. Post-Light/Limited Duty

(1) Marines who did not take a PFT/PPFT or CFT/PCFT for the semi-annual/annual requirement due to physical/medical reasons, will be administered a PFT/CFT no less than 30 days and no more than 90 days after return to full duty. Commanders/OICs should be attentive that Marines returning to full duty status following an extended limited duty period will require a progressive training routine in returning to pre-injury/disease fitness levels. If the grace period crosses over into the next semi-annual interval, the new PFT/CFT score will satisfy the current requirement and NMED will be utilized for the previous period.

(2) Marines who were able to perform a PPFT/PCFT and are able to complete a PFT/CFT after returning to full duty will have the option to either keep the PPFT/PCFT score or conduct a PFT/CFT. Marines will be given a minimum of 30 days and no more than 90 days to complete a PFT/CFT. The new score will replace the previous PPFT/PCFT. This is the only time a retest score will be used to replace a previous entry reported in MCTFS. If the grace period crosses over into the next semi-annual interval, the new PFT/CFT score will satisfy the current requirement and the PPFT/PCFT score will be utilized for the previous period. The new score will not be considered a remedial score.

f. Pregnancy/Post-Partum

(1) After confirmation of pregnancy from an APHCP or Obstetrician (OB) and an appropriate duty limitation code is entered into MCTFS, Marines will be waived from conducting the PFT/CFT. Pregnant Marines will participate in a medically approved exercise program throughout the pregnancy and postpartum period, except when not recommended by a APHCP, in accordance with references (m) and (o).

(2) Marines will fulfill the PFT/CFT requirement after the 42-day (post-partum) convalescent period and no later than 6 months after return to full duty. Unless medically prohibited, physical conditioning should resume as soon as possible following delivery. Commanders/OICs should be attentive that Marines returning to full duty status following pregnancy will require a progressive training routine in returning to the level of fitness experienced prior to pregnancy.

(3) For pregnancies that do not come to full term, Marines will be required to meet PFT/CFT requirements in a time period determined by a APHCP/OB healthcare provider. Time limits will not exceed those that are prescribed for a full term pregnancy.

(4) Although rare, difficult pregnancies, Cesarean sections or still births present unique challenges that may require greater recovery time. Therefore, in pregnancies where complications develop, APHCPs will determine the time needed to Return to Full Duty (RTFD) and complete a PFT/CFT.

(5) Marines who fail to RTFD following the 42-day (post-partum) convalescent leave period, may be given an additional period of up to 30 days light duty, to allow additional recovery time. If upon termination of the 30 days light duty, the Marine is still not RTFD, then the Marine will be placed on medical hold and referred to a MEB for determination of fitness for continued military service.

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g. 46 and Over Risk Factor Screening. Marines, age 46 years and over, who do not possess a current physical examination or Navy Annual Health Evaluation (BUMEDINST 6120.26) will conduct a self-validation "Risk Factor Worksheet, "30-60 days prior to conducting a PFT/CFT. Marines will complete sections (A) and (B) of the Risk Factor Worksheet found in Table 1-2, and submit the signed/completed form to their Commander/OIC for review. An APHCP medical screening is required prior to PFT/CFT participation under the following circumstances:

- (1) Marine replies "yes" to any question in section (B).
- (2) Marine exceeds body composition standards.

(3) Marines requiring a follow-on medical screening must be medically cleared by an APHCP prior to PFT/CFT participation. Supplemental SF600 forms will be attached to the Risk Factor Worksheet if additional APHCP remarks are required. Independent Duty Corpsmen are not authorized to issue a medical clearance for any Marine who replied "yes" to any Risk Factor Worksheet question. Marines who are not cleared for PFT/CFT participation by an APHCP are restricted from participation for the remainder of the current semi-annual period, either voluntarily or involuntarily. This restriction only applies to the period during which the APHCP determination was made. However, Marines are authorized to participate in the PFT/CFT when medically cleared by an APHCP following referral and provided no further medical evaluation is required. Risk Factor Worksheets and SF600 documents will be appropriately safeguarded and filed in the health record when completed. The CCI or CPTR will annotate completion of the Risk Factor Worksheet on the PFT/CFT Performance Worksheet prior to the conduct of the PFT/CFT, when required.

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| | | | |
|---|----------|------------------------------|---|
| NAVMC 11639 (08-01) (EF) | | RISK FACTOR WORKSHEET | |
| FOUO - Privacy Sensitive when filled in. | | | |
| NAME (LAST, FIRST, M.I.): | | SSN (LAST 4): | |
| COMMAND: | SECTION: | PHONE: | |
| SECTION A: (COMPLETED BY THE MARINE) | | | YES NO |
| (1) ARE YOU IN COMPLIANCE WITH MEDICAL PHYSICAL EXAMINATION REQUIREMENTS FOR YOUR AGE? | | | <input type="checkbox"/> <input type="checkbox"/> |
| (2) DATE OF LAST PERIODIC PHYSICAL EXAMINATION: | | | |
| SECTION B: (COMPLETED BY THE MARINE) | | | YES NO |
| (1) DO YOU HAVE A HISTORY OF HEART DISEASE OR HIGH BLOOD PRESSURE WHICH REQUIRES YOU TO RESTRICT PHYSICAL ACTIVITY OR SEEK MEDICAL TREATMENT? | | | <input type="checkbox"/> <input type="checkbox"/> |
| (2) SINCE YOUR LAST PERIODIC PHYSICAL EXAMINATION, SEMI-ANNUAL RISK FACTOR SCREENING, OR PFT/CFT, HAS | | | |
| A. A CHANGE IN YOUR HISTORY OF HEART DISEASE OR HIGH BLOOD PRESSURE WHICH REQUIRED YOU TO RESTRICT PHYSICAL ACTIVITY OR SEEK MEDICAL TREATMENT? | | | <input type="checkbox"/> <input type="checkbox"/> |
| B. A CHANGE IN YOUR FAMILY HISTORY SUCH AS IMMEDIATE FAMILY MEMBERS EXPERIENCING A HEART ATTACK OR DIED OF HEART DISEASE BEFORE THEY WERE 45 YEARS OLD? | | | <input type="checkbox"/> <input type="checkbox"/> |
| C. A CHANGE IN YOUR INCIDENCE OF DISCOMFORT TO YOUR CHEST, ARMS, OR NECK WHILE EXERCISING? | | | <input type="checkbox"/> <input type="checkbox"/> |
| D. AN INCIDENT WHERE YOU WERE PRONE TO HEAT EXHAUSTION/HEAT STROKE, FEELING FAINT, OR FEELING THAT YOU WERE ABOUT TO LOSE CONSCIOUSNESS? | | | <input type="checkbox"/> <input type="checkbox"/> |
| E. A CHANGE IN ANY MEDICAL CONDITION (E.G., DIABETES, ASTHMA, BONE OR JOINT DISEASE) WHICH YOU THINK MIGHT LIMIT YOUR PARTICIPATION IN THE PFT? | | | <input type="checkbox"/> <input type="checkbox"/> |
| F. A SIGNIFICANT WEIGHT CHANGE? | | | <input type="checkbox"/> <input type="checkbox"/> |
| G. A CHANGE IN YOUR SMOKING HABITS SUCH THAT YOU NOW SMOKE ONE OR MORE PACKS OF CIGARETTES DAILY? | | | <input type="checkbox"/> <input type="checkbox"/> |
| MARINE'S SIGNATURE | | DATE: | |
| SECTION C: (COMPLETED BY THE APPROPRIATELY PRIVILEGED HEALTH CARE PROVIDER (M.O.) IF REQUIRED) | | | |
| DATE OF MEDICAL EVALUATION: | | YES | NO |
| (1) THE MARINE MEETS BCP STANDARDS | | <input type="checkbox"/> | <input type="checkbox"/> |
| REMARKS: | | | |
| (2) THE MARINE ANSWERED 'YES' TO QUESTIONS IN SECTION (B) | | <input type="checkbox"/> | <input type="checkbox"/> |
| REMARKS: | | | |
| SECTION D: (COMPLETED BY THE APPROPRIATELY PRIVILEGED HEALTH CARE PROVIDER (M.O.) IF REQUIRED) | | | |
| (1) MEDICAL RECOMMENDATION: REFERRED FOR FURTHER MEDICAL CONSULTATION (E.G., PSYCHOLOGY, NUTRITION, INTERNAL MEDICINE, PHYSICAL THERAPY) | | <input type="checkbox"/> | <input type="checkbox"/> |
| REMARKS: | | | |
| (2) CLEARED FOR PARTICIPATION IN PFT/CFT | | <input type="checkbox"/> | <input type="checkbox"/> |
| REMARKS: | | | |
| SIGNATURE OF M.O. | | DATE: | |
| PRINTED NAME: | | PHONE: | |
| COMMAND: | UNIT: | | |

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Figure 1-2. -- Risk Factor Worksheet

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RISK FACTOR WORKSHEET

NAVMC 11639 (08-01) (EF)

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PRIVACY ACT STATEMENT

In accordance with the Privacy Act of 1974 (5 U.S.C. 552a/Public Law 93-579), this Notice informs you of the purpose for collection of information on this form. Please read it before completing the form.

AUTHORITY: 10 U.S.C. 5041, Headquarters, Marine Corps, 10 U.S.C. 5013, 37 U.S.C. 5201, and E.O. 9397

PRINCIPAL PURPOSE: Information collected by this form will be used to maintain military appearance data. The collection and maintenance of this information is authorized and governed by Privacy Act System of Records Notice MFD0003 MARINE CORPS TOTAL FORCE SYSTEM (MCTFS), posted at <http://www.defenselink.mil/privacy/notices/usmc/MFD0003.html>.

RETENTION: The collected information will be maintained in the MCTFS database with restricted, limited access permissions and PKI/password protections in place. Records in this file system will only be retrieved by the record subject's name and social security number. Records will be maintained for five years and will then be destroyed pursuant to provisions set forth in SECNAV M-5210.1; Subj: DON RECORDS MANAGEMENT PROGRAM.

ROUTINE USES: The only routine uses that apply are those published in Privacy Act System of Records Notice MFD00003 and the blanket routine uses published by the Department of Defense Privacy Office and posted at <http://www.defenselink.mil/privacy/notices/blanket-uses.html>.

DISCLOSURE: Providing information on this form is mandatory.

Figure 1-3. -- Risk Factor Worksheet Continued

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7. Exemptions and Waivers

a. Exemptions. Marines are exempt from the PFT/CFT requirement under the following conditions:

(1) Deployment to a combat zone and while in receipt of hostile fire pay. Marines are exempt from the PFT/CFT requirement for 60 days following their departure from a combat zone/termination of hostile fire pay. Routine deployments in support of the Unit Deployment Program (UDP) or Marine Expeditionary Units (MEU), and while not in receipt of hostile fire pay, do not exempt Marines from the PFT/CFT requirement.

(2) Marines on Temporary Limited Duty (TLD), Permanent Limited Duty (PLD), or awaiting PEB results. APHCP verification is required. Marines on light duty or awaiting MEB results are not exempt from the PFT/CFT requirement.

(3) Marines, age 46 and older, who have completed a risk factor screening and were not cleared by an APHCP for PFT/CFT participation.

(4) After confirmation from an APHCP/OB healthcare provider and an appropriate duty limitation code entered into MCTFS, Marines are exempt from taking the PFT/CFT during pregnancy, the 42-day (post-partum) convalescent period and for 6 months following return to full duty. For pregnancies that do not come to full term, Marines will be required to meet PFT/CFT semi-annual/annual requirements after consultation with an APHCP/OB health care provider and upon return to full duty.

b. Waivers

(1) Waivers may be solicited only for short-term situations that temporarily prevent an individual, group, or an entire unit from completing the training/testing requirements contained in this Order. The intent is for units to request a waiver when it has been determined that time or the lack of sufficient resources will prevent an individual, group, or entire unit from accomplishing the required combat conditioning training/testing. The purpose of granting waivers is to protect individual Marines who were legitimately unable to complete required training/testing from being adversely affected.

(2) Waivers must state the circumstances preventing an individual, group, or unit from completing required combat conditioning training and what steps are being taken by the unit to fulfill established training requirements. A unit requesting a "blanket waiver" is not permitted. Waiver requests must be submitted with a by-name roster for all individuals needing a waiver. Because PFT/CFT requirements are based on the calendar year, waivers will only apply for the time period requested.

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(3) The authority to waive training rests with the following Commanders and cannot be delegated:

(a) Deputy Commandant for Manpower and Reserve Affairs (DC M&RA)

(b) Marine Corps Combat Development Command (CG MCCDC)

(c) Marine Forces Command (COMMARFORCOM)

(d) Marine Forces Pacific (COMMARFORPAC)

(e) Marine Forces Reserve (COMMARFORRES)

(f) Marine Forces Special Operations Command (COMMARSOC)

(g) I, II, and III Marine Expeditionary Force (MEF)

(f) For separate organizations not commanded by a General Officer, authorization to waive training must be obtained from CG, MCCDC (C461TPS).

(g) For Marine activities that are not tenants of Marine Corps posts or stations, waivers may be submitted to CG, MCCDC (C461TPS).

(4) Commands authorized by this Order to grant waivers must send a copy of the waiver response to CG, MCCDC (C461TPS) within 30 days of disposition.

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PFT/CFT PERFORMANCE WORKSHEET
NAVMC 11622 (06-08) (EF)
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RETENTION: The collected information will be maintained in the MCTFS database with restricted, limited access permissions and PKI/password protections in place. Records in this file system will only be retrieved by the record subject's name and social security number. Records will be maintained for five years and will then be destroyed pursuant to provisions set forth in SECNAV M-5210.1; Subj: DON RECORDS MANAGEMENT PROGRAM.

ROUTINE USES: The only routine uses that apply are those published in Privacy Act System of Records Notice MFD0003 and the blanket routine uses published by the Department of Defense Privacy Office and posted at <http://www.defenselink.mil/privacy/notices/blanket-uses.html>.

DISCLOSURE: Providing information on this form is mandatory.

Figure 1-4. -- PFT/CFT Performance Worksheet Continued

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Chapter 2

Physical Fitness Test

1. Purpose. The PFT is a collective measure of general fitness Marine Corps-wide. The PFT was specifically designed to test the strength and stamina of the upper body, midsection, and lower body, as well as efficiency of the cardiovascular and respiratory systems.

2. Requirement

a. Active Component. The PFT is a scored, calendar year annual requirement for all active duty Marines, regardless of age, gender, grade, or duty assignment. It is required to be conducted in between 1 January and 30 June of each year.

b. Reserve Component. The PFT is a scored, calendar year annual requirement for all Selected Marine Corps Reserve (SMCR) and Individual Mobilization Augmentee (IMA) Marines, regardless of age, gender, grade, or duty assignment. PFT scores will remain valid for two years for promotional purposes should operational constraints prevent annual testing. It is required to be conducted in between 1 January and 30 June of each year.

c. Activated Reservists. Activated Reserve Marines, to include Active Reserve (AR), mobilized or those performing Active Duty Operational Support (ADOS) will comply with the Active Component annual PFT requirement. Exceptions and waivers will be administered in accordance with this Order.

d. End of Active Service (EAS)/Retirement. Marines are required to complete a PFT during the annual period preceding their EAS or retirement date, unless otherwise directed. The terminal leave date will not be utilized to determine PFT requirements.

e. EAS/Retirement Final Physical Examination. Completion of the required final physical examination, regardless of when completed, does not exempt a Marine from performing a PFT. A Marine, who elects to complete their final physical examination 7-12 months prior to EAS or retirement, is still required to perform the annual PFT for that period. This policy is also applicable to the Reserve Component annual requirement.

3. Sequence. The PFT consists of three events. Male Marines will perform dead-hang pull-ups, abdominal crunches, and a 3.0 mile run. Female Marines will complete the flexed-arm hang, abdominal crunches, and a 3.0 mile run. The sequence of PFT events is at the discretion of the unit Commanding Officer/OIC. However, all PFT events will be conducted in a single session, not to exceed 2 hours in duration. Transition between events should afford Marines adequate time to recover, stretch, hydrate and prepare for the next event. The command will not impose restrictions on the performance of any event other than those specifically stated in this Manual.

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For example, a command will not mandate that Marines must use the overhand grip when executing pull-ups or flexed-arm hang.

4. Procedures

a. Safety. Operational Risk Management (ORM) will be utilized in order to ensure PFT participants are not exposed to unnecessary risk.

b. Supervision. The CCI or CPTR will monitor the PFT and maintain the PFT/CFT Performance Worksheet, listed as Figure 1-1. Marines will be kept advised of their progress as they are performing each event. The CCI or CPTR or designate will call out each repetition for the pull-ups, and time-passed (in intervals) for the flexed-arm hang and abdominal crunch. The CCI or CPTR (and additional monitors) will be posted along the 3.0 mile run course and provide Marines their split time (1.5 miles) and finishing time.

c. Uniform. The only authorized uniform for the PFT is the Marine Corps approved green-on-green T-shirt, shorts, socks, and running shoes. The green-on-green sweat suit or running suit with watch cap and gloves may be worn, as required. However, the running suit is not to be used in conjunction with the sweat suit in any combination.

d. Equipment. A timepiece (digital or stopwatch) that accurately measures time to the second is required for the flexed-arm hang, abdominal crunch, and 3.0 mile run.

5. Events

a. Pull-up

(1) This is not a timed event and can be conducted either indoors or outdoors.

(2) Diameter of the bar may range between 1 and 1 3/4 inches. The use of athletic tape on the bar is authorized.

(3) The bar must be high enough to allow the tallest Marine's legs to hang straight without touching the ground, when arms are fully extended.

(4) A bench or stool may be used to initially grasp the bar.

(5) Sweatshirts/running suit top will be removed during the conduct of the pull-up event in order to observe the lockout of the elbows with each repetition.

(6) The preparatory command is "Ready" and the execute command is "Go."

(7) Assistance to the bar with a step up, being lifted up, or jumping up is authorized. Assistance up to the bar will not be used as momentum into the first pull-up.

(8) The bar must be grasped with both palms facing either forward or to the rear.

(9) The correct starting position begins when arms are fully extended beneath the bar, feet are free from touching the ground or any bar mounting assist and the body is motionless.

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(10) Legs may be positioned in a straight or bent position, but knees may not be raised above the waist.

(11) One repetition consists of raising the body with the arms until the chin is above the bar and then lowering the body until the arms are fully extended; repeat the exercise. At no time during the execution of this event can a Marine rest his chin on the bar.

(12) The intent is to execute a vertical "dead hang" pull-up. A certain amount of inherent body movement will occur as the pull-up is executed. However, the intent is to avoid a pendulum-like motion that enhances the ability to execute the pull-up. Whipping, kicking or kipping of the body or legs, or any leg movement used to assist in the vertical progression of the pull-up is not authorized. If observed, the repetition does not count for score.

(13) A repetition will be counted when a correct and complete pull-up is performed.

(14) The goal of this event is for Marines to execute as many correct and complete pull-ups before dropping off the bar.

b. Flexed-Arm Hang

(1) This is a timed event and can be conducted either indoors or outdoors.

(2) Sweatshirts will be removed during the conduct of the flexed-arm hang event in order to observe when the Marine has completely locked-out her elbows.

(3) Assistance to the bar with a step up, being lifted up, or jumping up to the start position is authorized.

(4) The bar must be grasped with both palms facing either forward or to the rear.

(5) The preparatory command is "Ready" and the execute command is "Go."

(6) The correct starting position begins when the Marine's arms are flexed at the elbow, the chin is held above the bar and not touching it, and the body is motionless. At no time during the execution of this event can a Marine rest her chin on the bar.

(7) Marines are authorized to drop down below the bar, however, some degree of elbow flexion must be maintained with both arms. Once a Marine's arms are fully extended or the Marine drops off the bar, the clock will stop.

(8) The goal of this event is for Marines to hang (maintain elbow flexion) for as long as possible within the prescribed time limit of 70 seconds.

c. Abdominal Crunch

(1) This is a timed event with a 2-minute time limit.

(2) This event can be conducted either indoors or outdoors.

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(3) The preparatory command is "Ready" and the execute command is "Go."

(4) On a flat surface, Marines will lie flat on their back with shoulder blades touching the deck, knees bent, and both feet flat on the deck.

(5) Arms will be folded across the chest or rib cage with no gap between the arms and chest/rib cage. Both arms must remain in constant contact with chest/rib cage throughout the exercise. A single repetition consists of raising the upper body from the starting position until both forearms or elbows simultaneously touch the thighs, and then return to the starting position with the shoulder blades touching the deck.

(6) The buttocks will remain in constant contact with the deck throughout the event. No arching of the lower back or lifting of the buttocks is permitted.

(7) An assistant may be used to hold a Marine's legs or feet, at or below the knees in whatever manner that is most comfortable for the Marine. Kneeling or sitting on the Marine's feet is permitted.

(8) A repetition will be counted when a correct and complete abdominal crunch is performed.

(9) The goal of this event is for Marines to execute as many correct and complete crunches within the 2-minute time limit.

d. 3.0 Mile Run

(1) This is a timed event and can be conducted either indoors or outdoors.

(2) The run course will be 3.0 miles and must be measured for accuracy and set over reasonably level ground.

(3) The preparatory command is "Ready" and the execute command is "Go."

(4) The course should be an "out and back" or a wide loop course. The run course should not include numerous sharp turns that would force a participant to slow down excessively to remain on the course. A determination as to whether the track is a yard or meter track must be made and the track measured to ensure accurate distance prior to conducting the PFT. Run courses should not require a Marine to do more than 12 laps to cover 3.0 miles, (e.g., a course should not be shorter than 440-yards per lap). Running this event on a treadmill is not authorized.

(5) The goal of this event is for Marines to complete the measured course as quickly as possible.

6. Performance. The minimum performance requirement for Marines to pass the PFT is to achieve a 3d class score, by age group. Marines must complete the minimum performance requirements in each event and achieve an overall combined score, as shown in Table 2-1.

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| Age Groups | Pull-Ups/ Flexed Arm | Abdominal Crunches | 3.0 Mile Run (Min) | Total Points | Min Score | Additional Points Needed |
|------------|-------------------------|-----------------------|-----------------------|-----------------|--------------|-----------------------------|
| 17-26 | 3/15 (SEC) | 50 | 28 (m) 31 (f) | 105 | 135 | 30 |
| 27-39 | 3/15 | 45 | 29 (m) 32 (f) | 94 | 110 | 16 |
| 40-45 | 3/15 | 45 | 30 (m) 33 (f) | 88 | 88 | 0 |
| 46+ | 3/15 | 40 | 33 (m) 36 (f) | 65 | 65 | 0 |

Table 2-1. -- PFT Minimum Performance Requirements

7. Classification. The minimum performance in each event will not achieve the overall points required for a passing score. Additional points must be earned in at least one event in order to achieve a 3d Class PFT or better, as shown in Table 2-2. Failure to meet the minimum requirements in any one event constitutes a failure of the entire test, regardless of the total number of points earned. Table 1-2 shows the minimum score required, per age group, to earn each PFT classification score. Marines should be encouraged to continually strive to perform their best and not merely accept minimum performance.

| PFT Class | Age Groups | | | |
|--------------|------------|-------|-------|-----|
| | 17-26 | 27-39 | 40-45 | 46+ |
| 1st | 225 | 200 | 175 | 150 |
| 2d | 175 | 150 | 125 | 100 |
| 3d | 135 | 110 | 88 | 65 |

Table 2-2. -- PFT Classification Scores

8. Score. Calculating a cumulative score for a completed PFT can be derived from Table 2-3. The official Marine Corps PFT calculator is found at Marine OnLine (MOL): <https://tfas.mol.usmc.mil/SSO/LoginRequest.do>.

9. Altitude Considerations. Units administering the PFT at altitudes of 4,500 feet or more above sea level will utilize Table 2-4 for adjusted run times. Commanders are directed to provide Marines a 30-day acclimatization period prior to conducting a PFT at altitude. Marines scheduled to report to commands at altitude in June or December will complete their PFTs prior to detaching.

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PFT SCORING TABLE (FEMALES)

| Points | Flexed-Arm Hang | Crunches | 3-Mile Run | Points | Flexed-Arm Hang | Crunches | 3-Mile Run |
|--------|-----------------|----------|------------|--------|-----------------|----------|------------|
| 100 | 70 sec | 100 | 21:00 | 50 | 45 sec | 50 | 29:20 |
| 99 | | 99 | 21:10 | 49 | | 49 | 29:30 |
| 98 | 69 sec | 98 | 21:20 | 48 | 44 sec | 48 | 29:40 |
| 97 | | 97 | 21:30 | 47 | | 47 | 29:50 |
| 96 | 68 sec | 96 | 21:40 | 46 | 43 sec | 46 | 30:00 |
| 95 | | 95 | 21:50 | 45 | | 45 | 30:10 |
| 94 | 67 sec | 94 | 22:00 | 44 | 42 sec | 44 | 30:20 |
| 93 | | 93 | 22:10 | 43 | | 43 | 30:30 |
| 92 | 66 sec | 92 | 22:20 | 42 | 41 sec | 42 | 30:40 |
| 91 | | 91 | 22:30 | 41 | | 41 | 30:50 |
| 90 | 65 sec | 90 | 22:40 | 40 | 40 sec | 40 | 31:00 |
| 89 | | 89 | 22:50 | 39 | 39 sec | x | 31:10 |
| 88 | 64 sec | 88 | 23:00 | 38 | 38 sec | x | 31:20 |
| 87 | | 87 | 23:10 | 37 | 37 sec | x | 31:30 |
| 86 | 63 sec | 86 | 23:20 | 36 | 36 sec | x | 31:40 |
| 85 | | 85 | 23:30 | 35 | 35 sec | x | 31:50 |
| 84 | 62 sec | 84 | 23:40 | 34 | 34 sec | x | 32:00 |
| 83 | | 83 | 23:50 | 33 | 33 sec | x | 32:10 |
| 82 | 61 sec | 82 | 24:00 | 32 | 32 sec | x | 32:20 |
| 81 | | 81 | 24:10 | 31 | 31 sec | x | 32:30 |
| 80 | 60 sec | 80 | 24:20 | 30 | 30 sec | x | 32:40 |
| 79 | | 79 | 24:30 | 29 | 29 sec | x | 32:50 |
| 78 | 59 sec | 78 | 24:40 | 28 | 28 sec | x | 33:00 |
| 77 | | 77 | 24:50 | 27 | 27 sec | x | 33:10 |
| 76 | 58 sec | 76 | 25:00 | 26 | 26 sec | x | 33:20 |
| 75 | | 75 | 25:10 | 25 | 25 sec | x | 33:30 |
| 74 | 57 sec | 74 | 25:20 | 24 | 24 sec | x | 33:40 |
| 73 | | 73 | 25:30 | 23 | 23 sec | x | 33:50 |
| 72 | 56 sec | 72 | 25:40 | 22 | 22 sec | x | 34:00 |
| 71 | | 71 | 25:50 | 21 | 21 sec | x | 34:10 |
| 70 | 55 sec | 70 | 26:00 | 20 | 20 sec | x | 34:20 |
| 69 | | 69 | 26:10 | 19 | 19 sec | x | 34:30 |
| 68 | 54 sec | 68 | 26:20 | 18 | 18 sec | x | 34:40 |
| 67 | | 67 | 26:30 | 17 | 17 sec | x | 34:50 |
| 66 | 53 sec | 66 | 26:40 | 16 | 16 sec | x | 35:00 |
| 65 | | 65 | 26:50 | 15 | 15 sec | x | 35:10 |
| 64 | 52 sec | 64 | 27:00 | 14 | x | x | 35:20 |
| 63 | | 63 | 27:10 | 13 | x | x | 35:30 |
| 62 | 51 sec | 62 | 27:20 | 12 | x | x | 35:40 |
| 61 | | 61 | 27:30 | 11 | x | x | 35:50 |
| 60 | 50 sec | 60 | 27:40 | 10 | x | x | 36:00 |
| 59 | | 59 | 27:50 | 9 | x | x | X |
| 58 | 49 sec | 58 | 28:00 | 8 | x | x | X |
| 57 | | 57 | 28:10 | 7 | x | x | X |
| 56 | 48 sec | 56 | 28:20 | 6 | x | x | X |
| 55 | | 55 | 28:30 | 5 | x | x | X |
| 54 | 47 sec | 54 | 28:40 | 4 | x | x | X |
| 53 | | 53 | 28:50 | 3 | x | x | X |
| 52 | 46 sec | 52 | 29:00 | 2 | x | x | X |
| 51 | | 51 | 29:10 | 1 | x | x | X |

*Round up all values (e.g., 21:01 to 21:09 equals 99 points)

Table 2-3. -- PFT Scoring Table (Females)

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PFT SCORING TABLE (MALES)

| Points | Pull-ups | Crunches | 3-Mile Run | Points | Pull-ups | Crunches | 3-Mile Run |
|--------|----------|----------|------------|--------|----------|----------|------------|
| 100 | 20 | 100 | 18:00 | 50 | 10 | 50 | 26:20 |
| 99 | | 99 | 18:10 | 49 | | 49 | 26:30 |
| 98 | | 98 | 18:20 | 48 | | 48 | 26:40 |
| 97 | | 97 | 18:30 | 47 | | 47 | 26:50 |
| 96 | | 96 | 18:40 | 46 | | 46 | 27:00 |
| 95 | 19 | 95 | 18:50 | 45 | 9 | 45 | 27:10 |
| 94 | | 94 | 19:00 | 44 | | 44 | 27:20 |
| 93 | | 93 | 19:10 | 43 | | 43 | 27:30 |
| 92 | | 92 | 19:20 | 42 | | 42 | 27:40 |
| 91 | | 91 | 19:30 | 41 | | 41 | 27:50 |
| 90 | 18 | 90 | 19:40 | 40 | 8 | 40 | 28:00 |
| 89 | | 89 | 19:50 | 39 | | x | 28:10 |
| 88 | | 88 | 20:00 | 38 | | x | 28:20 |
| 87 | | 87 | 20:10 | 37 | | x | 28:30 |
| 86 | | 86 | 20:20 | 36 | | x | 28:40 |
| 85 | 17 | 85 | 20:30 | 35 | 7 | x | 28:50 |
| 84 | | 84 | 20:40 | 34 | | x | 29:00 |
| 83 | | 83 | 20:50 | 33 | | x | 29:10 |
| 82 | | 82 | 21:00 | 32 | | x | 29:20 |
| 81 | | 81 | 21:10 | 31 | | x | 29:30 |
| 80 | 16 | 80 | 21:20 | 30 | 6 | x | 29:40 |
| 79 | | 79 | 21:30 | 29 | | x | 29:50 |
| 78 | | 78 | 21:40 | 28 | | x | 30:00 |
| 77 | | 77 | 21:50 | 27 | | x | 30:10 |
| 76 | | 76 | 22:00 | 26 | | x | 30:20 |
| 75 | 15 | 75 | 22:10 | 25 | 5 | x | 30:30 |
| 74 | | 74 | 22:20 | 24 | | x | 30:40 |
| 73 | | 73 | 22:30 | 23 | | x | 30:50 |
| 72 | | 72 | 22:40 | 22 | | x | 31:00 |
| 71 | | 71 | 22:50 | 21 | | x | 31:10 |
| 70 | 14 | 70 | 23:00 | 20 | 4 | x | 31:20 |
| 69 | | 69 | 23:10 | 19 | | x | 31:30 |
| 68 | | 68 | 23:20 | 18 | | x | 31:40 |
| 67 | | 67 | 23:30 | 17 | | x | 31:50 |
| 66 | | 66 | 23:40 | 16 | | x | 32:00 |
| 65 | 13 | 65 | 23:50 | 15 | 3 | x | 32:10 |
| 64 | | 64 | 24:00 | 14 | x | x | 32:20 |
| 63 | | 63 | 24:10 | 13 | x | x | 32:30 |
| 62 | | 62 | 24:20 | 12 | x | x | 32:40 |
| 61 | | 61 | 24:30 | 11 | x | x | 32:50 |
| 60 | 12 | 60 | 24:40 | 10 | x | x | 33:00 |
| 59 | | 59 | 24:50 | 9 | x | x | x |
| 58 | | 58 | 25:00 | 8 | x | x | x |
| 57 | | 57 | 25:10 | 7 | x | x | x |
| 56 | | 56 | 25:20 | 6 | x | x | x |
| 55 | 11 | 55 | 25:30 | 5 | x | x | x |
| 54 | | 54 | 25:40 | 4 | x | x | x |
| 53 | | 53 | 25:50 | 3 | x | x | x |
| 52 | | 52 | 26:00 | 2 | x | X | x |
| 51 | | 51 | 26:10 | 1 | x | x | x |

* Round up all values (e.g., 18:01 to 18:09 equals 99 points)

Table 2-3. -- PFT Scoring Table (Males)

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| Points | 3.0-Mile (Male) | 3.0-Mile (Female) | Points | 3.0-Mile (Male) | 3.0-Mile (Female) | Points | 3.0-Mile (Male) | 3.0-Mile (Female) |
|--------|-----------------|-------------------|--------|-----------------|-------------------|--------|-----------------|-------------------|
| 100 | 19:30 | 22:30 | 65 | 25:20 | :20 | 30 | 31:10 | 34:10 |
| 99 | 19:40 | 22:40 | 64 | 25:30 | 28:30 | 29 | 31:20 | 34:20 |
| 98 | 19:50 | 22:50 | 63 | 25:40 | 28:40 | 28 | 31:30 | 34:30 |
| 97 | 20:00 | 23:00 | 62 | 25:50 | 28:50 | 27 | 31:40 | 34:40 |
| 96 | 20:10 | 23:10 | 61 | 26:00 | 29:00 | 26 | 31:50 | 34:50 |
| 95 | 20:20 | 23:20 | 60 | 26:10 | 29:10 | 25 | 32:00 | 35:00 |
| 94 | 20:30 | 23:30 | 59 | 26:20 | 29:20 | 24 | 32:10 | 35:10 |
| 93 | 20:40 | 23:40 | 58 | 26:30 | 29:30 | 23 | 32:20 | 35:20 |
| 92 | 20:50 | 23:50 | 57 | 26:40 | 29:40 | 22 | 32:30 | 35:30 |
| 91 | 21:00 | 24:00 | 56 | 26:50 | 29:50 | 21 | 32:40 | 35:40 |
| 90 | 21:10 | 24:10 | 55 | 27:00 | 30:00 | 20 | 32:50 | 35:50 |
| 89 | 21:20 | 24:20 | 54 | 27:10 | 30:10 | 19 | 33:00 | 36:00 |
| 88 | 21:30 | 24:30 | 53 | 27:20 | 30:20 | 18 | 33:10 | 36:10 |
| 87 | 21:40 | 24:40 | 52 | 27:30 | 30:30 | 17 | 33:20 | 36:20 |
| 86 | 21:50 | 24:50 | 51 | 27:40 | 30:40 | 16 | 33:30 | 36:30 |
| 85 | 22:00 | 25:00 | 50 | 27:50 | 30:50 | 15 | 33:40 | 36:40 |
| 84 | 22:10 | 25:10 | 49 | 28:00 | 31:00 | 14 | 33:50 | 36:50 |
| 83 | 22:20 | 25:20 | 48 | 28:10 | 31:10 | 13 | 34:00 | 37:00 |
| 82 | 22:30 | 25:30 | 47 | 28:20 | 31:20 | 12 | 34:10 | 37:10 |
| 81 | 22:40 | 25:40 | 46 | 28:30 | 31:30 | 11 | 34:20 | 37:20 |
| 80 | 22:50 | 25:50 | 45 | 28:40 | 31:40 | 10 | 34:30 | 37:30 |
| 79 | 23:00 | 26:00 | 44 | 28:50 | 31:50 | 9 | 34:40 | 37:40 |
| 78 | 23:10 | 26:10 | 43 | 29:00 | 32:00 | 8 | 34:50 | 37:50 |
| 77 | 23:20 | 26:20 | 42 | 29:10 | 32:10 | 7 | 35:00 | 38:00 |
| 76 | 23:30 | 26:30 | 41 | 29:20 | 32:20 | 6 | 35:10 | 38:10 |
| 75 | 23:40 | 26:40 | 40 | 29:30 | 32:30 | 5 | 35:20 | 38:20 |
| 74 | 23:50 | 26:50 | 39 | 29:40 | 32:40 | 4 | 35:30 | 38:30 |
| 73 | 24:00 | 27:00 | 38 | 29:50 | 32:50 | 3 | 35:40 | 38:40 |
| 72 | 24:10 | 27:10 | 37 | 30:00 | 33:00 | 2 | 35:50 | 38:50 |
| 71 | 24:20 | 27:20 | 36 | 30:10 | 33:10 | 1 | 36:00 | 39:00 |
| 70 | 24:30 | 27:30 | 35 | 30:20 | 33:20 | | | |
| 69 | 24:40 | 27:40 | 34 | 30:30 | 33:30 | | | |
| 68 | 24:50 | 27:50 | 33 | 30:40 | 33:40 | | | |
| 67 | 25:00 | 28:00 | 32 | 30:50 | 33:50 | | | |
| 66 | 25:10 | 28:10 | 31 | 1:00 | 34:00 | | | |

Table 2-4. -- PFT Altitude Compensation Table

Chapter 3

Combat Fitness Test

1. Purpose. To assess a Marine's physical capacity in a broad spectrum of combat related tasks. The CFT was specifically designed to evaluate strength, stamina, agility and coordination as well as overall anaerobic capacity. The CFT is a complement to the PFT and measures the functional elements of combat fitness through execution of a series of events that represent every Marine's combat experience, emphasizing our ethos of "every Marine a rifleman."

2. Requirement

a. Active Component. The CFT is a scored, calendar year annual requirement for all active duty Marines, regardless of age, gender, grade, or duty assignment. It is required to be conducted in between 1 July and 31 December of each year.

b. Reserve Component. The CFT is a scored, calendar year annual requirement for all SMCR/IMA Marines, regardless of age, gender, grade, or duty assignment. CFT accomplishment will remain valid for two years for promotional purposes should operational constraints prevent annual testing. It is required to be conducted in between 1 July and 31 December of each year.

c. Activated Reservists. Activated Reserve Marines, to include AR, mobilized or those performing ADOS will comply with the Active Component CFT requirement. Exceptions and waivers will be administered in accordance with this Order.

d. End of Active Service (EAS)/Retirement. Marines are required to complete a CFT during the annual period preceding their EAS or retirement date, unless otherwise directed. The terminal leave date will not be utilized to determine CFT requirements.

e. EAS/Retirement Final Physical Examination. Completion of the required final physical examination, regardless of when completed, does not exempt a Marine from performing a CFT. A Marine, who elects to complete their final physical examination 7-12 months prior to EAS or retirement, is still required to perform the annual CFT for that period. This policy is also applicable to the Reserve Component annual requirement.

3. Sequence. The CFT consists of three events: Movement To Contact (MTC), Ammunition Lift (AL) and Maneuver Under Fire (MANUF). No deviation from the above sequence is authorized. All CFT events will be conducted in a single session, not to exceed 2 hours in duration. Transition between events should afford Marines adequate time to recover, stretch, hydrate and prepare for the next event. Rest between events will be no less than five (5) minutes.

4. Procedures

a. Safety. ORM will be utilized in order to ensure CFT participants are not exposed to unnecessary risk. If the MTC is conducted on a path, trail, or roadway, ORM measures will be taken to ensure safety of CFT participants.

b. Supervision. The CCI or CPTR will monitor the CFT and maintain the PFT/CFT Performance Worksheet. The CCI or designate will ensure proper techniques are employed during the AL and MANUF and will call out each repetition for the AL and time-passed (in intervals) for all events. The CCI will be posted at the start/finish point of the 880 yard run course and provide Marines their split time and finishing time for the MTC. Prior to the start of the MTC, the CCI will place monitors at various locations to encourage participants and ensure they remain on the course. During the MTC, the CCI will position the fastest runners towards the front and ensure participants are not placed too closely together to allow for a safe start. Because of the relative proximity and speed of runners throughout the MTC, the CCI will ensure the finish area remains clear.

c. Uniform. The only authorized uniform for the CFT is the Marine Pattern (MARPAT) utility uniform and boots. Watch cap, kneepads/elbow pads and gloves may be worn, as required. For the AL event, Marines will wear a green short-sleeve t-shirt so that lock out of the elbows can be observed. The blouse will be worn for the MANUF event. Commanders may authorize Marines to remove blouses for the running of the MTC event.

d. Equipment. The following equipment is required to conduct the CFT:

(1) A timepiece (digital or stopwatch) that accurately measures time to the second.

(2) Calibrated scale.

(3) Engineer tape, chalk or other fielding lining material.

(4) 100 foot measuring tape.

(5) Dummy grenade(s). It is preferred that the Grenade, Practice Hand (DODIC G811) is utilized for the CFT. Local commanders have the discretion to use a training aid of similar dimensions in place of a practice grenade when security requirements cannot be met or it is difficult to obtain the G811.

(6) M2A1 5.56mm ammunition cans weighing 30 pounds. A combination of sand and water of sufficient weight will be needed. Contents of can should not move excessively when lifted. Grip tape will be applied to the sides of the can to improve grip. Ammunition cans used expressly for the CFT should be appropriately marked in order to avoid confusion.

(7) Cones, pylons, utility flags, sand bags or other visible markers.

5. Events

a. Movement To Contact (MTC)

(1) This is a timed event that can be conducted either indoors or outdoors.

(2) The preparatory command is "Ready" and the execute command is "Go."

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(3) The run course will be 880 yards and must be measured for accuracy and set over reasonably level ground. Prior to the conduct of this event, the CCI/CPTR will ensure the running surface is free from hazards or debris that can cause injury to MTC participants.

(4) This event can be conducted on a track or measured surface and should not include numerous sharp turns that would force a participant to slow down excessively to remain on the course. A wide turnaround point will be implemented to prevent Marines from having to stop and turnaround, causing a loss in time on the event.

(5) Running this event on a treadmill is not authorized.

(6) The goal of this event is for Marines to complete the measured course as quickly as possible.

b. Ammunition Lift (AL)

(1) This is a timed event with a 2-minute time limit.

(2) This event can be conducted either indoors or outdoors.

(3) The preparatory command is "Ready" and the execute command is "Go."

(4) The AL is a repetitive lift of a 30-pound ammunition can from shoulder height to overhead.

(5) Prior to the start of the AL, Marines will be paired up by weight (within 10 pounds) and by approximate height in order to facilitate efficient transition to the MANUF.

(6) The partner counting repetitions will be located to the side (approx. 90 degree angle) of the Marine performing the AL in order to observe elbow lockout and prevent injury should the participant drop or return the ammunition can to the deck.

(7) When Marines are conducting the AL within close proximity, participants will conduct the event facing away from each other.

(8) Starting position for the AL is to hold the ammunition can sideways at shoulder height with both hands, handle facing away from the participant. The proper lifting technique is head up, chest elevated and lumbar curve maintained. Feet will remain shoulder-width apart or staggered in a basic-warrior stance position.

(9) The ammunition can must be lifted to a point overhead where the elbows are momentarily locked out. The ammunition can does not have to be lifted directly overhead. Once lock out is achieved, the ammunition can will be lowered to a point where the top of the can is at or below chin level. Once the ammo can is returned to this level, this counts as one repetition. To reach this level Marines may have to widen the distance between elbows. The top of the ammunition can is to remain parallel to the deck throughout the entire movement.

(10) A repetition will be counted when a correct and complete overhead lift is performed.

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(11) Marines are encouraged to use their legs to generate upward momentum of the ammunition can, especially when fatigued. There is no penalty if Marines choose not to use their legs. Alteration of stance during the AL is permissible.

(12) Marines are authorized to rest during the AL. The ammunition can may be held in the starting position or placed on the deck. If placed on the deck, the ammunition can will be lowered in a controlled movement and not thrown or dropped. Once lowered to the deck, no assistance can be provided when returning the ammunition can to the starting position. Proper technique will be utilized when returning to the starting position.

(13) The CCI or CPTR will monitor the event ensuring elbows are locked out and the ammunition can is lowered to a point at or just below the chin.

(14) The goal of this event is to complete as many correct and complete repetitions as possible in the 2-minute time limit.

c. Maneuver Under Fire (MANUF)

(1) The MANUF is a timed event to be conducted outdoors. The MANUF course should be constructed on a smooth and level grass surface, preferably a football or soccer field. Prior to the conduct of this event, the CCI/CPTR will ensure the running surface is free from hazards or debris that can cause injury to participants.

(2) The MANUF is a 300 yard shuttle run that includes a variety of combat-related tasks, to include crawls, buddy drags/carries, ammunition re-supply, grenade throw and agility running. See Tables 3-1 and 3-2 for MANUF layout.

(3) The number of monitors required is dependent upon the amount of lanes necessary to facilitate maximum throughput of a single running.

(4) The CCI or CPTR is the primary MANUF monitor. Each lane will have one field monitor positioned at the 25 yard line. One grenade pit observer will verify 2 lanes. The rank requirement for MANUF monitors is NCO or above. Grenade pit observers can be any rank. Monitors may rotate as necessary and are authorized to participate in the CFT. Mass starts for the MANUF is not necessary and individual field monitors can start Marines in their individual lanes upon approval of the CCI or CPTR.

For example, if eight MANUF lanes are established, thirteen monitors/observers are required: One primary MANUF monitor, eight field monitors and four grenade pit observers.

(5) Prior to execution, the primary monitor will partner Marines by weight (within 10 pounds) and approximate height (within 6 inches) and assign a lane.

(6) Prior to execution, the primary monitor will ensure partnered pairs are assigned lanes based upon MTC times (from fastest to slowest). Marines with the fastest MTC times will execute the MANUF first in order to ensure a uniform pace that facilitates overall supervision and safety of participants. The Marine from the partnered pair not executing the MANUF first will serve as the Simulated Casualty (SC).

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(7) Prior to execution, the primary monitor will direct designated SCs to proceed to the 75 yard line; sit up facing away with legs straight; one yard inboard from the right lateral limit of the assigned lane.

(8) Prior to execution, a dummy grenade will be placed in the center of each lane at the 75 yard line.

(9) Prior to execution, the primary monitor will ensure MANUF participants confirm their lane and SC location.

(10) Marines will start the MANUF while lying in the prone; chest on the ground; one yard inboard from the right lateral limit of the designated lane; on line with the SC located at the 75 yard line. Staggering placement of the legs is permitted.

(11) The preparatory command is "Ready" and the execute command is "Go." On the command "Go" Marines will rise and sprint to the 25 yard line.

(12) Upon reaching the 25 yard line, Marines will decelerate and execute a forward facing clockwise turn ("J" hook) around the marker placed one yard inboard from the right lateral limit of the lane. Once the forward facing turn has been executed, Marines will assume a high crawl position.

(13) With their chest on or behind the 25 yard line following the "J" hook, Marines will drop and execute a high crawl for 10 yards. The high crawl is characterized by the Marine maintaining contact with the ground with elbows, knees and torso.

(14) After high crawling 10 yards to the 35 yard line, Marines will then execute a modified high crawl for 15 yards to the 50 yard line. The modified high crawl is characterized by the Marine maintaining six (6) points of contact (hands, knees, and feet) with the ground.

(15) After reaching the 50 yard line, Marines will rise and negotiate a network of cones (utility flags/other markers) for 25 yards until reaching the 75 yard line. The SC will be seated at the 75 yard line with legs straight and forearms clasped together.

(16) Upon reaching the SC from the rear, Marines will prepare to conduct a casualty drag by reaching underneath and through the arms of the SC and obtaining a solid grasp on both forearms. Marines will then lift and drag the SC 10 yards through the first two cones at the 65 yard line. Marines will utilize proper lifting techniques by keeping the head up, chest elevated and the natural curve of the lumbar spine maintained. Field monitors may verbally guide Marines dragging the SC through the nearest two cones.

(17) Once the feet of the SC have passed the second cone, the field monitor will direct "Casualty Stand." Once the SC is fully erect, Marines will lift the SC into the Fireman's Carry position. Marines will utilize proper lifting techniques by keeping the head up, chest elevated and buttocks down. The Marine will ensure the SC is placed high on the shoulders. The SC will place the palm of one hand in the small of the back of the Marine doing the carry for support. Marines will then transport the SC 65 yards straight back to the start line without negotiating the remainder of the cone network. Stopping to rest and/or readjust is permitted.

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(18) Once the SC is passed through the start line, Marines will place the SC safely on the ground and lift two ammunition cans weighing 30 pounds each. Marines will utilize proper lifting techniques by keeping the head up, chest elevated and buttocks down. The Marine will transport the two 30 pound ammunition cans back to the 75 yard line, negotiating the cone network while en route.

(19) Upon reaching the 75 yard line, Marines will place the ammunition cans next to the dummy grenade while utilizing a good lowering technique by bending at the knees.

(20) Marines will pick up the dummy grenade and engage the grenade target from the standing position. After the grenade is thrown, Marines will immediately drop to the deck and execute three pushups. The grenade pit observer will signal to the field monitor both verbally and via hand signal whether the grenade throw was a hit or miss.

(21) To be counted as a hit, grenade throws must land directly in the grenade pit or strike the line marking the area. If the grenade lands in the grenade pit area, but rolls out, the throw is considered a hit. The field monitor will report the results of the grenade throw to the Marine after completion of the MANUF. Five seconds will be deducted from the overall MANUF time for hits and five seconds will be added to the overall MANUF time for misses.

(22) After conducting three properly executed push ups, Marines will pick up the ammunition cans, utilizing proper lifting techniques by keeping the head up, chest elevated and buttocks down. After negotiating the cone network, Marines will transport the ammunition cans back to the start line. The primary monitor will ensure a five yard buffer zone is maintained between the start/finish line and any personnel/equipment.

(23) The primary monitor will sound off as event time elapses. The field monitor will provide grenade throw results. Marines will provide MANUF times and grenade throw results at the conclusion of the event. Scores will be calculated as follows:

For example, a Marine with an overall MANUF time of 2:42 and had a hit on the grenade throw portion would report "2:42 with a hit." The Marine recording will mark the overall time for this Marine as 2:37.

(24) The goal of this event is for Marines to complete the measured course as quickly as possible.

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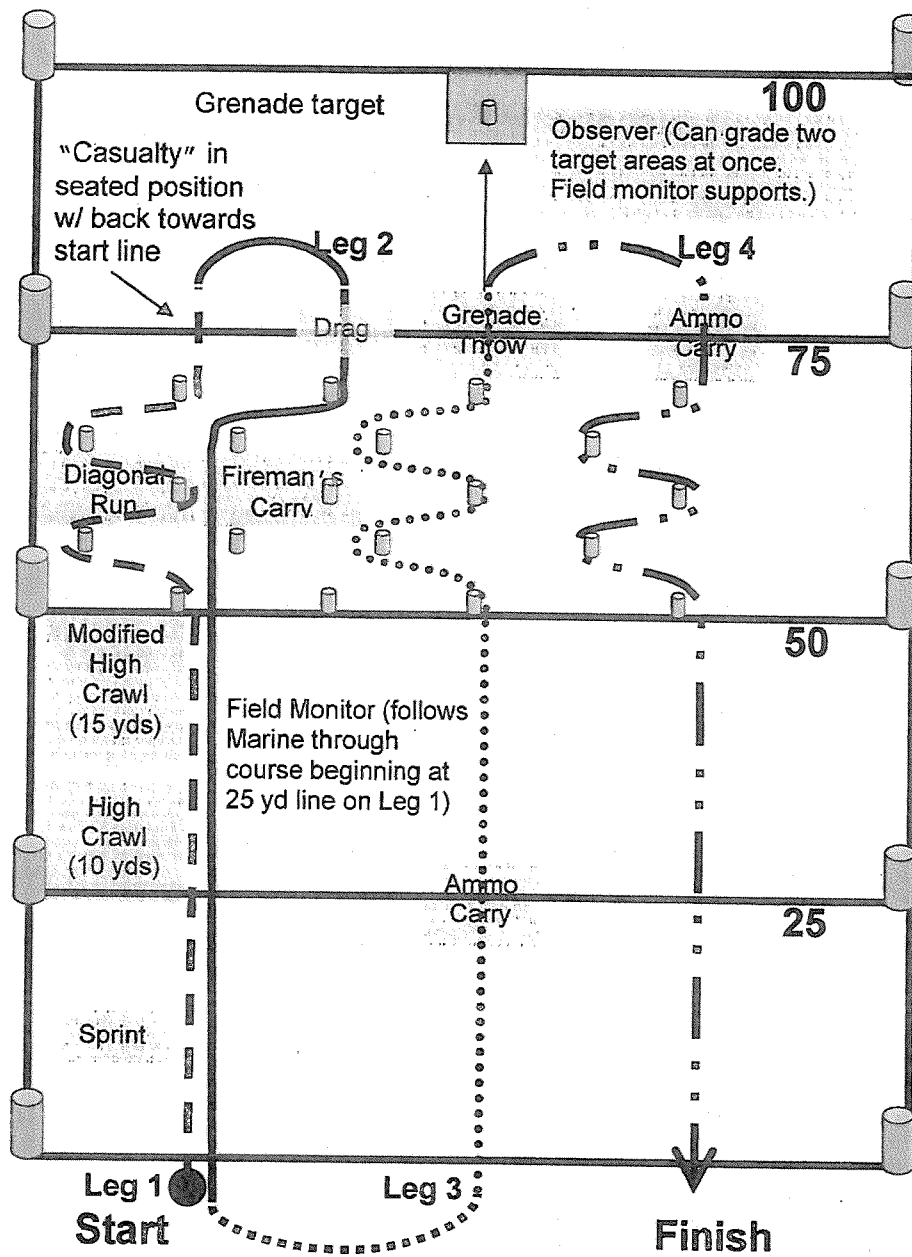


Table 3-1. -- Maneuver Under Fire Layout
(Diagram not to scale -- All events occur within same lane)

Lane Marking (Lane shown is left most lane)

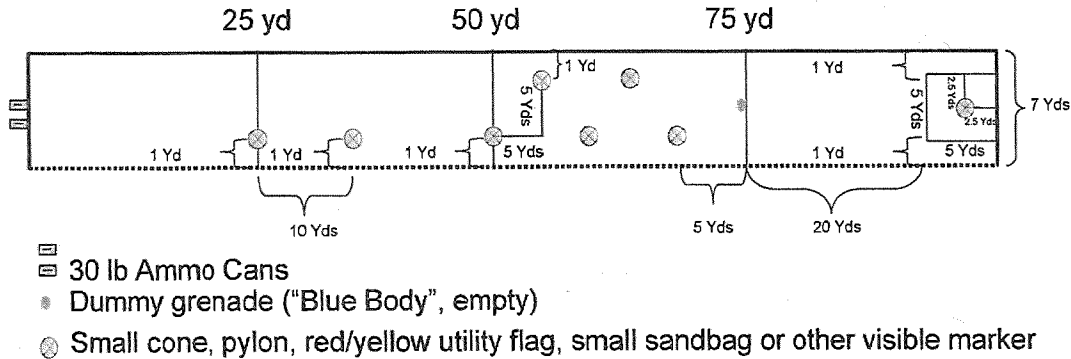


Table 3-2. -- Maneuver Under Fire Lane Marking

6. Performance. The minimum performance requirements for Marines to pass the CFT are contained in table 3-3. Marines must meet or exceed the minimum performance requirements for each event.

| CFT Minimum Requirements | | | | |
|--------------------------|-------|-------|-------|------|
| Male | | | | |
| | 17-26 | 27-39 | 40-45 | 46+ |
| MTC | 4:13 | 4:31 | 5:07 | 5:09 |
| AL | 33 | 28 | 17 | 16 |
| MANUF | 3:58 | 4:42 | 5:59 | 6:07 |
| Female | | | | |
| | 17-26 | 27-39 | 40-45 | 46+ |
| MTC | 5:27 | 5:28 | 5:35 | 5:50 |
| AL | 17 | 13 | 7 | 6 |
| MANUF | 5:59 | 6:04 | 6:25 | 6:30 |

Table 3-3. -- CFT Minimum Performance Requirements

7. Classification. CFT passing criteria has been derived from extensive testing of a wide sample population representing all demographics that comprise the Marine Corps Total Force. There are no differences or separate events based on gender or age. Maximum and minimum performance criteria were established utilizing specific performance percentiles, by age group. Marines must achieve the minimum performance requirement for all three events to successfully pass the CFT. Failure to meet the minimum requirement in any one event constitutes a failure of the entire test. CFT classifications for males/females for all age groups are as follows:

| CFT Classifications | |
|-----------------------|---------------|
| 1 st Class | 270-300 |
| 2 ^d Class | 225-269 |
| 3 rd Class | 190-224 |
| Fail | 189 and below |

Table 3-4. - CFT Classifications

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8. Score. The CFT is a scored event. Calculating a cumulative score for a completed CFT can be derived from Tables 3-5 through 3-7.

| MOVEMENT TO CONTACT | | | | | | | | |
|---------------------|-------|---|-------|---|-------|---|-----|---|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 2:45 | 100 | X | X | X | X | X | X | X |
| 2:46 | 99 | X | X | X | X | X | X | X |
| 2:47 | 99 | X | X | X | X | X | X | X |
| 2:48 | 98 | X | X | X | X | X | X | X |
| 2:49 | 98 | X | X | X | X | X | X | X |
| 2:50 | 97 | X | X | X | X | X | X | X |
| 2:51 | 97 | X | 100 | X | X | X | X | X |
| 2:52 | 96 | X | 99 | X | X | X | X | X |
| 2:53 | 96 | X | 99 | X | X | X | X | X |
| 2:54 | 95 | X | 98 | X | X | X | X | X |
| 2:55 | 95 | X | 98 | X | X | X | X | X |
| 2:56 | 95 | X | 97 | X | X | X | X | X |
| 2:57 | 94 | X | 97 | X | X | X | X | X |
| 2:58 | 94 | X | 97 | X | X | X | X | X |
| 2:59 | 93 | X | 96 | X | X | X | X | X |
| 3:00 | 93 | X | 96 | X | X | X | X | X |
| 3:01 | 92 | X | 95 | X | X | X | X | X |
| 3:02 | 92 | X | 95 | X | X | X | X | X |
| 3:03 | 91 | X | 95 | X | 100 | X | X | X |
| 3:04 | 91 | X | 94 | X | 99 | X | X | X |
| 3:05 | 91 | X | 94 | X | 99 | X | 100 | X |
| 3:06 | 90 | X | 93 | X | 99 | X | 99 | X |
| 3:07 | 90 | X | 93 | X | 99 | X | 99 | X |
| 3:08 | 89 | X | 93 | X | 98 | X | 99 | X |
| 3:09 | 89 | X | 92 | X | 98 | X | 99 | X |
| 3:10 | 88 | X | 92 | X | 98 | X | 98 | X |
| 3:11 | 88 | X | 91 | X | 97 | X | 98 | X |
| 3:12 | 87 | X | 91 | X | 97 | X | 98 | X |
| 3:13 | 87 | X | 91 | X | 97 | X | 97 | X |
| 3:14 | 87 | X | 90 | X | 97 | X | 97 | X |
| 3:15 | 86 | X | 90 | X | 96 | X | 97 | X |
| 3:16 | 86 | X | 89 | X | 96 | X | 96 | X |
| 3:17 | 85 | X | 89 | X | 96 | X | 96 | X |
| 3:18 | 85 | X | 88 | X | 95 | X | 96 | X |
| 3:19 | 84 | X | 88 | X | 95 | X | 95 | X |
| 3:20 | 84 | X | 88 | X | 95 | X | 95 | X |
| 3:21 | 83 | X | 87 | X | 94 | X | 95 | X |
| 3:22 | 83 | X | 87 | X | 94 | X | 95 | X |

Table 3-5. - Movement to Contact

MCO 6100.13 CH 1
10 Aug 09

MOVEMENT TO CONTACT

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|-----|-------|-----|-------|-----|-----|-----|
| | M. | F | M | F | M | F | M | F |
| 3:23 | 83 | 100 | 86 | X | 94 | X | 94 | X |
| 3:24 | 82 | 99 | 86 | X | 93 | X | 94 | X |
| 3:25 | 82 | 99 | 86 | X | 93 | X | 94 | X |
| 3:26 | 81 | 98 | 85 | X | 93 | X | 93 | X |
| 3:27 | 81 | 98 | 85 | X | 92 | X | 93 | X |
| 3:28 | 80 | 98 | 84 | X | 92 | X | 93 | X |
| 3:29 | 80 | 97 | 84 | X | 92 | X | 92 | X |
| 3:30 | 79 | 97 | 84 | 100 | 91 | X | 92 | X |
| 3:31 | 79 | 97 | 83 | 99 | 91 | X | 92 | X |
| 3:32 | 79 | 96 | 83 | 99 | 91 | X | 91 | X |
| 3:33 | 78 | 96 | 82 | 98 | 90 | X | 91 | X |
| 3:34 | 78 | 96 | 82 | 98 | 90 | X | 91 | X |
| 3:35 | 77 | 96 | 82 | 98 | 90 | X | 90 | X |
| 3:36 | 77 | 95 | 81 | 97 | 89 | X | 90 | X |
| 3:37 | 76 | 95 | 81 | 97 | 89 | X | 90 | X |
| 3:38 | 76 | 95 | 80 | 97 | 89 | X | 89 | X |
| 3:39 | 75 | 94 | 80 | 96 | 88 | X | 89 | X |
| 3:40 | 75 | 94 | 80 | 96 | 88 | X | 89 | X |
| 3:41 | 75 | 94 | 79 | 96 | 88 | X | 88 | X |
| 3:42 | 74 | 93 | 79 | 95 | 87 | X | 88 | X |
| 3:43 | 74 | 93 | 78 | 95 | 87 | X | 88 | X |
| 3:44 | 73 | 93 | 78 | 95 | 86 | X | 87 | X |
| 3:45 | 73 | 92 | 78 | 94 | 86 | X | 87 | X |
| 3:46 | 72 | 92 | 77 | 94 | 86 | X | 87 | X |
| 3:47 | 72 | 92 | 77 | 94 | 85 | X | 86 | X |
| 3:48 | 71 | 91 | 76 | 93 | 85 | X | 86 | X |
| 3:49 | 71 | 91 | 76 | 93 | 84 | 100 | 86 | X |
| 3:50 | 71 | 91 | 76 | 93 | 84 | 99 | 85 | X |
| 3:51 | 70 | 90 | 75 | 92 | 84 | 99 | 85 | X |
| 3:52 | 70 | 90 | 75 | 92 | 84 | 98 | 85 | X |
| 3:53 | 69 | 90 | 74 | 92 | 83 | 98 | 84 | X |
| 3:54 | 69 | 90 | 74 | 91 | 83 | 98 | 84 | X |
| 3:55 | 68 | 89 | 74 | 91 | 83 | 97 | 84 | 100 |
| 3:56 | 68 | 89 | 73 | 91 | 82 | 97 | 84 | 99 |
| 3:57 | 67 | 89 | 73 | 90 | 82 | 96 | 83 | 99 |
| 3:58 | 67 | 88 | 72 | 90 | 82 | 96 | 83 | 99 |
| 3:59 | 67 | 88 | 72 | 90 | 81 | 96 | 83 | 99 |
| 4:00 | 66 | 88 | 72 | 89 | 81 | 95 | 82 | 98 |
| 4:01 | 66 | 87 | 71 | 89 | 81 | 95 | 82 | 98 |
| 4:02 | 65 | 87 | 71 | 89 | 80 | 95 | 82 | 98 |
| 4:03 | 65 | 87 | 70 | 88 | 80 | 94 | 81 | 97 |
| 4:04 | 64 | 86 | 70 | 88 | 80 | 94 | 81 | 97 |

Table 3-5. - Movement to Contact

MCO 6100.13 CH 1
10 Aug 09

MOVEMENT TO CONTACT

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 4:05 | 64 | 86 | 70 | 88 | 79 | 93 | 81 | 97 |
| 4:06 | 63 | 86 | 69 | 87 | 79 | 93 | 80 | 96 |
| 4:07 | 63 | 85 | 69 | 87 | 79 | 93 | 80 | 96 |
| 4:08 | 63 | 85 | 68 | 87 | 78 | 92 | 80 | 96 |
| 4:09 | 62 | 85 | 68 | 86 | 78 | 92 | 79 | 95 |
| 4:10 | 62 | 85 | 67 | 86 | 78 | 92 | 79 | 95 |
| 4:11 | 61 | 84 | 67 | 86 | 77 | 91 | 79 | 95 |
| 4:12 | 61 | 84 | 67 | 85 | 77 | 91 | 78 | 94 |
| 4:13 | 60 | 84 | 66 | 85 | 77 | 90 | 78 | 94 |
| 4:14 | X | 83 | 66 | 85 | 77 | 90 | 78 | 94 |
| 4:15 | X | 83 | 65 | 84 | 76 | 90 | 77 | 93 |
| 4:16 | X | 83 | 65 | 84 | 76 | 89 | 77 | 93 |
| 4:17 | X | 82 | 65 | 84 | 76 | 89 | 77 | 93 |
| 4:18 | X | 82 | 64 | 83 | 75 | 89 | 76 | 92 |
| 4:19 | X | 82 | 64 | 83 | 75 | 88 | 76 | 92 |
| 4:20 | X | 81 | 63 | 83 | 75 | 88 | 76 | 92 |
| 4:21 | X | 81 | 63 | 83 | 74 | 88 | 75 | 91 |
| 4:22 | X | 81 | 63 | 82 | 74 | 87 | 75 | 91 |
| 4:23 | X | 80 | 62 | 82 | 74 | 87 | 75 | 91 |
| 4:24 | X | 80 | 62 | 82 | 73 | 86 | 74 | 90 |
| 4:25 | X | 80 | 61 | 81 | 73 | 86 | 74 | 90 |
| 4:26 | X | 79 | 61 | 81 | 73 | 86 | 74 | 89 |
| 4:27 | X | 79 | 61 | 81 | 72 | 85 | 74 | 89 |
| 4:28 | X | 79 | 60 | 80 | 72 | 85 | 73 | 89 |
| 4:29 | X | 79 | X | 80 | 72 | 85 | 73 | 88 |
| 4:30 | X | 78 | X | 80 | 71 | 84 | 73 | 88 |
| 4:31 | X | 78 | X | 79 | 71 | 84 | 72 | 88 |
| 4:32 | X | 78 | X | 79 | 71 | 83 | 72 | 87 |
| 4:33 | X | 77 | X | 79 | 71 | 83 | 72 | 87 |
| 4:34 | X | 77 | X | 78 | 70 | 83 | 71 | 87 |
| 4:35 | X | 77 | X | 78 | 70 | 82 | 71 | 86 |
| 4:36 | X | 76 | X | 78 | 70 | 82 | 71 | 86 |
| 4:37 | X | 76 | X | 77 | 69 | 82 | 70 | 86 |
| 4:38 | X | 76 | X | 77 | 69 | 81 | 70 | 85 |
| 4:39 | X | 75 | X | 77 | 69 | 81 | 70 | 85 |
| 4:40 | X | 75 | X | 76 | 68 | 80 | 69 | 85 |
| 4:41 | X | 75 | X | 76 | 68 | 80 | 69 | 84 |
| 4:42 | X | 74 | X | 76 | 68 | 80 | 69 | 84 |
| 4:43 | X | 74 | X | 75 | 67 | 79 | 68 | 84 |
| 4:44 | X | 74 | X | 75 | 67 | 79 | 68 | 83 |
| 4:45 | X | 73 | X | 75 | 67 | 79 | 68 | 83 |
| 4:46 | X | 73 | X | 74 | 66 | 78 | 67 | 83 |
| 4:47 | X | 73 | X | 74 | 66 | 78 | 67 | 82 |

Table 3-5. - Movement to Contact
3-11

Enclosure (1)

MCO 6100.13 CH 1
10 Aug 09

MOVEMENT TO CONTACT

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 4:48 | X | 73 | X | 74 | 66 | 78 | 67 | 82 |
| 4:49 | X | 72 | X | 73 | 65 | 77 | 66 | 82 |
| 4:50 | X | 72 | X | 73 | 65 | 77 | 66 | 81 |
| 4:51 | X | 72 | X | 73 | 65 | 76 | 66 | 81 |
| 4:52 | X | 71 | X | 72 | 64 | 76 | 65 | 81 |
| 4:53 | X | 71 | X | 72 | 64 | 76 | 65 | 80 |
| 4:54 | X | 71 | X | 72 | 64 | 75 | 65 | 80 |
| 4:55 | X | 70 | X | 71 | 64 | 75 | 64 | 80 |
| 4:56 | X | 70 | X | 71 | 63 | 75 | 64 | 79 |
| 4:57 | X | 70 | X | 71 | 63 | 74 | 64 | 79 |
| 4:58 | X | 69 | X | 70 | 63 | 74 | 63 | 79 |
| 4:59 | X | 69 | X | 70 | 62 | 73 | 63 | 78 |
| 5:00 | X | 69 | X | 70 | 62 | 73 | 63 | 78 |
| 5:01 | X | 68 | X | 69 | 62 | 73 | 62 | 78 |
| 5:02 | X | 68 | X | 69 | 61 | 72 | 62 | 77 |
| 5:03 | X | 68 | X | 69 | 61 | 72 | 62 | 77 |
| 5:04 | X | 68 | X | 68 | 61 | 72 | 61 | 77 |
| 5:05 | X | 67 | X | 68 | 60 | 71 | 61 | 76 |
| 5:06 | X | 67 | X | 68 | X | 71 | 61 | 76 |
| 5:07 | X | 67 | X | 67 | X | 71 | 60 | 76 |
| 5:08 | X | 66 | X | 67 | X | 70 | X | 75 |
| 5:09 | X | 66 | X | 67 | X | 70 | X | 75 |
| 5:10 | X | 66 | X | 66 | X | 69 | X | 75 |
| 5:11 | X | 65 | X | 66 | X | 69 | X | 74 |
| 5:12 | X | 65 | X | 66 | X | 69 | X | 74 |
| 5:13 | X | 65 | X | 65 | X | 68 | X | 74 |
| 5:14 | X | 64 | X | 65 | X | 68 | X | 73 |
| 5:15 | X | 64 | X | 65 | X | 68 | X | 73 |
| 5:16 | X | 64 | X | 64 | X | 67 | X | 73 |
| 5:17 | X | 63 | X | 64 | X | 67 | X | 72 |
| 5:18 | X | 63 | X | 64 | X | 66 | X | 72 |
| 5:19 | X | 63 | X | 63 | X | 66 | X | 72 |
| 5:20 | X | 62 | X | 63 | X | 66 | X | 71 |
| 5:21 | X | 62 | X | 63 | X | 65 | X | 71 |
| 5:22 | X | 62 | X | 62 | X | 65 | X | 71 |
| 5:23 | X | 62 | X | 62 | X | 65 | X | 70 |
| 5:24 | X | 61 | X | 62 | X | 64 | X | 70 |
| 5:25 | X | 61 | X | 61 | X | 64 | X | 69 |
| 5:26 | X | 61 | X | 61 | X | 63 | X | 69 |
| 5:27 | X | 60 | X | 61 | X | 63 | X | 69 |
| 5:28 | X | X | X | 60 | X | 63 | X | 68 |
| 5:29 | X | X | X | X | X | 62 | X | 68 |
| 5:30 | X | X | X | X | X | 62 | X | 68 |

Table 3-5. - Movement to Contact
3-12

Enclosure (1)

MCO 6100.13 CH 1
10 Aug 09

MOVEMENT TO CONTACT

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|---|-------|---|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 5:31 | X | X | X | X | X | 62 | X | 67 |
| 5:32 | X | X | X | X | X | 61 | X | 67 |
| 5:33 | X | X | X | X | X | 61 | X | 67 |
| 5:34 | X | X | X | X | X | 61 | X | 66 |
| 5:35 | X | X | X | X | X | 60 | X | 66 |
| 5:36 | X | X | X | X | X | 60 | X | 66 |
| 5:37 | X | X | X | X | X | X | X | 65 |
| 5:38 | X | X | X | X | X | X | X | 65 |
| 5:39 | X | X | X | X | X | X | X | 65 |
| 5:40 | X | X | X | X | X | X | X | 64 |
| 5:41 | X | X | X | X | X | X | X | 64 |
| 5:42 | X | X | X | X | X | X | X | 64 |
| 5:43 | X | X | X | X | X | X | X | 63 |
| 5:44 | X | X | X | X | X | X | X | 63 |
| 5:45 | X | X | X | X | X | X | X | 63 |
| 5:46 | X | X | X | X | X | X | X | 62 |
| 5:47 | X | X | X | X | X | X | X | 62 |
| 5:48 | X | X | X | X | X | X | X | 62 |
| 5:49 | X | X | X | X | X | X | X | 61 |
| 5:50 | X | X | X | X | X | X | X | 61 |
| 5:51 | X | X | X | X | X | X | X | 61 |
| 5:52 | X | X | X | X | X | X | X | 60 |

Table 3-5. - Movement to Contact

AMMO LIFT

| REPS | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|-----|-------|-----|-------|---|-----|---|
| | M | F | M | F | M | F | M | F |
| 97 | x | x | 100 | x | x | x | x | x |
| 96 | x | x | 99 | x | x | x | x | x |
| 95 | x | x | 99 | x | x | x | x | x |
| 94 | x | x | 98 | x | x | x | x | x |
| 93 | x | x | 98 | x | x | x | x | x |
| 92 | x | x | 97 | x | x | x | x | x |
| 91 | 100 | x | 97 | x | x | x | x | x |
| 90 | 99 | x | 96 | x | x | x | x | x |
| 89 | 99 | x | 95 | x | 100 | x | x | x |
| 88 | 98 | x | 95 | x | 99 | x | x | x |
| 87 | 97 | x | 94 | x | 99 | x | x | x |
| 86 | 97 | x | 94 | x | 98 | x | 100 | x |
| 85 | 96 | x | 93 | x | 98 | x | 99 | x |
| 84 | 95 | x | 92 | x | 97 | x | 99 | x |
| 83 | 94 | x | 92 | x | 97 | x | 98 | x |
| 82 | 94 | x | 91 | x | 96 | x | 98 | x |
| 81 | 93 | x | 91 | x | 96 | x | 97 | x |
| 80 | 92 | x | 90 | x | 95 | x | 97 | x |
| 79 | 92 | x | 90 | x | 95 | x | 96 | x |
| 78 | 91 | x | 89 | x | 94 | x | 95 | x |
| 77 | 90 | x | 88 | x | 93 | x | 95 | x |
| 76 | 90 | x | 88 | x | 93 | x | 94 | x |
| 75 | 89 | x | 87 | x | 92 | x | 94 | x |
| 74 | 88 | x | 87 | x | 92 | x | 93 | x |
| 73 | 88 | x | 86 | x | 91 | x | 93 | x |
| 72 | 87 | x | 86 | x | 91 | x | 92 | x |
| 71 | 86 | x | 85 | x | 90 | x | 91 | x |
| 70 | 86 | x | 84 | x | 90 | x | 91 | x |
| 69 | 85 | x | 84 | x | 89 | x | 90 | x |
| 68 | 84 | x | 83 | x | 88 | x | 90 | x |
| 67 | 83 | x | 83 | x | 88 | x | 89 | x |
| 66 | 83 | x | 82 | x | 87 | x | 89 | x |
| 65 | 82 | x | 81 | x | 87 | x | 88 | x |
| 64 | 81 | x | 81 | x | 86 | x | 87 | x |
| 63 | 81 | x | 80 | 100 | 86 | x | 87 | x |
| 62 | 80 | x | 80 | 99 | 85 | x | 86 | x |
| 61 | 79 | x | 79 | 98 | 85 | x | 86 | x |
| 60 | 79 | 100 | 79 | 98 | 84 | x | 85 | x |
| 59 | 78 | 99 | 78 | 97 | 84 | x | 85 | x |
| 58 | 77 | 98 | 77 | 96 | 83 | x | 84 | x |
| 57 | 77 | 97 | 77 | 95 | 82 | x | 83 | x |
| 56 | 76 | 96 | 76 | 94 | 82 | x | 83 | x |
| 55 | 75 | 95 | 76 | 94 | 81 | x | 82 | x |
| 54 | 74 | 94 | 75 | 93 | 81 | x | 82 | x |
| 53 | 74 | 93 | 74 | 92 | 80 | x | 81 | x |
| 52 | 73 | 93 | 74 | 91 | 80 | x | 81 | x |

Table 3-6. - Ammo Lift

AMMO LIFT

| REPS | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|-----|-----|-----|
| | M | F | M | F | M | F | M | F |
| 51 | 72 | 92 | 73 | 90 | 79 | x | 80 | x |
| 50 | 72 | 91 | 73 | 90 | 79 | x | 79 | x |
| 49 | 71 | 90 | 72 | 89 | 78 | x | 79 | x |
| 48 | 70 | 89 | 72 | 88 | 77 | x | 78 | x |
| 47 | 70 | 88 | 71 | 87 | 77 | x | 78 | x |
| 46 | 69 | 87 | 70 | 86 | 76 | x | 77 | x |
| 45 | 68 | 86 | 70 | 86 | 76 | 100 | 77 | x |
| 44 | 68 | 85 | 69 | 85 | 75 | 99 | 76 | x |
| 43 | 67 | 84 | 69 | 84 | 75 | 98 | 75 | x |
| 42 | 66 | 83 | 68 | 83 | 74 | 97 | 75 | x |
| 41 | 66 | 82 | 68 | 82 | 74 | 96 | 74 | 100 |
| 40 | 65 | 81 | 67 | 82 | 73 | 95 | 74 | 99 |
| 39 | 64 | 80 | 66 | 81 | 73 | 94 | 73 | 98 |
| 38 | 63 | 80 | 66 | 80 | 72 | 93 | 73 | 97 |
| 37 | 63 | 79 | 65 | 79 | 71 | 92 | 72 | 96 |
| 36 | 62 | 78 | 65 | 78 | 71 | 91 | 72 | 95 |
| 35 | 61 | 77 | 64 | 78 | 70 | 90 | 71 | 94 |
| 34 | 61 | 76 | 63 | 77 | 70 | 89 | 70 | 93 |
| 33 | 60 | 75 | 63 | 76 | 69 | 88 | 70 | 92 |
| 32 | x | 74 | 62 | 75 | 69 | 87 | 69 | 91 |
| 31 | x | 73 | 62 | 74 | 68 | 86 | 69 | 90 |
| 30 | x | 72 | 61 | 74 | 68 | 85 | 68 | 89 |
| 29 | x | 71 | 61 | 73 | 67 | 84 | 68 | 88 |
| 28 | x | 70 | 60 | 72 | 66 | 83 | 67 | 86 |
| 27 | x | 69 | x | 71 | 66 | 82 | 66 | 85 |
| 26 | x | 68 | x | 70 | 65 | 81 | 66 | 84 |
| 25 | x | 67 | x | 70 | 65 | 80 | 65 | 83 |
| 24 | x | 67 | x | 69 | 64 | 79 | 65 | 81 |
| 23 | x | 66 | x | 68 | 64 | 78 | 64 | 80 |
| 22 | x | 65 | x | 67 | 63 | 77 | 64 | 79 |
| 21 | x | 64 | x | 66 | 63 | 76 | 63 | 78 |
| 20 | x | 63 | x | 66 | 62 | 75 | 62 | 76 |
| 19 | x | 62 | x | 65 | 62 | 74 | 62 | 75 |
| 18 | x | 61 | x | 64 | 61 | 73 | 61 | 74 |
| 17 | x | 60 | x | 63 | 60 | 72 | 61 | 73 |
| 16 | x | x | x | 62 | x | 71 | 60 | 71 |
| 15 | x | x | x | 62 | x | 70 | x | 70 |
| 14 | x | x | x | 61 | x | 69 | x | 69 |
| 13 | x | x | x | 60 | x | 68 | x | 68 |
| 12 | x | x | x | x | x | 66 | x | 66 |
| 11 | x | x | x | x | x | 65 | x | 65 |
| 10 | x | x | x | x | x | 64 | x | 64 |
| 9 | x | x | x | x | x | 63 | x | 63 |
| 8 | x | x | x | x | x | 61 | x | 62 |
| 7 | x | x | x | x | x | 60 | x | 61 |
| 6 | x | x | x | x | x | x | x | 60 |

Table 3-6. - Ammo Lift

MANEUVER UNDER FIRE

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|---|-------|---|-------|---|-----|---|
| | M | F | M | F | M | F | M | F |
| 2:14 | 100 | X | X | X | X | X | X | X |
| 2:15 | 99 | X | X | X | X | X | X | X |
| 2:16 | 99 | X | X | X | X | X | X | X |
| 2:17 | 98 | X | X | X | X | X | X | X |
| 2:18 | 98 | X | X | X | X | X | X | X |
| 2:19 | 97 | X | X | X | X | X | X | X |
| 2:20 | 97 | X | X | X | X | X | X | X |
| 2:21 | 97 | X | X | X | X | X | X | X |
| 2:22 | 96 | X | X | X | X | X | X | X |
| 2:23 | 96 | X | X | X | X | X | X | X |
| 2:24 | 96 | X | X | X | X | X | X | X |
| 2:25 | 95 | X | X | X | X | X | X | X |
| 2:26 | 95 | X | 100 | X | X | X | X | X |
| 2:27 | 94 | X | 99 | X | X | X | X | X |
| 2:28 | 94 | X | 99 | X | X | X | X | X |
| 2:29 | 94 | X | 99 | X | X | X | X | X |
| 2:30 | 93 | X | 99 | X | X | X | X | X |
| 2:31 | 93 | X | 99 | X | X | X | X | X |
| 2:32 | 93 | X | 98 | X | X | X | X | X |
| 2:33 | 92 | X | 98 | X | X | X | X | X |
| 2:34 | 92 | X | 98 | X | 100 | X | X | X |
| 2:35 | 91 | X | 97 | X | 99 | X | X | X |
| 2:36 | 91 | X | 97 | X | 99 | X | X | X |
| 2:37 | 91 | X | 97 | X | 99 | X | X | X |
| 2:38 | 90 | X | 96 | X | 99 | X | X | X |
| 2:39 | 90 | X | 96 | X | 98 | X | X | X |
| 2:40 | 90 | X | 96 | X | 98 | X | X | X |
| 2:41 | 89 | X | 96 | X | 98 | X | X | X |
| 2:42 | 89 | X | 95 | X | 98 | X | X | X |
| 2:43 | 88 | X | 95 | X | 98 | X | X | X |
| 2:44 | 88 | X | 95 | X | 97 | X | X | X |
| 2:45 | 88 | X | 94 | X | 97 | X | X | X |
| 2:46 | 87 | X | 94 | X | 97 | X | X | X |
| 2:47 | 87 | X | 94 | X | 97 | X | X | X |
| 2:48 | 87 | X | 94 | X | 97 | X | X | X |
| 2:49 | 86 | X | 93 | X | 97 | X | X | X |
| 2:50 | 86 | X | 93 | X | 96 | X | X | X |
| 2:51 | 85 | X | 93 | X | 96 | X | X | X |
| 2:52 | 85 | X | 92 | X | 96 | X | 100 | X |
| 2:53 | 85 | X | 92 | X | 96 | X | 99 | X |
| 2:54 | 84 | X | 92 | X | 96 | X | 99 | X |
| 2:55 | 84 | X | 92 | X | 95 | X | 99 | X |
| 2:56 | 84 | X | 91 | X | 95 | X | 99 | X |
| 2:57 | 83 | X | 91 | X | 95 | X | 98 | X |
| 2:58 | 83 | X | 91 | X | 95 | X | 98 | X |
| 2:59 | 82 | X | 90 | X | 95 | X | 98 | X |
| 3:00 | 82 | X | 90 | X | 94 | X | 98 | X |

Table 3-7. - Maneuver Under Fire

| MANEUVER UNDER FIRE | | | | | | | | |
|---------------------|-------|-----|-------|-----|-------|-----|-----|-----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 3:01 | 82 | 100 | 90 | X | 94 | X | 98 | X |
| 3:02 | 81 | 99 | 89 | X | 94 | X | 97 | X |
| 3:03 | 81 | 99 | 89 | X | 94 | X | 97 | X |
| 3:04 | 81 | 99 | 89 | X | 94 | X | 97 | X |
| 3:05 | 80 | 99 | 89 | X | 93 | X | 97 | X |
| 3:06 | 80 | 99 | 88 | X | 93 | X | 97 | X |
| 3:07 | 79 | 99 | 88 | 100 | 93 | X | 96 | X |
| 3:08 | 79 | 98 | 88 | 99 | 93 | X | 96 | X |
| 3:09 | 79 | 98 | 87 | 99 | 93 | X | 96 | X |
| 3:10 | 78 | 98 | 87 | 99 | 93 | X | 96 | X |
| 3:11 | 78 | 98 | 87 | 99 | 92 | X | 96 | X |
| 3:12 | 78 | 98 | 87 | 98 | 92 | X | 95 | X |
| 3:13 | 77 | 97 | 86 | 98 | 92 | X | 95 | X |
| 3:14 | 77 | 97 | 86 | 98 | 92 | X | 95 | X |
| 3:15 | 76 | 97 | 86 | 98 | 92 | X | 95 | X |
| 3:16 | 76 | 97 | 85 | 97 | 91 | X | 95 | X |
| 3:17 | 76 | 96 | 85 | 97 | 91 | X | 94 | X |
| 3:18 | 75 | 96 | 85 | 97 | 91 | X | 94 | X |
| 3:19 | 75 | 96 | 85 | 97 | 91 | X | 94 | X |
| 3:20 | 74 | 96 | 84 | 97 | 91 | X | 94 | X |
| 3:21 | 74 | 96 | 84 | 96 | 90 | 100 | 94 | X |
| 3:22 | 74 | 95 | 84 | 96 | 90 | 99 | 93 | X |
| 3:23 | 73 | 95 | 83 | 96 | 90 | 99 | 93 | X |
| 3:24 | 73 | 95 | 83 | 96 | 90 | 99 | 93 | X |
| 3:25 | 73 | 95 | 83 | 95 | 90 | 99 | 93 | X |
| 3:26 | 72 | 95 | 82 | 95 | 90 | 98 | 93 | X |
| 3:27 | 72 | 94 | 82 | 95 | 89 | 98 | 92 | X |
| 3:28 | 71 | 94 | 82 | 95 | 89 | 98 | 92 | X |
| 3:29 | 71 | 94 | 82 | 95 | 89 | 98 | 92 | X |
| 3:30 | 71 | 94 | 81 | 94 | 89 | 98 | 92 | X |
| 3:31 | 70 | 93 | 81 | 94 | 89 | 97 | 92 | X |
| 3:32 | 70 | 93 | 81 | 94 | 88 | 97 | 91 | X |
| 3:33 | 70 | 93 | 80 | 94 | 88 | 97 | 91 | X |
| 3:34 | 69 | 93 | 80 | 93 | 88 | 97 | 91 | X |
| 3:35 | 69 | 93 | 80 | 93 | 88 | 96 | 91 | X |
| 3:36 | 68 | 92 | 80 | 93 | 88 | 96 | 91 | X |
| 3:37 | 68 | 92 | 79 | 93 | 87 | 96 | 90 | X |
| 3:38 | 68 | 92 | 79 | 93 | 87 | 96 | 90 | X |
| 3:39 | 67 | 92 | 79 | 92 | 87 | 96 | 90 | X |
| 3:40 | 67 | 91 | 78 | 92 | 87 | 95 | 90 | X |
| 3:41 | 67 | 91 | 78 | 92 | 87 | 95 | 90 | X |
| 3:42 | 66 | 91 | 78 | 92 | 86 | 95 | 89 | X |
| 3:43 | 66 | 91 | 78 | 91 | 86 | 95 | 89 | X |
| 3:44 | 65 | 91 | 77 | 91 | 86 | 95 | 89 | 100 |
| 3:45 | 65 | 90 | 77 | 91 | 86 | 94 | 89 | 99 |
| 3:46 | 65 | 90 | 77 | 91 | 86 | 94 | 88 | 99 |

Table 3-7. - Maneuver Under Fire

MANEUVER UNDER FIRE

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 3:47 | 64 | 90 | 76 | 91 | 86 | 94 | 88 | 99 |
| 3:48 | 64 | 90 | 76 | 90 | 85 | 94 | 88 | 99 |
| 3:49 | 64 | 89 | 76 | 90 | 85 | 93 | 88 | 99 |
| 3:50 | 63 | 89 | 75 | 90 | 85 | 93 | 88 | 99 |
| 3:51 | 63 | 89 | 75 | 90 | 85 | 93 | 87 | 98 |
| 3:52 | 62 | 89 | 75 | 89 | 85 | 93 | 87 | 98 |
| 3:53 | 62 | 89 | 75 | 89 | 84 | 93 | 87 | 98 |
| 3:54 | 62 | 88 | 74 | 89 | 84 | 92 | 87 | 98 |
| 3:55 | 61 | 88 | 74 | 89 | 84 | 92 | 87 | 97 |
| 3:56 | 61 | 88 | 74 | 89 | 84 | 92 | 86 | 97 |
| 3:57 | 61 | 88 | 73 | 88 | 84 | 92 | 86 | 97 |
| 3:58 | 60 | 88 | 73 | 88 | 83 | 92 | 86 | 97 |
| 3:59 | x | 87 | 73 | 88 | 83 | 91 | 86 | 96 |
| 4:00 | x | 87 | 73 | 88 | 83 | 91 | 86 | 96 |
| 4:01 | x | 87 | 72 | 88 | 83 | 91 | 85 | 96 |
| 4:02 | x | 87 | 72 | 87 | 83 | 91 | 85 | 96 |
| 4:03 | x | 86 | 72 | 87 | 82 | 91 | 85 | 96 |
| 4:04 | x | 86 | 71 | 87 | 82 | 90 | 85 | 95 |
| 4:05 | x | 86 | 71 | 87 | 82 | 90 | 85 | 95 |
| 4:06 | x | 86 | 71 | 86 | 82 | 90 | 84 | 95 |
| 4:07 | x | 86 | 71 | 86 | 82 | 90 | 84 | 95 |
| 4:08 | x | 85 | 70 | 86 | 82 | 89 | 84 | 94 |
| 4:09 | x | 85 | 70 | 86 | 81 | 89 | 84 | 94 |
| 4:10 | x | 85 | 70 | 86 | 81 | 89 | 84 | 94 |
| 4:11 | x | 85 | 69 | 85 | 81 | 89 | 83 | 94 |
| 4:12 | x | 84 | 69 | 85 | 81 | 89 | 83 | 93 |
| 4:13 | x | 84 | 69 | 85 | 81 | 88 | 83 | 93 |
| 4:14 | x | 84 | 68 | 85 | 80 | 88 | 83 | 93 |
| 4:15 | x | 84 | 68 | 84 | 80 | 88 | 83 | 93 |
| 4:16 | x | 84 | 68 | 84 | 80 | 88 | 82 | 92 |
| 4:17 | x | 83 | 68 | 84 | 80 | 88 | 82 | 92 |
| 4:18 | x | 83 | 67 | 84 | 80 | 87 | 82 | 92 |
| 4:19 | x | 83 | 67 | 84 | 79 | 87 | 82 | 92 |
| 4:20 | x | 83 | 67 | 83 | 79 | 87 | 82 | 92 |
| 4:21 | x | 82 | 66 | 83 | 79 | 87 | 81 | 91 |
| 4:22 | x | 82 | 66 | 83 | 79 | 86 | 81 | 91 |
| 4:23 | x | 82 | 66 | 83 | 79 | 86 | 81 | 91 |
| 4:24 | x | 82 | 66 | 82 | 78 | 86 | 81 | 91 |
| 4:25 | x | 82 | 65 | 82 | 78 | 86 | 81 | 90 |
| 4:26 | x | 81 | 65 | 82 | 78 | 86 | 80 | 90 |
| 4:27 | x | 81 | 65 | 82 | 78 | 85 | 80 | 90 |
| 4:28 | x | 81 | 64 | 82 | 78 | 85 | 80 | 90 |
| 4:29 | x | 81 | 64 | 81 | 78 | 85 | 80 | 89 |
| 4:30 | x | 81 | 64 | 81 | 77 | 85 | 80 | 89 |

Table 3-7. - Maneuver Under Fire

MANEUVER UNDER FIRE

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 4:31 | X | 80 | 63 | 81 | 77 | 85 | 79 | 89 |
| 4:32 | X | 80 | 63 | 81 | 77 | 84 | 79 | 89 |
| 4:33 | X | 80 | 63 | 80 | 77 | 84 | 79 | 88 |
| 4:34 | X | 80 | 63 | 80 | 77 | 84 | 79 | 88 |
| 4:35 | X | 79 | 62 | 80 | 76 | 84 | 79 | 88 |
| 4:35 | X | 79 | 62 | 80 | 76 | 84 | 79 | 88 |
| 4:36 | X | 79 | 62 | 80 | 76 | 84 | 78 | 88 |
| 4:37 | X | 79 | 62 | 80 | 76 | 83 | 78 | 88 |
| 4:38 | X | 79 | 61 | 79 | 76 | 83 | 78 | 87 |
| 4:39 | X | 79 | 61 | 79 | 76 | 83 | 78 | 87 |
| 4:40 | X | 78 | 61 | 79 | 75 | 83 | 78 | 87 |
| 4:41 | X | 78 | 61 | 79 | 75 | 82 | 77 | 87 |
| 4:42 | X | 78 | 60 | 78 | 75 | 82 | 77 | 86 |
| 4:43 | X | 78 | X | 78 | 75 | 82 | 77 | 86 |
| 4:44 | X | 77 | X | 78 | 75 | 82 | 77 | 86 |
| 4:45 | X | 77 | X | 78 | 74 | 82 | 77 | 86 |
| 4:46 | X | 77 | X | 78 | 74 | 81 | 76 | 85 |
| 4:47 | X | 77 | X | 77 | 74 | 81 | 76 | 85 |
| 4:48 | X | 77 | X | 77 | 74 | 81 | 76 | 85 |
| 4:49 | X | 76 | X | 77 | 74 | 81 | 76 | 85 |
| 4:50 | X | 76 | X | 77 | 74 | 81 | 76 | 84 |
| 4:51 | X | 76 | X | 76 | 73 | 80 | 75 | 84 |
| 4:52 | X | 76 | X | 76 | 73 | 80 | 75 | 84 |
| 4:53 | X | 75 | X | 76 | 73 | 80 | 75 | 84 |
| 4:54 | X | 75 | X | 76 | 73 | 80 | 75 | 84 |
| 4:55 | X | 75 | X | 76 | 73 | 79 | 75 | 83 |
| 4:56 | X | 75 | X | 75 | 72 | 79 | 74 | 83 |
| 4:57 | X | 75 | X | 75 | 72 | 79 | 74 | 83 |
| 4:58 | X | 74 | X | 75 | 72 | 79 | 74 | 83 |
| 4:59 | X | 74 | X | 75 | 72 | 79 | 74 | 82 |
| 5:00 | X | 74 | X | 74 | 72 | 78 | 74 | 82 |
| 5:01 | X | 74 | X | 74 | 71 | 78 | 73 | 82 |
| 5:02 | X | 74 | X | 74 | 71 | 78 | 73 | 82 |
| 5:03 | X | 73 | X | 74 | 71 | 78 | 73 | 81 |
| 5:04 | X | 73 | X | 74 | 71 | 78 | 73 | 81 |
| 5:05 | X | 73 | X | 73 | 71 | 77 | 73 | 81 |
| 5:06 | X | 73 | X | 73 | 71 | 77 | 72 | 81 |
| 5:07 | X | 72 | X | 73 | 70 | 77 | 72 | 80 |
| 5:08 | X | 72 | X | 73 | 70 | 77 | 72 | 80 |
| 5:09 | X | 72 | X | 72 | 70 | 77 | 72 | 80 |
| 5:10 | X | 72 | X | 72 | 70 | 76 | 72 | 80 |
| 5:11 | X | 72 | X | 72 | 70 | 76 | 71 | 80 |
| 5:12 | X | 71 | X | 72 | 69 | 76 | 71 | 79 |
| 5:13 | X | 71 | X | 72 | 69 | 76 | 71 | 79 |

Table 3-7. - Maneuver Under Fire

MANEUVER UNDER FIRE

| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
|------|-------|----|-------|----|-------|----|-----|----|
| | M | F | M | F | M | F | M | F |
| 5:13 | x | 71 | x | 72 | 69 | 76 | 71 | 79 |
| 5:14 | x | 71 | x | 71 | 69 | 75 | 71 | 79 |
| 5:15 | x | 71 | x | 71 | 69 | 75 | 71 | 79 |
| 5:16 | x | 70 | x | 71 | 69 | 75 | 70 | 78 |
| 5:17 | x | 70 | x | 71 | 68 | 75 | 70 | 78 |
| 5:18 | x | 70 | x | 70 | 68 | 75 | 70 | 78 |
| 5:19 | x | 70 | x | 70 | 68 | 74 | 70 | 78 |
| 5:20 | x | 70 | x | 70 | 68 | 74 | 70 | 77 |
| 5:21 | x | 69 | x | 70 | 68 | 74 | 69 | 77 |
| 5:22 | x | 69 | x | 70 | 67 | 74 | 69 | 77 |
| 5:23 | x | 69 | x | 69 | 67 | 74 | 69 | 77 |
| 5:24 | x | 69 | x | 69 | 67 | 73 | 69 | 77 |
| 5:25 | x | 68 | x | 69 | 67 | 73 | 68 | 76 |
| 5:26 | x | 68 | x | 69 | 67 | 73 | 68 | 76 |
| 5:27 | x | 68 | x | 69 | 67 | 73 | 68 | 76 |
| 5:28 | x | 68 | x | 68 | 66 | 72 | 68 | 76 |
| 5:29 | x | 68 | x | 68 | 66 | 72 | 68 | 75 |
| 5:30 | x | 67 | x | 68 | 66 | 72 | 67 | 75 |
| 5:31 | x | 67 | x | 68 | 66 | 72 | 67 | 75 |
| 5:32 | x | 67 | x | 67 | 66 | 72 | 67 | 75 |
| 5:33 | x | 67 | x | 67 | 65 | 71 | 67 | 74 |
| 5:34 | x | 66 | x | 67 | 65 | 71 | 67 | 74 |
| 5:35 | x | 66 | x | 67 | 65 | 71 | 66 | 74 |
| 5:36 | x | 66 | x | 67 | 65 | 71 | 66 | 74 |
| 5:37 | x | 66 | x | 66 | 65 | 71 | 66 | 73 |
| 5:38 | x | 66 | x | 66 | 64 | 70 | 66 | 73 |
| 5:39 | x | 65 | x | 66 | 64 | 70 | 66 | 73 |
| 5:40 | x | 65 | x | 66 | 64 | 70 | 65 | 73 |
| 5:41 | x | 65 | x | 65 | 64 | 70 | 65 | 73 |
| 5:42 | x | 65 | x | 65 | 64 | 70 | 65 | 72 |
| 5:43 | x | 65 | x | 65 | 63 | 69 | 65 | 72 |
| 5:44 | x | 64 | x | 65 | 63 | 69 | 65 | 72 |
| 5:45 | x | 64 | x | 65 | 63 | 69 | 64 | 72 |
| 5:46 | x | 64 | x | 64 | 63 | 69 | 64 | 71 |
| 5:47 | x | 64 | x | 64 | 63 | 68 | 64 | 71 |
| 5:48 | x | 63 | x | 64 | 63 | 68 | 64 | 71 |
| 5:49 | x | 63 | x | 64 | 62 | 68 | 64 | 71 |
| 5:50 | x | 63 | x | 63 | 62 | 68 | 63 | 70 |
| 5:51 | x | 63 | x | 63 | 62 | 68 | 63 | 70 |
| 5:52 | x | 63 | x | 63 | 62 | 67 | 63 | 70 |
| 5:53 | x | 62 | x | 63 | 62 | 67 | 63 | 70 |
| 5:54 | x | 62 | x | 63 | 61 | 67 | 63 | 69 |
| 5:55 | x | 62 | x | 62 | 61 | 67 | 62 | 69 |
| 5:56 | x | 62 | x | 62 | 61 | 67 | 62 | 69 |

Table 3-7. - Maneuver Under Fire

| MANEUVER UNDER FIRE | | | | | | | | |
|---------------------|-------|----|-------|----|-------|----|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 5:57 | X | 61 | X | 62 | 61 | 66 | 62 | 69 |
| 5:58 | X | 61 | X | 62 | 61 | 66 | 62 | 69 |
| 5:59 | X | 61 | X | 61 | 60 | 66 | 62 | 68 |
| 6:00 | X | 61 | X | 61 | X | 66 | 61 | 68 |
| 6:01 | X | 61 | X | 61 | X | 66 | 61 | 68 |
| 6:02 | X | 60 | X | 61 | X | 65 | 61 | 68 |
| 6:03 | X | X | X | 61 | X | 65 | 61 | 67 |
| 6:04 | X | X | X | 60 | X | 65 | 61 | 67 |
| 6:05 | X | X | X | X | X | 65 | 60 | 67 |
| 6:06 | X | X | X | X | X | 64 | 60 | 67 |
| 6:07 | X | X | X | X | X | 64 | 60 | 66 |
| 6:08 | X | X | X | X | X | 64 | 60 | 66 |
| 6:09 | X | X | X | X | X | 64 | 60 | 66 |
| 6:10 | X | X | X | X | X | 64 | X | 66 |
| 6:11 | X | X | X | X | X | 63 | X | 65 |
| 6:12 | X | X | X | X | X | 63 | X | 65 |
| 6:13 | X | X | X | X | X | 63 | X | 65 |
| 6:14 | X | X | X | X | X | 63 | X | 65 |
| 6:15 | X | X | X | X | X | 63 | X | 65 |
| 6:16 | X | X | X | X | X | 62 | X | 64 |
| 6:17 | X | X | X | X | X | 62 | X | 64 |
| 6:18 | X | X | X | X | X | 62 | X | 64 |
| 6:19 | X | X | X | X | X | 62 | X | 64 |
| 6:20 | X | X | X | X | X | 61 | X | 63 |
| 6:21 | X | X | X | X | X | 61 | X | 63 |
| 6:22 | X | X | X | X | X | 61 | X | 63 |
| 6:23 | X | X | X | X | X | 61 | X | 63 |
| 6:24 | X | X | X | X | X | 61 | X | 62 |
| 6:25 | X | X | X | X | X | 60 | X | 62 |
| 6:26 | X | X | X | X | X | X | X | 62 |
| 6:27 | X | X | X | X | X | X | X | 62 |
| 6:28 | X | X | X | X | X | X | X | 61 |
| 6:29 | X | X | X | X | X | X | X | 61 |
| 6:30 | X | X | X | X | X | X | X | 61 |
| 6:31 | X | X | X | X | X | X | X | 61 |
| 6:32 | X | X | X | X | X | X | X | 61 |
| 6:33 | X | X | X | X | X | X | X | 60 |

Table 3-7. - Maneuver Under Fire

9. Altitude Considerations. Units located at altitudes of 4,500 feet or more above sea level will provide Marines a 30-day acclimatization period prior to conducting a CFT. Marines scheduled to report to commands at altitude in June or December will complete their CFTs prior to detaching. Calculating a cumulative score for a completed CFT at altitude can be derived from Tables 3-8 (Movement to Contact) and 3-9 (Maneuver Under Fire). There is no altitude compensation for the Ammo lift.

| MOVEMENT TO CONTACT (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|---|-------|---|-------|---|-----|---|
| | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| TIME | M | F | M | F | M | F | M | F |
| 2:53 | 100 | X | X | X | X | X | X | X |
| 2:54 | 99 | X | X | X | X | X | X | X |
| 2:55 | 99 | X | X | X | X | X | X | X |
| 2:56 | 98 | X | 100 | X | X | X | X | X |
| 2:57 | 98 | X | 99 | X | X | X | X | X |
| 2:58 | 97 | X | 99 | X | X | X | X | X |
| 2:59 | 97 | X | 98 | X | X | X | X | X |
| 3:00 | 96 | X | 98 | X | X | X | X | X |
| 3:01 | 96 | X | 97 | X | X | X | X | X |
| 3:02 | 95 | X | 97 | X | X | X | X | X |
| 3:03 | 95 | X | 97 | X | X | X | X | X |
| 3:04 | 95 | X | 96 | X | X | X | X | X |
| 3:05 | 94 | X | 96 | X | X | X | X | X |
| 3:06 | 94 | X | 95 | X | X | X | X | X |
| 3:07 | 93 | X | 95 | X | X | X | X | X |
| 3:08 | 93 | X | 95 | X | X | X | X | X |
| 3:09 | 92 | X | 94 | X | 100 | X | X | X |
| 3:10 | 92 | X | 94 | X | 99 | X | X | X |
| 3:11 | 91 | X | 93 | X | 99 | X | 100 | X |
| 3:12 | 91 | X | 93 | X | 99 | X | 99 | X |
| 3:13 | 91 | X | 93 | X | 99 | X | 99 | X |
| 3:14 | 90 | X | 92 | X | 98 | X | 99 | X |
| 3:15 | 90 | X | 92 | X | 98 | X | 99 | X |
| 3:16 | 89 | X | 91 | X | 98 | X | 98 | X |
| 3:17 | 89 | X | 91 | X | 97 | X | 98 | X |
| 3:18 | 88 | X | 91 | X | 97 | X | 98 | X |
| 3:19 | 88 | X | 90 | X | 97 | X | 97 | X |
| 3:20 | 87 | X | 90 | X | 97 | X | 97 | X |
| 3:21 | 87 | X | 89 | X | 96 | X | 97 | X |
| 3:22 | 87 | X | 89 | X | 96 | X | 96 | X |
| 3:23 | 86 | X | 88 | X | 96 | X | 96 | X |
| 3:24 | 86 | X | 88 | X | 95 | X | 96 | X |
| 3:25 | 85 | X | 88 | X | 95 | X | 95 | X |
| 3:26 | 85 | X | 87 | X | 95 | X | 95 | X |
| 3:27 | 84 | X | 87 | X | 94 | X | 95 | X |

Table 3-8. Movement to Contact (Altitude)

| MOVEMENT TO CONTACT (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|-----|-------|-----|-------|-----|-----|-----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 3:28 | 84 | x | 86 | x | 94 | x | 95 | x |
| 3:29 | 83 | 100 | 86 | x | 94 | x | 94 | x |
| 3:30 | 83 | 99 | 86 | x | 93 | x | 94 | x |
| 3:31 | 83 | 99 | 85 | x | 93 | x | 94 | x |
| 3:32 | 82 | 98 | 85 | x | 93 | x | 93 | x |
| 3:33 | 82 | 98 | 84 | x | 92 | x | 93 | x |
| 3:34 | 81 | 98 | 84 | x | 92 | x | 93 | x |
| 3:35 | 81 | 97 | 84 | x | 92 | x | 92 | x |
| 3:36 | 80 | 97 | 83 | 100 | 91 | x | 92 | x |
| 3:37 | 80 | 97 | 83 | 99 | 91 | x | 92 | x |
| 3:38 | 79 | 96 | 82 | 99 | 91 | x | 91 | x |
| 3:39 | 79 | 96 | 82 | 98 | 90 | x | 91 | x |
| 3:40 | 79 | 96 | 82 | 98 | 90 | x | 91 | x |
| 3:41 | 78 | 96 | 81 | 98 | 90 | x | 90 | x |
| 3:42 | 78 | 95 | 81 | 97 | 89 | x | 90 | x |
| 3:43 | 77 | 95 | 80 | 97 | 89 | x | 90 | x |
| 3:44 | 77 | 95 | 80 | 97 | 89 | x | 89 | x |
| 3:45 | 76 | 94 | 80 | 96 | 88 | x | 89 | x |
| 3:46 | 76 | 94 | 79 | 96 | 88 | x | 89 | x |
| 3:47 | 75 | 94 | 79 | 96 | 88 | x | 88 | x |
| 3:48 | 75 | 93 | 78 | 95 | 87 | x | 88 | x |
| 3:49 | 75 | 93 | 78 | 95 | 87 | x | 88 | x |
| 3:50 | 74 | 93 | 78 | 95 | 86 | x | 87 | x |
| 3:51 | 74 | 92 | 77 | 94 | 86 | x | 87 | x |
| 3:52 | 73 | 92 | 77 | 94 | 86 | x | 87 | x |
| 3:53 | 73 | 92 | 76 | 94 | 85 | x | 86 | x |
| 3:54 | 72 | 91 | 76 | 93 | 85 | x | 86 | x |
| 3:55 | 72 | 91 | 76 | 93 | 84 | 100 | 86 | x |
| 3:56 | 71 | 91 | 75 | 93 | 84 | 99 | 85 | x |
| 3:57 | 71 | 90 | 75 | 92 | 84 | 99 | 85 | x |
| 3:58 | 71 | 90 | 74 | 92 | 84 | 98 | 85 | x |
| 3:59 | 70 | 90 | 74 | 92 | 83 | 98 | 84 | x |
| 4:00 | 70 | 90 | 74 | 91 | 83 | 98 | 84 | x |
| 4:01 | 69 | 89 | 73 | 91 | 83 | 97 | 84 | 100 |
| 4:02 | 69 | 89 | 73 | 91 | 82 | 97 | 84 | 99 |
| 4:03 | 68 | 89 | 72 | 90 | 82 | 96 | 83 | 99 |
| 4:04 | 68 | 88 | 72 | 90 | 82 | 96 | 83 | 98 |
| 4:05 | 67 | 88 | 72 | 90 | 81 | 96 | 83 | 98 |
| 4:06 | 67 | 88 | 71 | 89 | 81 | 95 | 82 | 98 |
| 4:07 | 67 | 87 | 71 | 89 | 81 | 95 | 82 | 97 |
| 4:08 | 66 | 87 | 70 | 89 | 80 | 95 | 82 | 97 |
| 4:09 | 66 | 87 | 70 | 88 | 80 | 94 | 81 | 97 |
| 4:10 | 65 | 86 | 70 | 88 | 80 | 94 | 81 | 96 |
| 4:11 | 65 | 86 | 69 | 88 | 79 | 93 | 81 | 96 |

Table 3-8. Movement to Contact (Altitude)

| MOVEMENT TO CONTACT (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|----|-----|----|
| | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| TIME | M | F | M | F | M | F | M | F |
| 4:12 | 64 | 86 | 69 | 87 | 79 | 93 | 80 | 96 |
| 4:13 | 64 | 85 | 68 | 87 | 79 | 93 | 80 | 95 |
| 4:14 | 63 | 85 | 68 | 87 | 78 | 92 | 80 | 95 |
| 4:15 | 63 | 85 | 67 | 86 | 78 | 92 | 79 | 95 |
| 4:16 | 63 | 85 | 67 | 86 | 78 | 92 | 79 | 94 |
| 4:17 | 62 | 84 | 67 | 86 | 77 | 91 | 79 | 94 |
| 4:18 | 62 | 84 | 66 | 85 | 77 | 91 | 78 | 94 |
| 4:19 | 61 | 84 | 66 | 85 | 77 | 90 | 78 | 93 |
| 4:20 | 61 | 83 | 65 | 85 | 77 | 90 | 78 | 93 |
| 4:21 | 60 | 83 | 65 | 84 | 76 | 90 | 77 | 93 |
| 4:22 | x | 83 | 65 | 84 | 76 | 89 | 77 | 92 |
| 4:23 | x | 82 | 64 | 84 | 76 | 89 | 77 | 92 |
| 4:24 | x | 82 | 64 | 83 | 75 | 89 | 76 | 92 |
| 4:25 | x | 82 | 63 | 83 | 75 | 88 | 76 | 91 |
| 4:26 | x | 81 | 63 | 83 | 75 | 88 | 76 | 91 |
| 4:27 | x | 81 | 63 | 83 | 74 | 88 | 75 | 91 |
| 4:28 | x | 81 | 62 | 82 | 74 | 87 | 75 | 90 |
| 4:29 | x | 80 | 62 | 82 | 74 | 87 | 75 | 90 |
| 4:30 | x | 80 | 61 | 82 | 73 | 86 | 74 | 90 |
| 4:31 | x | 80 | 61 | 81 | 73 | 86 | 74 | 89 |
| 4:32 | x | 79 | 61 | 81 | 73 | 86 | 74 | 89 |
| 4:33 | x | 79 | 60 | 81 | 72 | 85 | 74 | 88 |
| 4:34 | x | 79 | 60 | 80 | 72 | 85 | 73 | 88 |
| 4:35 | x | 79 | x | 80 | 72 | 85 | 73 | 88 |
| 4:36 | x | 78 | x | 80 | 71 | 84 | 73 | 87 |
| 4:37 | x | 78 | x | 79 | 71 | 84 | 72 | 87 |
| 4:38 | x | 78 | x | 79 | 71 | 83 | 72 | 87 |
| 4:39 | x | 77 | x | 79 | 71 | 83 | 72 | 86 |
| 4:40 | x | 77 | x | 78 | 70 | 83 | 71 | 86 |
| 4:41 | x | 77 | x | 78 | 70 | 82 | 71 | 86 |
| 4:42 | x | 76 | x | 78 | 70 | 82 | 71 | 85 |
| 4:43 | x | 76 | x | 77 | 69 | 82 | 70 | 85 |
| 4:44 | x | 76 | x | 77 | 69 | 81 | 70 | 85 |
| 4:45 | x | 75 | x | 77 | 69 | 81 | 70 | 84 |
| 4:46 | x | 75 | x | 76 | 68 | 80 | 69 | 84 |
| 4:47 | x | 75 | x | 76 | 68 | 80 | 69 | 84 |
| 4:48 | x | 74 | x | 76 | 68 | 80 | 69 | 83 |
| 4:49 | x | 74 | x | 75 | 67 | 79 | 68 | 83 |
| 4:50 | x | 74 | x | 75 | 67 | 79 | 68 | 83 |
| 4:51 | x | 73 | x | 75 | 67 | 79 | 68 | 82 |
| 4:52 | x | 73 | x | 74 | 66 | 78 | 67 | 82 |
| 4:53 | x | 73 | x | 74 | 66 | 78 | 67 | 82 |
| 4:54 | x | 73 | x | 74 | 66 | 78 | 67 | 81 |
| 4:55 | x | 72 | x | 73 | 65 | 77 | 66 | 81 |
| 4:56 | x | 72 | x | 73 | 65 | 77 | 66 | 81 |

Table 3-8. Movement to Contact (Altitude)

| MOVEMENT TO CONTACT (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|----|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 4:57 | x | 72 | x | 73 | 65 | 76 | 66 | 80 |
| 4:58 | x | 71 | x | 72 | 64 | 76 | 65 | 80 |
| 4:59 | x | 71 | x | 72 | 64 | 76 | 65 | 80 |
| 5:00 | x | 71 | x | 72 | 64 | 75 | 65 | 79 |
| 5:01 | x | 70 | x | 71 | 64 | 75 | 64 | 79 |
| 5:02 | x | 70 | x | 71 | 63 | 75 | 64 | 79 |
| 5:03 | x | 70 | x | 71 | 63 | 74 | 64 | 78 |
| 5:04 | x | 69 | x | 70 | 63 | 74 | 63 | 78 |
| 5:05 | x | 69 | x | 70 | 62 | 73 | 63 | 78 |
| 5:06 | x | 69 | x | 70 | 62 | 73 | 63 | 77 |
| 5:07 | x | 68 | x | 69 | 62 | 73 | 62 | 77 |
| 5:08 | x | 68 | x | 69 | 61 | 72 | 62 | 77 |
| 5:09 | x | 68 | x | 69 | 61 | 72 | 62 | 76 |
| 5:10 | x | 68 | x | 68 | 61 | 72 | 61 | 76 |
| 5:11 | x | 67 | x | 68 | 60 | 71 | 61 | 76 |
| 5:12 | x | 67 | x | 68 | x | 71 | 61 | 75 |
| 5:13 | x | 67 | x | 67 | x | 71 | 60 | 75 |
| 5:14 | x | 66 | x | 67 | x | 70 | x | 75 |
| 5:15 | x | 66 | x | 67 | x | 70 | x | 74 |
| 5:16 | x | 66 | x | 66 | x | 69 | x | 74 |
| 5:17 | x | 65 | x | 66 | x | 69 | x | 74 |
| 5:18 | x | 65 | x | 66 | x | 69 | x | 73 |
| 5:19 | x | 65 | x | 65 | x | 68 | x | 73 |
| 5:20 | x | 64 | x | 65 | x | 68 | x | 73 |
| 5:21 | x | 64 | x | 65 | x | 68 | x | 72 |
| 5:22 | x | 64 | x | 64 | x | 67 | x | 72 |
| 5:23 | x | 63 | x | 64 | x | 67 | x | 72 |
| 5:24 | x | 63 | x | 64 | x | 66 | x | 71 |
| 5:25 | x | 63 | x | 63 | x | 66 | x | 71 |
| 5:26 | x | 62 | x | 63 | x | 66 | x | 71 |
| 5:27 | x | 62 | x | 63 | x | 65 | x | 70 |
| 5:28 | x | 62 | x | 62 | x | 65 | x | 70 |
| 5:29 | x | 62 | x | 62 | x | 65 | x | 70 |
| 5:30 | x | 61 | x | 62 | x | 64 | x | 69 |
| 5:31 | x | 61 | x | 61 | x | 64 | x | 69 |
| 5:32 | x | 61 | x | 61 | x | 63 | x | 68 |
| 5:33 | x | 60 | x | 61 | x | 63 | x | 68 |
| 5:34 | x | x | x | 60 | x | 63 | x | 68 |
| 5:35 | x | x | x | x | x | 62 | x | 67 |
| 5:36 | x | x | x | x | x | 62 | x | 67 |
| 5:37 | x | x | x | x | x | 62 | x | 67 |
| 5:38 | x | x | x | x | x | 61 | x | 66 |
| 5:39 | x | x | x | x | x | 61 | x | 66 |
| 5:40 | x | x | x | x | x | 61 | x | 66 |
| 5:41 | x | x | x | x | x | 60 | x | 65 |
| 5:42 | x | x | x | x | x | x | x | 65 |

Table 3-8. Movement to Contact (Altitude)

| MOVEMENT TO CONTACT (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|---|-------|---|-------|---|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 5:43 | x | x | x | x | x | x | x | 65 |
| 5:44 | x | x | x | x | x | x | x | 64 |
| 5:45 | x | x | x | x | x | x | x | 64 |
| 5:46 | x | x | x | x | x | x | x | 64 |
| 5:47 | x | x | x | x | x | x | x | 63 |
| 5:48 | x | x | x | x | x | x | x | 63 |
| 5:49 | x | x | x | x | x | x | x | 63 |
| 5:50 | x | x | x | x | x | x | x | 62 |
| 5:51 | x | x | x | x | x | x | x | 62 |
| 5:52 | x | x | x | x | x | x | x | 62 |
| 5:53 | x | x | x | x | x | x | x | 61 |
| 5:54 | x | x | x | x | x | x | x | 61 |
| 5:55 | x | x | x | x | x | x | x | 61 |
| 5:56 | x | x | x | x | x | x | x | 60 |

Table 3-8. Movement to Contact (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|---|-------|---|-------|---|-----|---|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 2:22 | 100 | x | x | x | x | x | x | x |
| 2:23 | 99 | x | x | x | x | x | x | x |
| 2:24 | 99 | x | x | x | x | x | x | x |
| 2:25 | 98 | x | x | x | x | x | x | x |
| 2:26 | 98 | x | x | x | x | x | x | x |
| 2:27 | 97 | x | x | x | x | x | x | x |
| 2:28 | 97 | x | x | x | x | x | x | x |
| 2:29 | 97 | x | x | x | x | x | x | x |
| 2:30 | 96 | x | x | x | x | x | x | x |
| 2:31 | 96 | x | x | x | x | x | x | x |
| 2:32 | 96 | x | x | x | x | x | x | x |
| 2:33 | 95 | x | x | x | x | x | x | x |
| 2:34 | 95 | x | 100 | x | x | x | x | x |
| 2:35 | 94 | x | 99 | x | x | x | x | x |
| 2:36 | 94 | x | 99 | x | x | x | x | x |
| 2:37 | 94 | x | 99 | x | x | x | x | x |
| 2:38 | 93 | x | 99 | x | x | x | x | x |
| 2:39 | 93 | x | 99 | x | x | x | x | x |
| 2:40 | 93 | x | 98 | x | x | x | x | x |
| 2:41 | 92 | x | 98 | x | x | x | x | x |
| 2:42 | 92 | x | 98 | x | x | x | x | x |
| 2:43 | 91 | x | 97 | x | x | x | x | x |
| 2:44 | 91 | x | 97 | x | 100 | x | x | x |
| 2:45 | 91 | x | 97 | x | 99 | x | x | x |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|-----|-------|-----|-------|---|-----|---|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 2:46 | 90 | x | 96 | x | 99 | x | x | x |
| 2:47 | 90 | x | 96 | x | 99 | x | x | x |
| 2:48 | 90 | x | 96 | x | 99 | x | x | x |
| 2:49 | 89 | x | 96 | x | 98 | x | x | x |
| 2:50 | 89 | x | 95 | x | 98 | x | x | x |
| 2:51 | 88 | x | 95 | x | 98 | x | x | x |
| 2:52 | 88 | x | 95 | x | 98 | x | x | x |
| 2:53 | 88 | x | 94 | x | 98 | x | x | x |
| 2:54 | 87 | x | 94 | x | 97 | x | x | x |
| 2:55 | 87 | x | 94 | x | 97 | x | x | x |
| 2:56 | 87 | x | 94 | x | 97 | x | x | x |
| 2:57 | 86 | x | 93 | x | 97 | x | x | x |
| 2:58 | 86 | x | 93 | x | 97 | x | x | x |
| 2:59 | 85 | x | 93 | x | 97 | x | x | x |
| 3:00 | 85 | x | 92 | x | 96 | x | x | x |
| 3:01 | 85 | x | 92 | x | 96 | x | x | x |
| 3:02 | 84 | x | 92 | x | 96 | x | 100 | x |
| 3:03 | 84 | x | 92 | x | 96 | x | 99 | x |
| 3:04 | 84 | x | 91 | x | 96 | x | 99 | x |
| 3:05 | 83 | x | 91 | x | 95 | x | 99 | x |
| 3:06 | 83 | x | 91 | x | 95 | x | 99 | x |
| 3:07 | 82 | x | 90 | x | 95 | x | 98 | x |
| 3:08 | 82 | x | 90 | x | 95 | x | 98 | x |
| 3:09 | 82 | x | 90 | x | 95 | x | 98 | x |
| 3:10 | 81 | 100 | 89 | x | 94 | x | 98 | x |
| 3:11 | 81 | 99 | 89 | x | 94 | x | 98 | x |
| 3:12 | 81 | 99 | 89 | x | 94 | x | 97 | x |
| 3:13 | 80 | 99 | 89 | x | 94 | x | 97 | x |
| 3:14 | 80 | 99 | 88 | x | 94 | x | 97 | x |
| 3:15 | 79 | 98 | 88 | x | 93 | x | 97 | x |
| 3:16 | 79 | 98 | 88 | 100 | 93 | x | 97 | x |
| 3:17 | 79 | 98 | 87 | 99 | 93 | x | 96 | x |
| 3:18 | 78 | 98 | 87 | 99 | 93 | x | 96 | x |
| 3:19 | 78 | 97 | 87 | 99 | 93 | x | 96 | x |
| 3:20 | 78 | 97 | 87 | 99 | 93 | x | 96 | x |
| 3:21 | 77 | 97 | 86 | 98 | 92 | x | 96 | x |
| 3:22 | 77 | 97 | 86 | 98 | 92 | x | 95 | x |
| 3:23 | 76 | 97 | 86 | 98 | 92 | x | 95 | x |
| 3:24 | 76 | 96 | 85 | 98 | 92 | x | 95 | x |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|-----|-----|-----|
| | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| TIME | M | F | M | F | M | F | M | F |
| 3:25 | 76 | 96 | 85 | 97 | 92 | x | 95 | x |
| 3:26 | 75 | 96 | 85 | 97 | 91 | x | 95 | x |
| 3:27 | 75 | 96 | 85 | 97 | 91 | x | 94 | x |
| 3:28 | 74 | 95 | 84 | 97 | 91 | x | 94 | x |
| 3:29 | 74 | 95 | 84 | 97 | 91 | x | 94 | x |
| 3:30 | 74 | 95 | 84 | 96 | 91 | 100 | 94 | x |
| 3:31 | 73 | 95 | 83 | 96 | 90 | 99 | 94 | x |
| 3:32 | 73 | 95 | 83 | 96 | 90 | 99 | 93 | x |
| 3:33 | 73 | 94 | 83 | 96 | 90 | 99 | 93 | x |
| 3:34 | 72 | 94 | 82 | 95 | 90 | 99 | 93 | x |
| 3:35 | 72 | 94 | 82 | 95 | 90 | 99 | 93 | x |
| 3:36 | 71 | 94 | 82 | 95 | 90 | 99 | 93 | x |
| 3:37 | 71 | 94 | 82 | 95 | 89 | 99 | 92 | x |
| 3:38 | 71 | 93 | 81 | 95 | 89 | 98 | 92 | x |
| 3:39 | 70 | 93 | 81 | 94 | 89 | 98 | 92 | x |
| 3:40 | 70 | 93 | 81 | 94 | 89 | 98 | 92 | x |
| 3:41 | 70 | 93 | 80 | 94 | 89 | 98 | 92 | x |
| 3:42 | 69 | 92 | 80 | 94 | 88 | 97 | 91 | x |
| 3:43 | 69 | 92 | 80 | 93 | 88 | 97 | 91 | x |
| 3:44 | 68 | 92 | 80 | 93 | 88 | 97 | 91 | x |
| 3:45 | 68 | 92 | 79 | 93 | 88 | 97 | 91 | x |
| 3:46 | 68 | 92 | 79 | 93 | 88 | 97 | 91 | x |
| 3:47 | 67 | 91 | 79 | 93 | 87 | 96 | 90 | x |
| 3:48 | 67 | 91 | 78 | 92 | 87 | 96 | 90 | x |
| 3:49 | 67 | 91 | 78 | 92 | 87 | 96 | 90 | x |
| 3:50 | 66 | 91 | 78 | 92 | 87 | 96 | 90 | x |
| 3:51 | 66 | 90 | 78 | 92 | 87 | 96 | 90 | x |
| 3:52 | 65 | 90 | 77 | 91 | 86 | 95 | 89 | 100 |
| 3:53 | 65 | 90 | 77 | 91 | 86 | 95 | 89 | 99 |
| 3:54 | 65 | 90 | 77 | 91 | 86 | 95 | 89 | 99 |
| 3:55 | 64 | 90 | 76 | 91 | 86 | 95 | 89 | 99 |
| 3:56 | 64 | 89 | 76 | 91 | 86 | 94 | 88 | 99 |
| 3:57 | 64 | 89 | 76 | 90 | 86 | 94 | 88 | 99 |
| 3:58 | 63 | 89 | 75 | 90 | 85 | 94 | 88 | 99 |
| 3:59 | 63 | 89 | 75 | 90 | 85 | 94 | 88 | 98 |
| 4:00 | 62 | 88 | 75 | 90 | 85 | 94 | 88 | 98 |
| 4:01 | 62 | 88 | 75 | 89 | 85 | 93 | 87 | 98 |
| 4:02 | 62 | 88 | 74 | 89 | 85 | 93 | 87 | 98 |
| 4:03 | 61 | 88 | 74 | 89 | 84 | 93 | 87 | 97 |
| 4:04 | 61 | 88 | 74 | 89 | 84 | 93 | 87 | 97 |
| 4:05 | 61 | 87 | 73 | 89 | 84 | 93 | 87 | 97 |
| 4:06 | 60 | 87 | 73 | 88 | 84 | 92 | 86 | 97 |
| 4:07 | x | 87 | 73 | 88 | 84 | 92 | 86 | 96 |
| 4:08 | x | 87 | 73 | 88 | 83 | 92 | 86 | 96 |
| 4:09 | x | 87 | 72 | 88 | 83 | 92 | 86 | 96 |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|----|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 4:10 | x | 86 | 72 | 88 | 83 | 92 | 86 | 96 |
| 4:11 | x | 86 | 72 | 87 | 83 | 91 | 85 | 96 |
| 4:12 | x | 86 | 71 | 87 | 83 | 91 | 85 | 95 |
| 4:13 | x | 86 | 71 | 87 | 82 | 91 | 85 | 95 |
| 4:14 | x | 85 | 71 | 87 | 82 | 91 | 85 | 95 |
| 4:15 | x | 85 | 71 | 86 | 82 | 90 | 85 | 95 |
| 4:16 | x | 85 | 70 | 86 | 82 | 90 | 84 | 94 |
| 4:17 | x | 85 | 70 | 86 | 82 | 90 | 84 | 94 |
| 4:18 | x | 85 | 70 | 86 | 82 | 90 | 84 | 94 |
| 4:19 | x | 84 | 69 | 86 | 81 | 90 | 84 | 94 |
| 4:20 | x | 84 | 69 | 85 | 81 | 89 | 84 | 93 |
| 4:21 | x | 84 | 69 | 85 | 81 | 89 | 83 | 93 |
| 4:22 | x | 84 | 68 | 85 | 81 | 89 | 83 | 93 |
| 4:23 | x | 83 | 68 | 85 | 81 | 89 | 83 | 93 |
| 4:24 | x | 83 | 68 | 84 | 80 | 89 | 83 | 92 |
| 4:25 | x | 83 | 68 | 84 | 80 | 88 | 83 | 92 |
| 4:26 | x | 83 | 67 | 84 | 80 | 88 | 82 | 92 |
| 4:27 | x | 83 | 67 | 84 | 80 | 88 | 82 | 92 |
| 4:28 | x | 82 | 67 | 84 | 80 | 88 | 82 | 92 |
| 4:29 | x | 82 | 66 | 83 | 79 | 87 | 82 | 91 |
| 4:30 | x | 82 | 66 | 83 | 79 | 87 | 82 | 91 |
| 4:31 | x | 82 | 66 | 83 | 79 | 87 | 81 | 91 |
| 4:32 | x | 81 | 66 | 83 | 79 | 87 | 81 | 91 |
| 4:33 | x | 81 | 65 | 82 | 79 | 87 | 81 | 90 |
| 4:34 | x | 81 | 65 | 82 | 78 | 86 | 81 | 90 |
| 4:35 | x | 81 | 65 | 82 | 78 | 86 | 81 | 90 |
| 4:36 | x | 81 | 64 | 82 | 78 | 86 | 80 | 90 |
| 4:37 | x | 80 | 64 | 82 | 78 | 86 | 80 | 89 |
| 4:38 | x | 80 | 64 | 81 | 78 | 86 | 80 | 89 |
| 4:39 | x | 80 | 63 | 81 | 78 | 85 | 80 | 89 |
| 4:40 | x | 80 | 63 | 81 | 77 | 85 | 80 | 89 |
| 4:41 | x | 80 | 63 | 81 | 77 | 85 | 79 | 88 |
| 4:42 | x | 79 | 63 | 80 | 77 | 85 | 79 | 88 |
| 4:43 | x | 79 | 62 | 80 | 77 | 85 | 79 | 88 |
| 4:44 | x | 79 | 62 | 80 | 77 | 84 | 79 | 88 |
| 4:45 | x | 79 | 62 | 80 | 76 | 84 | 79 | 88 |
| 4:46 | x | 78 | 61 | 80 | 76 | 84 | 78 | 87 |
| 4:47 | x | 78 | 61 | 79 | 76 | 84 | 78 | 87 |
| 4:48 | x | 78 | 61 | 79 | 76 | 83 | 78 | 87 |
| 4:49 | x | 78 | 61 | 79 | 76 | 83 | 78 | 87 |
| 4:50 | x | 78 | 60 | 79 | 75 | 83 | 78 | 86 |
| 4:51 | x | 77 | x | 78 | 75 | 83 | 77 | 86 |
| 4:52 | x | 77 | x | 78 | 75 | 83 | 77 | 86 |
| 4:53 | x | 77 | x | 78 | 75 | 82 | 77 | 86 |
| 4:54 | x | 77 | x | 78 | 75 | 82 | 77 | 85 |
| 4:55 | x | 76 | x | 78 | 74 | 82 | 77 | 85 |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|----|-----|----|
| | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| TIME | M | F | M | F | M | F | M | F |
| 4:56 | x | 76 | x | 77 | 74 | 82 | 76 | 85 |
| 4:57 | x | 76 | x | 77 | 74 | 82 | 76 | 85 |
| 4:58 | x | 76 | x | 77 | 74 | 81 | 76 | 84 |
| 4:59 | x | 76 | x | 77 | 74 | 81 | 76 | 84 |
| 5:00 | x | 75 | x | 76 | 74 | 81 | 76 | 84 |
| 5:01 | x | 75 | x | 76 | 73 | 81 | 75 | 84 |
| 5:02 | x | 75 | x | 76 | 73 | 80 | 75 | 84 |
| 5:03 | x | 75 | x | 76 | 73 | 80 | 75 | 83 |
| 5:04 | x | 74 | x | 76 | 73 | 80 | 75 | 83 |
| 5:05 | x | 74 | x | 75 | 73 | 80 | 75 | 83 |
| 5:06 | x | 74 | x | 75 | 72 | 80 | 74 | 83 |
| 5:07 | x | 74 | x | 75 | 72 | 79 | 74 | 82 |
| 5:08 | x | 74 | x | 75 | 72 | 79 | 74 | 82 |
| 5:09 | x | 73 | x | 74 | 72 | 79 | 74 | 82 |
| 5:10 | x | 73 | x | 74 | 72 | 79 | 74 | 82 |
| 5:11 | x | 73 | x | 74 | 71 | 79 | 73 | 81 |
| 5:12 | x | 73 | x | 74 | 71 | 78 | 73 | 81 |
| 5:13 | x | 73 | x | 74 | 71 | 78 | 73 | 81 |
| 5:14 | x | 72 | x | 73 | 71 | 78 | 73 | 81 |
| 5:15 | x | 72 | x | 73 | 71 | 78 | 73 | 80 |
| 5:16 | x | 72 | x | 73 | 71 | 78 | 72 | 80 |
| 5:17 | x | 72 | x | 73 | 70 | 77 | 72 | 80 |
| 5:18 | x | 71 | x | 72 | 70 | 77 | 72 | 80 |
| 5:19 | x | 71 | x | 72 | 70 | 77 | 72 | 80 |
| 5:20 | x | 71 | x | 72 | 70 | 77 | 72 | 79 |
| 5:21 | x | 71 | x | 72 | 70 | 76 | 71 | 79 |
| 5:22 | x | 71 | x | 72 | 69 | 76 | 71 | 79 |
| 5:23 | x | 70 | x | 71 | 69 | 76 | 71 | 79 |
| 5:24 | x | 70 | x | 71 | 69 | 76 | 71 | 78 |
| 5:25 | x | 70 | x | 71 | 69 | 76 | 71 | 78 |
| 5:26 | x | 70 | x | 71 | 69 | 75 | 70 | 78 |
| 5:27 | x | 69 | x | 70 | 68 | 75 | 70 | 78 |
| 5:28 | x | 69 | x | 70 | 68 | 75 | 70 | 77 |
| 5:29 | x | 69 | x | 70 | 68 | 75 | 70 | 77 |
| 5:30 | x | 69 | x | 70 | 68 | 75 | 70 | 77 |
| 5:31 | x | 69 | x | 70 | 68 | 74 | 69 | 77 |
| 5:32 | x | 68 | x | 69 | 67 | 74 | 69 | 77 |
| 5:33 | x | 68 | x | 69 | 67 | 74 | 69 | 76 |
| 5:34 | x | 68 | x | 69 | 67 | 74 | 69 | 76 |
| 5:35 | x | 68 | x | 69 | 67 | 73 | 68 | 76 |
| 5:36 | x | 67 | x | 69 | 67 | 73 | 68 | 76 |
| 5:37 | x | 67 | x | 68 | 67 | 73 | 68 | 75 |
| 5:38 | x | 67 | x | 68 | 66 | 73 | 68 | 75 |
| 5:39 | x | 67 | x | 68 | 66 | 73 | 68 | 75 |
| 5:40 | x | 67 | x | 68 | 66 | 72 | 67 | 75 |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|----|-------|----|-------|----|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 5:41 | x | 66 | x | 67 | 66 | 72 | 67 | 74 |
| 5:42 | x | 66 | x | 67 | 66 | 72 | 67 | 74 |
| 5:43 | x | 66 | x | 67 | 65 | 72 | 67 | 74 |
| 5:44 | x | 66 | x | 67 | 65 | 72 | 67 | 74 |
| 5:45 | x | 65 | x | 67 | 65 | 71 | 66 | 73 |
| 5:46 | x | 65 | x | 66 | 65 | 71 | 66 | 73 |
| 5:47 | x | 65 | x | 66 | 65 | 71 | 66 | 73 |
| 5:48 | x | 65 | x | 66 | 64 | 71 | 66 | 73 |
| 5:49 | x | 65 | x | 66 | 64 | 71 | 66 | 73 |
| 5:50 | x | 64 | x | 65 | 64 | 70 | 65 | 72 |
| 5:51 | x | 64 | x | 65 | 64 | 70 | 65 | 72 |
| 5:52 | x | 64 | x | 65 | 64 | 70 | 65 | 72 |
| 5:53 | x | 64 | x | 65 | 63 | 70 | 65 | 72 |
| 5:54 | x | 64 | x | 65 | 63 | 69 | 65 | 71 |
| 5:55 | x | 63 | x | 64 | 63 | 69 | 64 | 71 |
| 5:56 | x | 63 | x | 64 | 63 | 69 | 64 | 71 |
| 5:57 | x | 63 | x | 64 | 63 | 69 | 64 | 71 |
| 5:58 | x | 63 | x | 64 | 63 | 69 | 64 | 70 |
| 5:59 | x | 62 | x | 63 | 62 | 68 | 64 | 70 |
| 6:00 | x | 62 | x | 63 | 62 | 68 | 63 | 70 |
| 6:01 | x | 62 | x | 63 | 62 | 68 | 63 | 70 |
| 6:02 | x | 62 | x | 63 | 62 | 68 | 63 | 69 |
| 6:03 | x | 62 | x | 63 | 62 | 68 | 63 | 69 |
| 6:04 | x | 61 | x | 62 | 61 | 67 | 63 | 69 |
| 6:05 | x | 61 | x | 62 | 61 | 67 | 62 | 69 |
| 6:06 | x | 61 | x | 62 | 61 | 67 | 62 | 69 |
| 6:07 | x | 61 | x | 62 | 61 | 67 | 62 | 68 |
| 6:08 | x | 60 | x | 61 | 61 | 67 | 62 | 68 |
| 6:09 | x | x | x | 61 | 60 | 66 | 62 | 68 |
| 6:10 | x | x | x | 61 | x | 66 | 61 | 68 |
| 6:11 | x | x | x | 61 | x | 66 | 61 | 67 |
| 6:12 | x | x | x | 61 | x | 66 | 61 | 67 |
| 6:13 | x | x | x | 60 | x | 65 | 61 | 67 |
| 6:14 | x | x | x | x | x | 65 | 61 | 67 |
| 6:15 | x | x | x | x | x | 65 | 60 | 66 |
| 6:16 | x | x | x | x | x | 65 | x | 66 |
| 6:17 | x | x | x | x | x | 65 | x | 66 |
| 6:18 | x | x | x | x | x | 64 | x | 66 |
| 6:19 | x | x | x | x | x | 64 | x | 65 |
| 6:20 | x | x | x | x | x | 64 | x | 65 |
| 6:21 | x | x | x | x | x | 64 | x | 65 |
| 6:22 | x | x | x | x | x | 64 | x | 65 |
| 6:23 | x | x | x | x | x | 63 | x | 65 |

Table 3-9. Maneuver Under Fire (Altitude)

| MANEUVER UNDER FIRE (ALTITUDE) | | | | | | | | |
|--------------------------------|-------|---|-------|---|-------|----|-----|----|
| TIME | 17-26 | | 27-39 | | 40-45 | | 46+ | |
| | M | F | M | F | M | F | M | F |
| 6:24 | x | x | x | x | x | 63 | x | 64 |
| 6:25 | x | x | x | x | x | 63 | x | 64 |
| 6:26 | x | x | x | x | x | 63 | x | 64 |
| 6:27 | x | x | x | x | x | 62 | x | 64 |
| 6:28 | x | x | x | x | x | 62 | x | 63 |
| 6:29 | x | x | x | x | x | 62 | x | 63 |
| 6:30 | x | x | x | x | x | 62 | x | 63 |
| 6:31 | x | x | x | x | x | 62 | x | 63 |
| 6:32 | x | x | x | x | x | 61 | x | 62 |
| 6:33 | x | x | x | x | x | 61 | x | 62 |
| 6:34 | x | x | x | x | x | 60 | x | 62 |
| 6:35 | x | x | x | x | x | x | x | 62 |
| 6:36 | x | x | x | x | x | x | x | 61 |
| 6:37 | x | x | x | x | x | x | x | 61 |
| 6:38 | x | x | x | x | x | x | x | 61 |
| 6:39 | x | x | x | x | x | x | x | 61 |
| 6:40 | x | x | x | x | x | x | x | 61 |
| 6:41 | x | x | x | x | x | x | x | 60 |

Table 3-9. Maneuver Under Fire (Altitude)

Chapter 4

Remedial Conditioning Program

1. Purpose. The purpose of the Remedial Conditioning Program (RCP) is to provide a structured environment through focused supervision and tailored fitness training in order to adjust the attitudes and improve fitness and appearance levels of Marines that have been degraded due to apathy, injury, disease, pregnancy or prolonged periods of inactivity.

a. Remedial conditioning is a process by which Marines are encouraged and challenged in a progressive manner to meet established fitness and body composition standards.

b. The CCI or CPTR will develop RCP training plans in accordance with reference (b), respective organizational METL, applicable MOS tasks and identified deficiencies of assigned Marines.

c. RCP training should be conducted in small groups in order to facilitate focused instruction, oversight, and positive reinforcement.

d. RCP training groups should be organized by area of deficiency and fitness level. RCP training should be commensurate with ability level and, when possible, weaker Marines should be partnered with stronger Marines.

e. As performance levels improve, Marines should be further reorganized in order to improve remaining deficiencies.

For example, one group may exhibit a deficiency in upper body strength while another may exhibit deficiencies in cardiovascular/respiratory endurance. RCP training plans should be developed that target the specific deficiencies of each group.

2. Requirement. The RCP is a locally managed program with no formal administrative assignment process. RCP assignment is not punitive in nature, but is intended to encourage improvement in overall fitness levels or serve as a supplement to the Marine Corps Body Composition and Military Appearance Program (MCBCMAP). Marines who meet the following criteria will be assigned to the RCP:

a. Marines who are required, but do not take (RDNT) the PFT or CFT.

b. Marines who achieve less than a 3d class score on the PFT or fail to pass the CFT.

c. Marines formally assigned to the Military Appearance Program (MAP).

d. Marines formally assigned to the Body Composition Program (BCP).

e. Marines who routinely demonstrate an inability to physically perform MOS related tasks, as demonstrated by a lack of strength, cardiovascular endurance, mobility, balance, stability, agility, coordination, power, speed or flexibility.

f. Marines recovering from injuries, disease or prolonged periods of inactivity.

MCO 6100.13

1 Aug 08

3. Assignment

a. The minimum participation period for Marines assigned to the RCP is 30 days, regardless of change in ability.

b. Marines assigned to the RCP must achieve a 3d class PFT score, pass the CFT, and meet established MAP/BCP standards prior to removal. Failure to do so will result in continued RCP participation.

c. Marines will remain in the RCP for the duration of their MAP assignment. Because MAP assignment could continue indefinitely, RCP participation will continue until compliance with established MAP standards is achieved.

d. Marines will remain in the RCP for the duration of their BCP assignment. Marines being administratively processed for BCP failure will remain assigned to the RCP until separated or compliance with established BCP standards is achieved.

e. Marines will remain in the RCP until identified performance related deficiencies have been corrected.

f. Female Marines assigned to the MAP or BCP prior to pregnancy and RTFD status will resume active participation in the RCP upon the recommendation of an APHCP.

4. Procedures

a. Safety

(1) ORM will be utilized in order to ensure RCP participants are not exposed to unnecessary risk.

(2) RCP training plans should be challenging while ensuring measures are taken to avoid over-training and potential overuse injuries.

b. Supervision. Commanders/OICs assist Marines through identification of specific deficiencies and subsequent assignment to the RCP. The CCI or CPTR is primarily responsible to the Commander/OIC for developing RCP training plans that improve fitness, performance and appearance levels. The CCI or CPTR will develop and supervise the performance of Marines assigned to the RCP in order to ensure compliance with established fitness and appearance standards.

c. Measurement. Continuous measurement is the only way to gauge progress. While testing should not supplant training, periodic testing is essential. Progress measurement should include, but is not limited to the execution of periodic PFT, CFT or weigh-ins. At a minimum, Marines assigned to the RCP will be evaluated at least once during each 30-day assignment.



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON DC 20350-3000

MCO 6110.3A CH-1
C 469
12 OCT 2017

MARINE CORPS ORDER 6110.3A CH-1

From: Commandant of the Marine Corps
To: Distribution List

Subj: CHANGE 1 TO MARINE CORPS BODY COMPOSITION AND MILITARY
APPEARANCE PROGRAM

Encl: (1) New enclosure (5) "Temporary Medical Exemption Process" to
MCO 6110.3A

1. Situation. To transmit changes and a new enclosure (5) to the basic Order.
2. Cancellation. MCO 6110.3A
3. Mission. This change clarifies the responsibilities and roles of medical staff in evaluating and granting a temporary medical exemption due to an underlying medical condition. This change also revises enclosure (5) to update the temporary medical exemption process flowchart.
4. Execution
 - a. Replace office code "C 466" with the office code for the Training and Education Command Force Fitness Division "C 469" throughout the Order.
 - b. Replace Enclosure (5) "BCP Medical Waiver Sequence Chart" with the new Enclosure (5) "Temporary Medical Exemption" chart.
 - c. Delete paragraph 2. "Responsibilities", sub-paragraph 2.a.(2), and replace with "(2) Commanders/OICs will ensure Marines receive a medical evaluation from an authorized medical provider (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) prior to being assigned to BCP or MAP."
 - d. In paragraph 2. "Responsibilities", sub-paragraph 2.a. "Commanders/Officers-In-Charge", re-number item (3) as item (4). Insert new text for item 2.a.(3) with the language: "(3) Commanders/OICs will consider recommendations for temporary medical exemptions if they are forwarded by board certified or board eligible military physicians (BCBEMP) as shown in the process chart provided at enclosure (5)."

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e. Under paragraph 2. "Responsibilities", sub-paragraph 2.c. "FFI/CPTR", items (12) and (13), replace "BCP" with "MAP".

f. Under paragraph 2. "Responsibilities", add a new sub-paragraph e. "Medical Providers" with the following language:

"e. Medical Providers

(1) Authorized medical providers (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) will evaluate Marines who have failed an official weigh-in and are being screened for BCP or MAP.

(2) Authorized medical providers will use the sequence chart provided at enclosure (5) for Marines whose weight gain may be due to a new medical condition or recent change to a medical therapy. If the provider determines a temporary medical exemption may be appropriate, the recommendation will be forwarded per the sequence chart at enclosure (5).

(3) Board Certified or Board Eligible Military Physicians (BCBEMP) may originate recommendations for temporary medical exemptions and may endorse recommendations from non-BCBEMPs, Independent Duty Corpsman, Nurse Practitioner, and Physician Assistants as shown in the sequence chart at enclosure (5).

(4) Authorized Medical providers will refer Marines to a Medical Evaluation Board if the Marine has made two consecutive requests for a temporary medical exemption for the same condition within a 12-month period or has made three requests for any condition within the most recent four year period."

g. In paragraph 4.c. "BCP Formal Assignment", after the word "expired" insert the following text: "with the exception of pregnant/post-partum Marines as specified in Paragraph 4.f.(3)."

h. In paragraph 4.c. "BCP Formal Assignment", delete sub-paragraph 4.c. (4) and replace with:

"(4) An authorized medical provider (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) will evaluate the Marine and make the following determinations:

- (a) Medical clearance to participate in the BCP/MAP/RCP.
- (b) Physical limitations or restrictions.
- (c) Recommended weight and body composition fat reduction goals.
- (d) Recommended nutritional and dietary measures.
- (e) Referral to BCBEMP for evaluation of possible underlying cause for weight gain."

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i. In paragraph 4.c.(9) "BCP Formal Assignment" replace "medical waiver" with "temporary medical exemption."

j. In paragraph 6. "Medical Considerations", delete section 6.d. "Medical Evaluation" and replace with the following text:

"d. Medical Evaluation

(1) Marines not in compliance with established weight and body composition standards and Marines not meeting military appearance standards require a medical evaluation prior to BCP or MAP formal assignment. An authorized medical provider (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) will evaluate the Marine and make the following recommendations/determinations:

- (a) Medical clearance to participate in the BCP/MAP/RCP.
- (b) Physical limitations or restrictions.
- (c) Recommended weight and body composition fat reduction goals.
- (d) Recommended nutritional and dietary measures.
- (e) Referral to BCBEMP for evaluation of possible underlying cause for weight gain.

(2) Marines who suspect that their weight gain is due to an underlying medical condition will be evaluated by an authorized medical provider as shown in the sequence chart provided at enclosure (5). If the authorized medical provider determines that the weight gain is the result of a medical condition, or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain, the provider may recommend a temporary medical exemption. The inability to exercise is not a valid reason for a temporary medical exemption from weight and body fat standards.

(3) All recommendations for temporary medical exemptions require the endorsement of a Board Certified or Board Eligible Military Physician (BCBEMP). If the provider recommending the temporary medical exemption is not a BCBEMP, then the Marine must be referred to a BCBEMP for further evaluation."

k. Within the unit diary example entry in paragraph 7.e. SRB/OQR (3), replace the words "You are advised that failure to take composition" with the phrase "You are advised that failure to take corrective action."

l. In paragraph 8. "Exemptions and Waivers" delete section 8.a. "Exemptions" and replace with:

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12 OCT 2017

"a. Exemptions

(1) Temporary medical exemptions may be granted for Marines newly diagnosed or with worsening medical condition or therapy who have followed the process in the sequence chart provided at enclosure (5). Marines with approved temporary medical exemptions will not be assigned to BCP or MAP during the current six-month period. Marines are subject to a medical records review by a medical evaluation board (MEB) if:

(a) Marine receives a temporary medical exemption for the same medical condition over two consecutive six-month periods that resulted in the member not participating in the BCP.

(b) Marine receives three temporary medical exemptions in the most recent four-year period for any medical condition that resulted in the member not participating in the BCP.

(c) The CO requests a MEB when the Marine's fitness/health is questionable for continued service.

(2) Pregnancy and post-partum: After confirmation from an authorized medical provider, Marines on BCP/MAP who are pregnant will be placed in an inactive BCP/MAP status. Pregnant and post-partum Marines not on BCP/MAP will not be evaluated for BCP or MAP. The period of inactive status and non-evaluation will include pregnancy, the 12 week (post-partum) convalescent period and for six months following RTFD. For pregnancies that do not come to full term, Marines will be required to meet weight standard requirements after consultation with an authorized medical provider and upon RTFD."

5. Filing Instructions. This change transmittal will be filed immediately following the signature page of the basic Order.

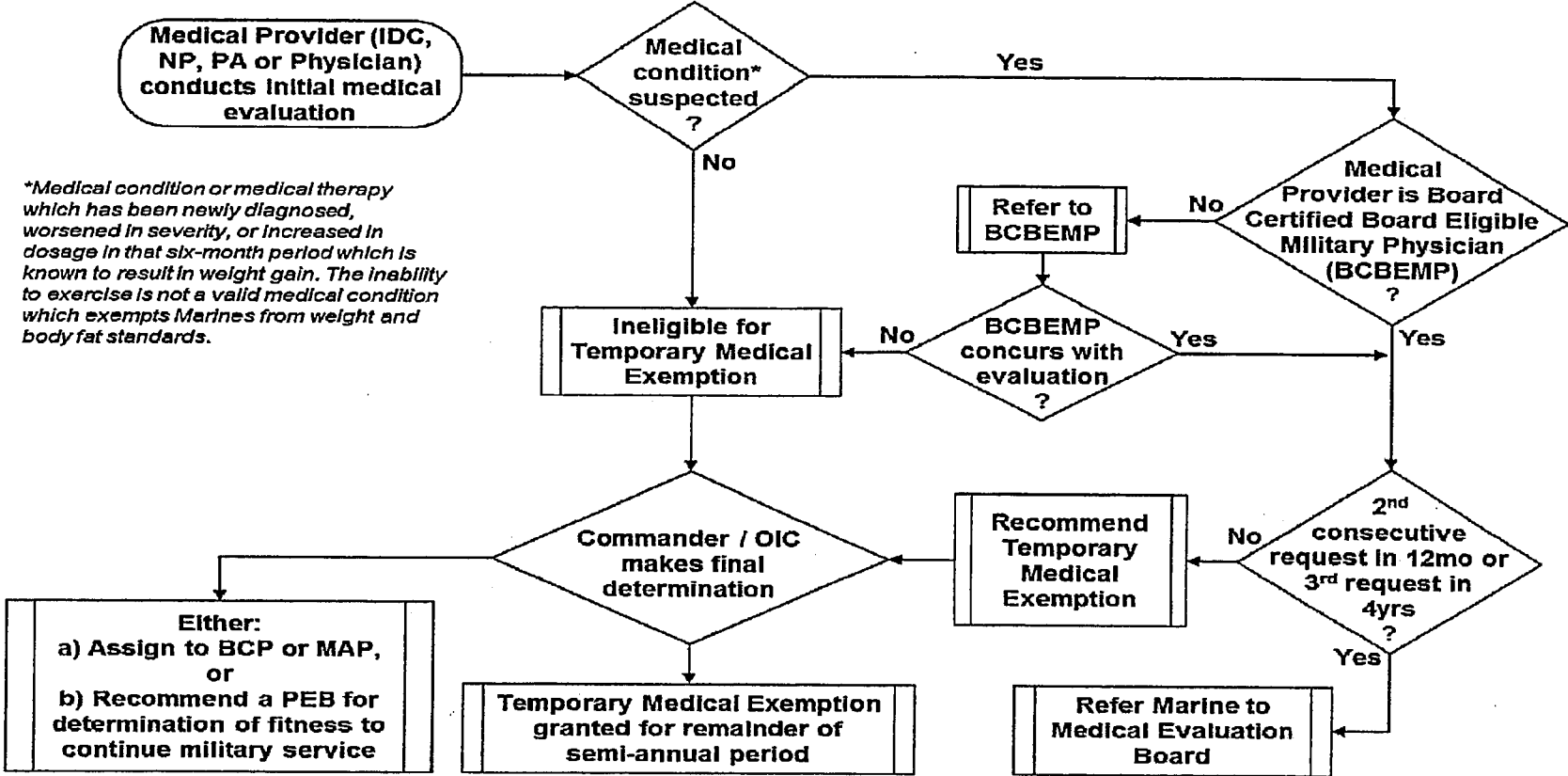


R. S. WALSH
Deputy Commandant for
Combat Development and Integration

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Temporary Medical Exemption Process (new chart below)

Temporary Medical Exemption Process





DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON DC 20350-3000

MCO 6110.3A
C 466469
15 Dec 2016

MARINE CORPS ORDER 6110.3A

From: Commandant of the Marine Corps
To: Distribution List

Subj: MARINE CORPS BODY COMPOSITION AND MILITARY APPEARANCE
PROGRAM

Ref: (a) MARCORMAN
(b) MCO 6100.13 W/CH 2
(c) DoD Instruction 1308.3, "DoD Physical Fitness and
Body Fat Programs Procedures," November 5, 2002
(d) MCO 3500.27C
(e) MCO 5210.11F
(f) MCO 1900.16 W/CH 1
(g) SECNAVINST 1920.6C CH 5
(h) NavMed P-117
(i) MCO 5000.12E W/CH 1-2
(j) BUMEDINST 6320.66E CH 2
(k) MCTFSPRIUM
(l) MCO P1400.32D W/CH 1-2
(m) MCO P1400.31C W/CH 1
(n) MCO 1040.31
(o) MCO P1326.6D W/CH 2
(p) MCO P1070.12K W/CH 1
(q) MCO 1610.7
(r) SECNAV M-5210.1
(s) 5 U.S.C 552a
(t) SECNAVINST 5211.5E

Encl: (1) MCBCMAP Procedural Guidance
(2) MCBCMAP Sequence Chart
(3) DoD Height/Weight Standards Table
(4) DoD Body Composition Standards Table
(5) ~~BEP Medical Waiver Sequence Chart~~ Temporary Medical
Exemption Process
(6) Pregnancy and Post-Partum Policy Flowchart

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unlimited.

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15 Dec 2016

1. Situation. To provide policy and procedural guidance for implementation of the Marine Corps Body Composition and Military Appearance Program (MCBCMAP), per the references.

2. Cancellation. MCO 6110.3.

3. Mission. This Order establishes procedures for the effective management of the MCBCMAP. Commanders will ensure all Marines comply with the requirements and standards contained in this Order. Policy and procedural guidance is contained in the enclosures.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Every Marine must comply with established body composition standards and present a suitable military appearance, regardless of age, grade, gender, or duty assignment, as per reference (a).

(2) End State. Combined with the Marine Corps Physical Fitness Program (MCPFP) contained in reference (b) and in recognition that Marines are warrior athletes, it is essential the Marine Corps develops a comprehensive program that will enhance Marine wellness, body composition, and military appearance while diminishing other risk factors in order to improve Marine combat readiness and personal appearance.

(3) Concept of Operations

(a) The MCBCMAP is comprised of two distinct programs that monitor and evaluate the appearance of Marines while providing assistance through focused supervision in order to ensure compliance with established body composition and military appearance standards. Failure to comply with the policies and standards contained in this Order may result in administrative action that limits promotion, retention, and assignment.

(b) The effectiveness and long-term viability of the MCBCMAP are dependent upon uniform application and enforcement by commanders and compliance by all Marines. Commanders and Officers-In-Charge (OIC) will ensure Marines comply with the standards established in reference (c) and in accordance with the contents of this Order. Failure to do so may jeopardize

operational readiness and erode American confidence in the United States Marine Corps.

b. Subordinate Element Missions

(1) Deputy Commandant for Manpower & Reserve Affairs (DC M&RA)

(a) Ensure promotion, retention, assignment and reporting policies are consistent with the policies established in this Order.

(b) Provide a system capable of reporting and recording individual height, weight and body composition data in order to facilitate analysis and policy modification, as required.

(2) Commanding General, Training & Education Command (TECOM)

(a) Serve as program sponsor and provide subject matter experts in order to ensure the currency and relevance of the MCBCMAP.

(b) Manage and monitor MCBCMAP through development, implementation and interpretation of standards, policies, and procedures consistent with the requirements contained in reference (c).

(3) Inspector General (IG), Headquarters, Marine Corps

(a) Review implementation and management of the MCBCMAP during command inspections and report findings to the Commandant of the Marine Corps following conclusion of periodic IG inspections.

(b) Provide an annual assessment of MCBCMAP IG inspection results to the Commandant of the Marine Corps no later than 31 January for the period 1 January through 31 December.

5. Administration and Logistics

a. Submit all recommendations concerning this Order to CG, TECOM via Marine Air Ground Task Force Training and Education Standards Division.

b. Records Management. Records created as a result of this Order shall be managed according to National Archives and

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Records Administration (NARA) approved dispositions per references (r) to ensure proper maintenance, use, accessibility, and preservation, regardless of format or medium.

c. Privacy Act. Any misuse or unauthorized disclosure of personally identifiable information (PII) may result in both civil and criminal penalties. The Department of the Navy (DON) recognizes that the privacy of an individual is a personal and fundamental right that shall be respected and protected. The DON's need to collect, use, maintain, or disseminate PII about individuals for purposes of discharging its statutory responsibilities will be balanced against the individuals' right to be protected against unwarranted invasion of privacy. All collection, use, maintenance, or dissemination of PII will be in accordance with the Privacy Act of 1974, as amended (reference (s)) and implemented per reference (t)

d. Forms Management. Naval Forms Online (NFOL) is the official online resource for Marine Corps forms. Marine Corps forms identified in this Bulletin may be retrieved from: <https://navalforms.documentservices.dla.mil/web/public/forms>.

6. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

b. Signal. This Order is effective the date signed.



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DISTRIBUTION: PCN 10209357500

MCO 6110.3A
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MCBCMAP Procedural Guidance

1. Objectives. It is not uncommon for Marines to experience weight gain and increased body fat as a result of decreased physical activity and improper nutrition. Marines may also experience weight gain as metabolic rates change with age when no corresponding reduction in caloric intake is made. Excess body fat is directly associated with high blood pressure, high blood cholesterol, diabetes, cancer, cardiovascular disease, and similar health risks. Furthermore, increased weight gain and body fat affects fitness levels through reduced stamina, speed, and endurance. Marines who exceed weight and body fat standards are a detriment to and detract from the combat readiness of their unit. Furthermore, it can generally be considered that a Marine who meets established height, weight, body composition, grooming, and uniform standards will present a suitable military appearance. However, there are some Marines that may meet all established standards yet still fail to present a suitable military appearance. The presentation of an unsuitable military appearance is inconsistent with the Marine Corps leadership principle of setting the example. Simply put, Marines who do not present a suitable military appearance fail to possess the qualities necessary to effectively lead Marines. This is especially true for Marines in a leadership or supervisory role who are required to ensure their subordinates comply with established policies and standards. The objective of the MCBCMAP is to establish healthy weight and body composition standards, and to ensure all Marines present a suitable military appearance. An effective MCBCMAP achieves the following:

- a. Provide Marines information and assistance in order to modify the attitudes and behavior consistent with a healthy lifestyle.
- b. Contribute to the health and well-being of every Marine through continuous monitoring of weight, body composition, and military appearance.
- c. Motivate Marines to set the example by maintaining established weight and body composition standards.
- d. Ensure compliance through supervised oversight, remedial conditioning and professional assistance.
- e. This Order provides guidance and procedures for both overweight and underweight Marines.

2. Responsibilities

a. Commanders/Officers-In-Charge (OICs)

(1) Commanders/OICs possessing special courts-martial convening authority will enforce compliance with weight, body composition, and military appearance standards contained in reference (c) and the contents of this Order through development and uniform application of periodic assessments, assignment, and supervisory procedures.

~~(2) Commanders/OICs will ensure Marines receive a fair and impartial evaluation, to include a medical determination in order to establish if excess weight and body composition is due to a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six month period which is known to result in weight gain. Medical determinations must be made by a board certified or board eligible military physician (BCBEMP) and will include, but not be limited to the following~~ Commanders/OICs will ensure Marines receive a medical evaluation from an authorized medical provider (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) prior to being assigned to BCP or MAP:

- (a) Current duty status.
- (b) Recommended dietary plan.
- (c) Realistic weight and body composition reduction goals.
- (d) Combat conditioning restrictions and limitations.

(3) Commanders/OICs will consider recommendations for temporary medical exemptions if they are forwarded by board certified or board eligible military physicians (BCBEMP) as shown in the process chart provided at enclosure (5).

(4) Commanders/OICs will select and assign in writing a force fitness instructor (FFI) and/or command physical training representative (CPTR).

b. Executive Officers/Senior Enlisted Advisors

(1) Executive officers will evaluate officers for compliance with the military appearance program (MAP).

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(2) Executive officers will provide oversight and supervise the performance of officers assigned to the MAP.

(3) Senior enlisted advisors will evaluate enlisted Marines for compliance with the MAP.

(4) Senior enlisted advisors will provide oversight and supervise the performance of enlisted personnel assigned to the MAP.

(5) Executive officers/senior enlisted advisors will supervise the implementation of a weight reduction or weight redistribution plan developed by BUMED or certified Semper Fit professional for Marines assigned to the MAP, as required.

(6) Executive officers/senior enlisted advisors will provide guidance and assistance regarding the supervision and performance of Marines assigned to the MAP, ensuring they receive all available resources and support at the command's disposal.

c. FFI/CPTR

(1) The FFI or CPTR will thoroughly review reference (c) and the contents of this Order immediately upon assignment.

(2) The FFI or CPTR is responsible to the commander for development, implementation, management and supervision of the organizational MAP, Body Composition Program (BCP) and Remedial Conditioning Program (RCP).

(3) The FFI or CPTR is responsible for applying risk management (RM) fundamentals during the conduct of the RCP in support of MAP or BCP assignment, in accordance with reference (d).

(4) The FFI or CPTR is responsible for coordinating and supervising the execution of weigh-ins and body composition evaluations (BCEs) utilizing NAVMC 11621, "BCP Evaluation," form if necessary. Responsibilities may include, but not be limited to the following:

(a) Select and train BCE evaluators as required.

(b) Report BCE findings for those Marines who exceed weight and body composition standards in accordance with reference (c) and the contents of this Order.

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(c) Document and record BCE data.

(d) Manage and maintain BCE documentation in accordance with references (e) and (r). BCE documentation will contain, but not be limited to the following:

1. NAVMC 11621, "BCP Evaluation."
2. Medical documentation.
3. Counseling records.
4. Weekly weigh-in and BCE results for active duty units. Reserve units will conduct weigh-ins as reasonably practicable.
5. RCP training log.
6. Physical Fitness Test (PFT)/Combat Fitness Test (CFT) performance results.

(5) The FFI or CPTR will coordinate diet and nutrition seminars or coordinate appointments with Semper Fit fitness and lifestyle professionals for Marines assigned to the BCP or MAP.

(6) The FFI or CPTR will ensure Marines on their first BCP assignment order complete MarineNet MCIZ4133AZ (Semper Fit Basic Fitness Course).

(7) The FFI or CPTR will ensure Marines on their second or subsequent BCP assignment order and complete MarineNet MCIZ4134AZ (Semper Fit Advanced Course).

(8) The FFI or CPTR is responsible for providing periodic feedback to the senior enlisted advisor, executive officer and commander/OIC regarding the status and performance of Marines assigned to the MAP.

(9) Upon notification, the FFI or CPTR will initiate MAP evaluation procedures utilizing NAVMC 11620, "MAP Evaluation," form.

(10) The FFI or CPTR will document and record MAP performance data.

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(11) The FFI or CPTR will manage and maintain MAP documentation in accordance with reference (e). MAP documentation will contain, but not be limited to the following:

(a) NAVMC 11620, "MAP Evaluation."

(b) Counseling records.

(c) Weekly weigh-in and BCE results for active duty units. Reserve units will conduct weigh-ins as reasonably practicable.

(d) RCP training log.

(12) The FFI or CPTR will ensure Marines on their first BCP MAP assignment order complete MarineNet MCIZ4133AZ (Semper Fit Basic Fitness Course).

(13) The FFI or CPTR will ensure Marines on their second or subsequent BCP MAP assignment order and complete MarineNet MCIZ4134AZ (Semper Fit Advanced Course).

d. Individual Marines

(1) Every Marine will conform to established Marine Corps weight and body composition standards and present a suitable military appearance, regardless of age, grade, gender or duty assignment.

(2) Marines who exceed established Marine Corps weight and body composition standards will take necessary action to return to standards within the prescribed timeline. Failure to do so may result in formal assignment to the BCP and administrative actions that include limitations on promotion, retention, assignment or administrative separation.

(3) Marines who do not present a suitable military appearance will take all necessary action to improve their appearance within prescribed timelines. Failure to do so may result in formal assignment to the MAP and administrative action that includes limitations on promotion, retention and assignment.

e. Medical Providers

(1) Authorized medical providers (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant)

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will evaluate Marines who have failed an official weigh-in and are being screened for BCP or MAP.

(2) Authorized medical providers will use the sequence chart provided at enclosure (5) for Marines whose weight gain may be due to a new medical condition or recent change to a medical therapy. If the provider determines a temporary medical exemption may be appropriate, the recommendation will be forwarded per the sequence chart at enclosure (5).

(3) Board Certified or Board Eligible Military Physicians (BCBEMP) may originate recommendations for temporary medical exemptions and may endorse recommendations from non-BCBEMPs, Independent Duty Corpsman, Nurse Practitioner, and Physician Assistants as shown in the sequence chart at enclosure (5).

(4) Authorized Medical providers will refer Marines to a Medical Evaluation Board if the Marine has made two consecutive requests for a temporary medical exemption for the same condition within a 12-month period or has made three requests for any condition within the most recent four year period.

3. Requirement

a. Purpose. The MCBCMAP establishes, evaluates and enforces compliance with optimal weight, body composition, and military appearance standards that are essential to the preservation of good order and discipline and necessary for the maintenance of combat readiness Marine Corps-wide.

b. Scope. All Marines will be periodically evaluated for weight and military appearance in accordance with the sequence described in enclosure (2) and the frequency described below. However, commanders/OICs are authorized to conduct unit/individual weigh-ins, BCP, or MAP assessments as often as deemed necessary. Weigh-ins may be conducted on the same day as the PFT/CFT. Inspector General/Commanding Generals may also perform weigh-ins while conducting unannounced inspections.

c. Standards. Marines are considered to exceed standard when their body weight and body fat percentage exceeds the maximum allowable limits for their height, as contained in enclosures (3) and (4). Reference (c) and this Order primarily focus on Marines who exceed their maximum allowable weight, but Commanders/OICs should provide the same level of assistance and

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supervision for those Marines who are below their minimum allowable limit.

d. Frequency

(1) Active Component. The weigh-in is a calendar year semi-annual requirement for all active duty Marines, regardless of age, grade, gender, or duty assignment.

(2) Reserve Component. The weigh-in is a calendar year annual requirement for all SMCR/IMA Marines, regardless of age, grade, gender or duty assignment.

(3) Activated Reservists. Activated Reserve Marines, to include AR, mobilized or those performing active duty operational support (ADOS) will comply with the active component semi-annual weigh-in requirement.

(4) Permanent Change of Station/Assignment (PCS/PCA) Orders. A Marine can be transferred, receive PCS/PCA orders during an initial assignment, or be extended under an initial BCP assignment. Marines will not be transferred or execute PCS/PCA orders while on a second assignment to the BCP. For transferred Marines on their initial BCP assignment, losing commands will ensure the original BCP file in its entirety is forwarded to the gaining command by registered/receipt mail within seven days of departure. The losing command will retain a copy of the file in accordance with reference (e). Marines assigned to the MAP are eligible for PCS/PCA.

(5) End of Active Service (EAS)/Retirement. Imminent EAS/retirement does not preclude a Marine, who exceeds weight and body composition standards or presents an unsuitable military appearance from being evaluated and assigned to the MAP, BCP, and RCP. Commanders/OICs are authorized to evaluate and assign Marines to the MAP, BCP, and RCP up to their EAS date. However, commanders/OICs will exercise discretion and judgment regarding final disposition of Marines who fail to meet weight and body composition standards within seven months of EAS. Regardless of BCP assignment decision, commanders/OICs are encouraged to enforce RCP compliance.

e. Sequence. Marines will be evaluated in accordance with the sequence contained in enclosure (2). If a Marine is not within weight standards, then the FFI or CPTR will conduct a BCE utilizing the circumference (taping) technique, on the same day as the weight measurement. BCE's are only required for Marines

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who exceed their maximum weight standard or present an unsuitable military appearance due to improper weight distribution, as determined by the commander/OIC.

f. Procedures

(1) Safety. In accordance with reference (d), RM fundamentals will be applied in order to ensure Marines are not exposed to unnecessary risk.

(2) Supervision. The commander/OIC is responsible overall for the conduct of the MCBCMAP. Executive officers/senior enlisted advisors are responsible for organizing and conducting MAP assessments and making appropriate recommendations to the commander/OIC. The FFI or CPTR or designated evaluator(s) are the only individuals authorized to perform height, weight and body composition measurements in conjunction with MAP assessments. The FFI or CPTR will supervise the performance and progress of Marines assigned to the BCP, MAP, and RCP in accordance with the contents of this Order and guidance received from the commander/OIC, executive officer and senior enlisted advisor. The MAP is comprised of all aspects of the MCBCMAP and is meant to be an organizational aid to improve military appearance and prevent Marines from being assigned to the BCP. However, MAP failure incorporates adverse administrative action in order to encourage and/or enforce compliance.

(3) Uniform. The only authorized uniform for the weigh-in and BCE (if necessary) is the Marine Corps approved green-on-green T-shirt, shorts and socks. No other uniform or clothing garment is permitted. Shoes will be removed prior to evaluation.

(4) Equipment. Height will be measured utilizing a standard, non-stretching fiberglass tape measure affixed to a vertical surface or a wall mounted stadiometer. The tape measure will be calibrated using a separate yardstick or metal ruler. Weight will be measured utilizing a calibrated digital or balance beam scale. Circumferences will be measured using a self-tensioning taping device (digital or non-digital) for those who require body fat estimation. Examples of these devices can be found at <http://www.fitness.marines.mil>.

(5) Evaluations

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(a) Height Measurement. The Marine will stand with their back against the wall, heels flat on the deck, shoulders back, with arms to the side in a relaxed manner, and head straight forward. For use in height/weight tables and FitRep reporting, height measurement will be recorded to the nearest inch. If height fraction is less than 1/2-inch, round down to the nearest inch. If height fraction is 1/2-inch or more, round up. If Marine exceeds weight on height/weight tables, height will be re-measured and recorded to the nearest 1/2-inch for use in body fat percentage estimation.

(b) Weight Measurement. Weight will be measured on a calibrated digital or balance beam scale in the required PT uniform, without running shoes. A one-pound reduction will be granted for the PT uniform; however, no other weight reductions are authorized. Measurement will be recorded to the nearest pound. If the weight fraction is 1/2-pound or less, round down to the nearest pound. If more than 1/2-pound, round up.

(c) Circumference Measurement. Body composition will be estimated using the circumference-based method. No substitute body composition evaluation methods are permitted in accordance with reference (c). The FFI or CPTR or designated evaluator(s) are the only individuals authorized to perform height, weight and BCE's, if necessary. All measurements will be taken on bare skin, the only exception being the female hip measurement. A confirmation height/weight measurement will be performed prior to conducting a BCE. Using the self-tensioning device, the FFI will measure Marines at the gender specific sites. The FFI will measure Marines by standing to the right of the Marine being measured. Pull the end of the tape around the body part being measured. Place the rod at the end of the tape into the circular slot. Press the button in the center and let the tape retract to a snug fit. Read and record your measurement on the outer edge of the tape measure, or as indicated with the digital model (the end opposite the locked in rod). Circumference measurements will be taken three times by two separate evaluators in order to ensure accuracy. Each set of measurements will be completed sequentially to discourage assumption of repeated measurements of a specific region. The lowest body fat percentage estimation (vice circumference measurement) that results from the six sets of circumference measurements by the two BCP evaluators will be utilized for MAP or BCP assessment purposes. Video instructions can be found at <http://www.fitness.marines.mil>.

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1. Male Marines. Measurements for male Marines will be taken along the neck and abdominal circumference, at the navel. Measure the neck circumference by placing the curved portion of the self-tensioning device on the right neck muscle so that the taping device conforms to the natural curvature of the neck muscle. The tape will cross the bottom the larynx and perpendicular to the long axis of the neck. The Marine should look straight ahead during the measurement, with shoulders down, not hunched. For neck measurements, round up to the nearest 1/2-inch and record.

Measure the abdominal circumference by placing the curved portion of the self-tensioning taping device on the right side of the Marines abdomen. The tape will cross the center of the navel and be parallel to the deck. Arms will be straight and relaxed at the sides. Take measurement at the end of the Marine's normal, relaxed exhalation. For abdominal measurements, round down to the nearest 1/2-inch and record. The circumference value is calculated by subtracting the neck from the abdominal measurement.

| |
|--|
| $\text{abdominal} - \text{neck} = \text{circumference}$ value |
|--|

Male body fat percentages can be derived utilizing enclosure (4) by locating the number at the intersection of height measurement and circumference value.

2. Female Marines. Measurements for female Marines will be taken along the neck similar to males, at the waist at the thinnest portion of the abdomen, and at the hips. Measurements for female Marines will be performed by female evaluators, only. Measure the natural waist circumference against the skin at the point of minimal abdominal circumference, usually located about halfway between the navel and the lower end of the sternum (breastbone) with the self-tensioning device as indicated in the paragraph above. When this site is not easily observed, take several measurements at probable sites and use the smallest value. Ensure the tape is level and parallel to the deck. Arms will be straight and relaxed at the sides. Take measurements at the end of a normal, relaxed exhalation. For natural waist measurement, round down to the nearest 1/2-inch and record. Measure the hip circumference while facing the Marine's right side by placing the tape around the hips so that it passes over the greatest protrusion of the buttocks as viewed from the side. Ensure the tape is level and parallel to the deck. For hip measurement, round down to the nearest 1/2-inch and record. The

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circumference value is calculated by adding the waist and hip measurements and subtracting the neck measurement.

$$\begin{array}{c} \text{waist + hip - neck = circumference} \\ \text{value} \end{array}$$

Female body fat percentages can be derived utilizing enclosure (4) by locating the number at the intersection of height measurement and circumference value.

(d) MAP Assessments. Commanders will conduct military appearance assessments based upon personal appearance indicators (personal hygiene, grooming and uniform wear) and improper distribution/excessive accumulation of body fat. Specific areas to be evaluated are:

1. Subjective Indicators

a. Uniform inspections (Service 'C' uniform).

b. Personnel inspections that focus on hygiene and grooming standards.

2. Objective Indicators

a. Established DoD height/weight standards.

b. Established Marine Corps body fat percentages, by age group.

c. Established DoD body composition standards. Specific target areas are: neck and abdomen for male Marines, neck, waistline and hips for female Marines.

4. Assignment Process

a. Enforcement of BCP and MAP Standards. Maintenance and monitoring of BCP and MAP standards is a shared individual Marine and command responsibility. Compliance with BCP and appearance standards is continuous and not tied to a reporting period or event.

b. BCP and MAP

(1) Commander's BCP. If Marines do not meet established BCP standards they will be notified of their deficiencies and

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processed for BCP assignment. Commanders are responsible for ensuring the BCP processing period is completed as soon as possible and not longer than 60 days. During this period, and any other time a Marine is out of standards, administrative actions (restricted or withheld/delayed promotions, denied reenlistment, denied special school/special duty assignments, etc.) outlined in paragraph 5 of this enclosure apply whether processing results in BCP assignment or not. The commander also has the power to determine that although a Marine is outside height, weight, and body composition standards that his or her uniformed appearance is commensurate with that of a squared away Marine. Should that be a commander's determination, the commander has the opportunity to seek a waiver for the Marine through the chain of command. The final authority for a waiver rests with the first General Officer in the chain of command.

(2) Commander's MAP. Because Marines come in all shapes and sizes, there is an imperative to ensure that the commander has a continuous say in the assignment of his or her Marines to programs dealing with body composition and military appearance. The authority of the commander is such that should he or she decide that a Marine is within height and weight standards, the body composition percentages, or both, that Marine can still be assigned to the MAP. Such an assignment would normally be oriented towards weight redistribution, vice loss, and a Marine should be given an opportunity to correct deficiencies before being formally assigned to the MAP. Should an assignment to the formal program be necessary, the commander will provide the appropriate resources, counseling, and unit diary entries. Should a Marine not show progress while on the program, reenlistment and promotion opportunities could be denied. To maintain fairness and impartiality, Marines assigned to the MAP will have the right to appeal their status to the next higher officer in the chain of command.

c. BCP Formal Assignment. Commanders/OICs possessing special courts-martial convening authority will assign Marines to the BCP and RCP who fail to comply with established weight and body composition standards, in accordance with reference (c) and the contents of this Order. Commanders/OICs will utilize NAVMC 11621 to notify Marines of their formal BCP assignment. Marines on their first BCP assignment will not be removed from the program until their initial six-month assignment has expired with the exception of pregnant/post-partum Marines as specified in Paragraph 4.f.(3). This measure is required in order to ensure healthy weight and body fat loss techniques are employed and appropriate attitude and lifestyle adjustments are made.

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The following steps are required to formally assign and remove Marines to/from the BCP:

(1) Upon notification that a Marine exceeds established weight standards, the FFI or CPTR will conduct a BCE and record results on NAVMC 11621.

(2) After confirmation that a Marine exceeds established weight and body composition standards, the FFI or CPTR will notify the chain of command that a medical evaluation is required.

(3) At any time in the BCP assignment processing period, Marines may have additional weigh-ins/BCES conducted. If the Marine returns to standard within the BCP assignment processing period, the Marine will not be assigned to BCP. If the Marine is still out of standards at the end of this period the Marine will be assigned to BCP. If a performance evaluation is due during the period of BCP processing, the Marines HT/WT/BF percentage data will be accurately reported and a statement will be included in the report that the Marine is being evaluated for assignment to BCP. The Marine will be provided the opportunity to submit a statement regarding this adverse comment.

~~(4) A BCBEMP will make the following determination and recommendations:~~

~~_____ (a) A determination as to whether weight gain is due to a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six month period which is known to result in weight gain. A BCP medical waiver may only be recommended by a physician (board eligible or certified specialist). The inability to exercise is not a valid reason for a BCP waiver. All BCP medical waivers recommendations will require two signatures. If the physician recommending the waiver is civilian, a BCBEMP must endorse the waiver. If the physician recommending the waiver is a BCBEMP, the waiver must be endorsed by a physician one level higher in the chain of command.~~

~~_____ (b) Medical clearance to participate in the BCP/RCP.~~

~~_____ (c) Physical limitations or restrictions.~~

~~_____ (d) Recommended weight and body composition fat reduction goals.~~

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~~(e) Recommended nutritional and dietary measures.~~

(4) An authorized medical provider (Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) will evaluate the Marine and make the following determinations:

(a) Medical clearance to participate in the BCP/MAP/RCP.

(b) Physical limitations or restrictions.

(c) Recommended weight and body composition fat reduction goals.

(d) Recommended nutritional and dietary measures.

(e) Referral to BCBEMP for evaluation of possible underlying cause for weight gain.

(5) After the medical evaluation, the FFI or CPTR will deliver the package to the commander/OIC. The commander/OIC will conduct an assessment and make a BCP assignment decision.

(6) If assigned, the Marine will be counseled on his/her deficiencies, corrective action required and information regarding BCP assignment responsibilities. The Marine will acknowledge notification of deficiencies and BCP assignment by signing the NAVMC 11621 and a NAVMC 118, Administrative Action," (page 11) entry in accordance with paragraph 6105 of reference (f).

(7) At the conclusion of the six-month period, the FFI or CPTR will complete the final BCP assessment and deliver the package to the commander/OIC for a final determination. For Marines on extended or second assignments, this process can occur as soon as the Marine complies with established weight and body composition standards.

(8) Once the final determination has been made and appropriate unit diary entries entered, the FFI or CPTR will complete documentation of the BCE and retain, in accordance with reference (e).

(9) A BCP ~~medical waiver~~ temporary medical exemption sequence chart is provided at enclosure (5).

d. BCP Extension

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(1) Only Marines on their first assignment can be granted an extension.

(2) A Marine who has failed to comply with established weight and body composition standards, but has made satisfactory progress will be afforded a one-time six-month extension. Additional extensions are not authorized.

(3) Marines who fail to make satisfactory progress will not receive an extension and will be processed for administrative separation in accordance with references (f) and (g).

(4) An extension does not constitute a second assignment.

e. Second BCP Assignment

(1) Marines who have been assigned to and officially removed from the BCP at any time in their career, yet fail to meet established weight and body composition standards, may receive a second one-time six-month assignment to the BCP.

(2) Extensions to second assignments are not authorized.

(3) All other BCP management policies apply.

f. BCP Removal

(1) Marines on their first BCP assignment who comply with established weight and body composition standards at the conclusion of their six-month assignment period will be removed from the BCP by their commander/OIC possessing special courts-martial convening authority utilizing NAVMC 11621, with no further action required.

(2) Marines on their second assignment who comply with established weight and body composition standards can be removed from the BCP at any time during their six-month assignment.

(3) Marines who fail to comply with established weight and body composition standards due to unsatisfactory progress shall receive a page 11 entry in accordance with paragraph 6105 of reference (f) and be processed for administrative separation (Weight Control Failure).

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(4) Marines who fail to comply with established weight and body composition standards due to indifference or apathy shall receive a NAVMC 10274 entry in accordance with paragraph 6105 of reference (f) and be processed for administrative separation (Unsatisfactory Performance).

(5) Administrative separation procedures for officers who fail to comply with established weight and body composition standards will be performed in accordance with reference (g).

g. MAP Formal Assignment. Commanders/OICs possessing special courts-martial convening authority will conduct a MAP assessment and make a formal assignment determination. Assessments will include a review of all relevant MAP documentation and a commander/OIC Summer Service 'C' uniform inspection. Commanders/OICs will utilize NAVMC 11620 to notify Marines of their initial 60-day formal MAP assignment. Because of the intrinsic link between the BCP and MAP, Marines who do not present a suitable military appearance will be evaluated by a BCBEEMP prior to MAP formal assignment in order to rule out the possibility of an underlying medical condition or disease as a primary causal factor behind the improper weight distribution. Instructions regarding the use of NAVMC 11620 are included with the form upon download.

(1) The MAP processing period includes the right of the Marine to appeal the pending MAP assignment to the next higher level commander in the chain of command within five (5) working days. MAP appeal authority may not be delegated. Appeal authority will be provided access to all relevant MAP information and can respond to the request in writing or may require a personal assessment conducted in the "Service 'C' uniform". MAP appeal requests should be adjudicated in a timely manner. If MAP authority concurs with the initial MAP assessment, the Marine will be assigned to MAP.

(2) If MAP appeal authority rules in favor of the Marine, the Marine will not be assigned to MAP.

(3) Only after assignment to MAP, either following a denied appeal or if the Marine accepts the initial MAP assignment decision, will provisions in paragraph 5 of this enclosure apply. When a Marine is assigned to MAP, this will be reflected in proficiency/conduct marks or on fitness reports.

h. MAP Extension. Once formally assigned to the MAP, commanders/OICs that possess special courts-martial convening

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authority will extend Marines who fail to comply with established subjective and objective MAP indicators in sequential 60-day increments until they either present a suitable military appearance (and are removed from MAP) or get assigned to the BCP as a result of failing to meet established weight and body composition standards.

i. MAP Removal. Commanders/OICs that possess special courts-martial convening authority will immediately remove Marines from the MAP as soon as they present a suitable military appearance utilizing the MAP evaluation form. No further administrative action is required once a Marine is removed from MAP.

j. MAP Failure. Marines who are formally assigned to the MAP and fail to conform to established body composition standards within the initial 60-day formal MAP assignment period will be subject to adverse administrative action that may affect promotion, assignment, and retention.

k. MAP Appeals. Upon notification of formal assignment to the MAP by a commander/OIC possessing special courts-martial convening authority, Marines may submit a written request appealing their formal MAP assignment to the next higher level commander in the chain of command within five working days. The appeal authority will be provided access to all relevant MAP documentation and can respond to the request in writing or may require a personal assessment to be conducted in the Service 'C' uniform. MAP appeal requests should be adjudicated in a timely manner. If the higher level authority approves the appeal request, Marines will be immediately removed from the MAP with no further administrative action required. Appeal authority cannot be delegated.

5. Administrative Action. Tables 1 and 2 contain a summary of required administrative actions as a result of BCP or MAP assignment, in accordance with references (f) through (q).

a. Promotion

(1) Enlisted Marines. In accordance with reference (1), enlisted Marines are placed in a promotion restriction status while assigned to the BCP or MAP, regardless of combat zone assignment or BCP status. Enlisted Marines will no longer be in a promotion restriction status once removed from the BCP or MAP.

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(2) Officers. Commanders may request promotions be delayed for those officers who are deemed not physically qualified for promotion, regardless of combat zone assignment or BCP status, in accordance with reference (m).

b. Retention. Marines who do not meet established weight and body composition standards or fail to present a suitable military appearance are not eligible for reenlistment or voluntary extension, in accordance with reference (n).

c. Special Schools/Special Duty Assignment (SDA). Marines who do not meet established weight and body composition standards or fail to present a suitable military appearance may be ineligible for selection to special schools and assignment to specific SDA billets, in accordance with reference (o). This provision also applies to selection for and attendance at officer and enlisted resident professional military education (PME).

d. Repeat Failure(s). For Marines processed, but not separated for BCP failure/unsatisfactory performance, or Marines found to be out of standards a third time, participation in the BCP and RCP are mandatory until separation, EAS, retirement, or until compliance with established standards. Commands will continue BCP and RCP supervision, as required, regardless of separation authority to retain.

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Table 1.--BCP Administrative Summary.

| ADMINISTRATIVE ACTION AFTER BCP ASSIGNMENT | 1st | 2d |
|---|------------|-----------|
| Mandatory RCP | Yes | Yes |
| Page 11 Counseling Entry (NAVMC 10274) | Yes* | Yes* |
| Adverse Fitness Report | Yes | Yes |
| Substandard Conduct Marks | Yes | Yes |
| Promotion Restriction | Yes | Yes |
| Eligible for PCS/PCA Transfer | Yes | No |
| Eligible for Reenlistment | No | No |
| Eligible for Special School Assignment | No | No |
| Process for AdSep | Yes | Yes |

*Note: A NAVMC 10274, "Administrative Action," (Page 11) entry in accordance with paragraph 6105 of reference (f) shall be made when a Marine is counseled on deficiencies, corrective action to be taken, and assignment to BCP. Additional page 11 entries shall be made when a Marine has not made satisfactory progress during BCP assignment in accordance with references (f) and (p).

Table 2.--MAP Administrative Summary.

| ADMINISTRATIVE ACTION | MAP ASSIGNMENT |
|---|-----------------------|
| Mentoring (Command Leadership) | Yes |
| Health Coaching (Semper Fit Health Promotion) | Yes |
| Semper Fit Diet and Nutrition Assistance (MTF) | Yes |
| Mandatory RCP | Yes |
| Page 11 Entry, per para. 6105 of ref. (f) (NAVMC 10274) | No |
| Adverse Fitness Report (MAP Failure) | Yes |
| Substandard Conduct Marks | Yes |
| Promotion Restriction | Yes* |
| Eligible for PCS/PCA Transfer | Yes |
| Eligible for Reenlistment | No* |
| Eligible for Special School Assignment | No* |
| Process for AdSep | No |

*Note: Marines will be placed in a promotion restriction status and cannot be promoted if they fail to comply with MAP standards. Marines are also ineligible for reenlistment and special school/SDA assignment when they are in non-compliance of MAP standards.

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6. Medical Considerations

a. Pregnancy. Pregnant Marines, as verified by a BCBEEMP/obstetrician (OB) health care provider, will not be evaluated for MAP or BCP assignment. If already formally assigned, Marines will be placed in an inactive status during pregnancy and for six months after return to full duty (RTFD) following 12 weeks (post-partum) convalescent leave, in accordance with references (h) through (j). A flow chart that provides a visual depiction of the process is provided in enclosure (6).

b. Light/Limited Duty. Marines who are assigned light or limited duty or pending medical evaluation board (MEB)/physical evaluation board (PEB) screening are required to comply with established body composition and military appearance standards and may be evaluated for assignment to the BCP or MAP.

c. Neuro-Musculoskeletal (NMS) Injuries. NMS injuries may reduce or inhibit an individual's normal activity and without a resultant decrease in caloric intake, weight gain will occur. While the location of the injury will be the determining factor in how activity is limited, NMS injuries are normally of such short duration that they do not serve as a basis for exemption from assignment to the BCP or MAP.

~~d. Medical Evaluation. Marines who are not in compliance with established weight, body composition or military appearance standards require a BCBEEMP evaluation prior to BCP or MAP formal assignment. A BCBEEMP must make a determination if a Marine's weight gain is due to a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain. The inability to exercise is not a valid reason for a BCP waiver. All BCP medical waivers recommendations will require two signatures. If the physician recommending the waiver is civilian, a BCBEEMP must endorse the waiver. If the physician recommending the waiver is a BCBEEMP, the waiver must be endorsed by a physician one level higher in the chain of command.~~

d. Medical Evaluation.

(1) Marines not in compliance with established weight and body composition standards and Marines not meeting military appearance standards require a medical evaluation prior to BCP or MAP formal assignment. An authorized medical provider

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(Independent Duty Corpsman, Nurse Practitioner, Physician, or Physician Assistant) will evaluate the Marine and make the following recommendations/determinations:

- (a) Medical clearance to participate in the BCP/MAP/RCP.
- (b) Physical limitations or restrictions.
- (c) Recommended weight and body composition fat reduction goals.
- (d) Recommended nutritional and dietary measures.
- (e) Referral to BCBEMP for evaluation of possible underlying cause for weight gain.

(2) Marines who suspect that their weight gain is due to an underlying medical condition will be evaluated by an authorized medical provider as shown in the sequence chart provided at enclosure (5). If the authorized medical provider determines that the weight gain is the result of a medical condition, or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain, the provider may recommend a temporary medical exemption. The inability to exercise is not a valid reason for a temporary medical exemption from weight and body fat standards.

(3) All recommendations for temporary medical exemptions require the endorsement of a Board Certified or Board Eligible Military Physician (BCBEMP). If the provider recommending the temporary medical exemption is not a BCBEMP, then the Marine must be referred to a BCBEMP for further evaluation

e. Newly diagnosed or Worsening Medical Condition or Therapy. When exceeding established body composition standards is due to a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain, the BCBEMP will make an appropriate annotation in the Marine's Health Record and make the following recommendation(s)/take the following action(s):

- (1) Treat/alleviate the medical condition, return Marine to full duty, and recommend for assignment to the BCP or MAP.

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(2) Forward to a PEB for determination of fitness to continue military service.

7. Reporting

a. Performance. The FFI or CPTR is responsible for completing NAVMC 11620 and NAVMC 11621. The FFI or CPTR will ensure complete and accurate information is presented to the senior enlisted advisor (for enlisted Marines) or the executive officer (for officers) in order to provide a fair and unbiased assessment to the commander/OIC. A copy of NAVMC 11620 or NAVMC 11621 will be submitted to the appropriate servicing personnel administration center (PAC) for unit diary recording when the commander/OIC has made an appropriate formal assignment or removal determination. The FFI or CPTR will retain the original forms in accordance with references (e) and (r).

b. UD-MIPS/MCTFS. Unit diary entries are required for the following circumstances:

(1) When a Marine is assigned to the BCP following a medical evaluation and commander/OIC assessment.

(2) When a Marine is granted a BCP extension.

(3) When a Marine is placed in an inactive status.

(4) When a Marine returns to an active BCP status.

(5) When a Marine is removed from the BCP or program assignment has expired.

(6) When a Marine is formally assigned to the MAP by a commander/OIC possessing Special Courts Martial Authority.

(7) When a Marine is formally removed from the MAP by a commander/OIC possessing special courts martial authority.

c. Conduct Marks. For Marines, corporals and below, conduct marks will be adjusted commensurate with BCP and MAP assignment, in accordance with reference (p).

d. Performance Evaluation

(1) Directed Comments. A Section I directed comment will be made to address the following circumstances:

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(a) When a Marine exceeds established body composition standards, as a result of a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain. This does not render the report adverse.

(b) When a Marine is assigned to the BCP, at any time during the respective reporting period, as a result of exceeding established body composition standards, not the result of an underlying medical condition or disease. BCP formal assignment renders the fitness report adverse.

(c) A Section I directed comment will be made when a Marine fails to present a suitable military appearance at the conclusion of the first formal MAP assignment. Failure to present a suitable military appearance at the conclusion of the initial 60-day formal MAP assignment period renders the fitness report adverse. If a Marine presents a suitable military appearance at any time during MAP assignment, the Marine will be removed from the program without any further administrative action.

(d) Marines who score 285 and higher on both the PFT and CFT are exempt from weight and body fat limits. These values however will still be reported on the fitness report. A Section I comment will indicate that due to the Marine's high PFT and CFT performance, they are exempt from weight and body fat limits.

(e) Marines who score 250 and higher on both the PFT and CFT are allowed an additional 1 percent body fat. If this additional 1 percent body fat causes the Marine to exceed allowable body fat for their age group, a Section I comment will indicate that due to the Marine's high PFT and CFT performance, they are allowed an additional 1 percent and are within standards.

e. SRB/OQR. A NAVMC 10274 entry in accordance with paragraph 6105 of reference (f) and per reference (p) shall be made for the following occasions:

(1) When a Marine is assigned to the BCP.

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"Counseled this date concerning your assignment to the Marine Corps BCP. You are advised that failure to take corrective action and meet established weight/body composition standards may result in processing for administrative separation from the USMC for either weight control failure or unsatisfactory performance per paragraphs 6206 and 6215 of MARCORSEPMAN. Specific recommendations for corrective action are: Meet your weight/body fat reduction goals by losing the prescribed ___ lbs and ___ % body fat per month for six months and actively participate in your diet and exercise program. Assistance is available through your chain of command. I was advised that within five working days after acknowledgment of this entry a written rebuttal could be submitted and that such a rebuttal will be filed on the document side of my SRB/OQR. I choose (to) (not to) make such a statement."

(2) When a Marine fails to make satisfactory progress while assigned to the BCP. This entry is to be made during the fourth month of assignment.

"Counseled this date concerning your unsatisfactory performance while assigned to the Marine Corps BCP. Due to insufficient effort, you have not met your weight/body composition reduction goals. You are advised that failure to take corrective action and reach your required body composition will result in administrative separation for unsatisfactory performance per paragraph 6206 of MCO 1900.16. Specific recommendations for corrective action are: Meet your weight/body composition reduction goal, and actively participate in your diet and exercise program. Assistance is available through your chain of command. I am advised that within 5 working days after acknowledgment of this entry, a written rebuttal could be submitted and that such a rebuttal will be filed on the document side of my SRB/OQR. I choose (to) (not to) make such a statement."

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(3) When a Marine makes satisfactory progress, but fails to meet established weight and body compositions standards.

"Counseled this date concerning your failure to comply with established weight/body composition standards while assigned to the Marine Corps BCP. ~~You are advised that failure to take composition~~ You are advised that failure to take corrective action may result in processing for administrative separation for unsatisfactory performance per paragraph 6206 of MCO 1900.16_. Specific recommendations for corrective action are: Meet your weight/body composition reduction goal and actively participate in your diet and exercise program. Assistance is available through your chain of command. I am advised that

This entry will be made at the conclusion of the six-month BCP

"Counseled this date concerning your extension on the Marine Corps BCP. You have made reasonable progress but have failed to comply with established weight/body composition standards while on your first assignment to the BCP. Therefore, you have been granted a one-time extension of six months to meet the body composition standards set forth in MCO 6110.3_. You are advised that failure to take corrective action while on this six-month extension may result in processing for administrative separation for either weight control failure or unsatisfactory performance per paragraphs 6206 and 6215 of MCO 1900.16_. Specific recommendations for corrective action are: Meet your weight/body composition reduction goals by losing the prescribed ___ lbs and ___ % body fat per month for six months and actively participate in your diet and exercise program. Assistance is available through your chain of command. I was advised that within five working days after acknowledgment of this entry a written rebuttal could be submitted and that such a rebuttal will be filed on the document side of my SRB/OQR. I choose (to) (not to) make such a statement."

assignment period.

(4) When a Marine is granted an extension to the BCP.

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(5) The following NAVMC 10274 entries will be made upon MAP Assignment/Removal.

(Date) Assigned to MAP this date IAW MCO 6110.3_.

(Date) Removed from MAP this date IAW MCO 6110.3_.

8. Exemptions and Waivers

a. Exemptions

~~_____ (1) Marines with a medical condition or medical therapy which has been newly diagnosed, worsened in severity, or increased in dosage in that six-month period which is known to result in weight gain will remain in an inactive BCP status and are not eligible for formal MAP assignment until the condition is alleviated or the Marine is separated, retired or medically discharged. Marines are subject to a medical records review by a medical evaluation board (MEB) if:~~

~~_____ (a) Marine receives a medical waiver for the same medical condition over two consecutive six-month periods that resulted in the member not participating in the BCP.~~

~~_____ (b) Marine receives three medical waivers in the most recent four-year period for any medical condition that resulted in the member not participating in the BCP.~~

~~_____ (c) The CO requests a MEB when the Marine's fitness/health is questionable for continued service.~~

~~_____ (2) After confirmation from a BCBEMP/OB healthcare provider, Marines who are pregnant will be placed in an inactive BCP status and are not eligible for formal MAP assignment during pregnancy, the 12-week (post-partum) convalescent period and for six months following RTFD. For pregnancies that do not come to full term, Marines will be required to meet weight standard requirements after consultation with a BCBEMP/OB health care provider and upon RTFD.~~

a. Exemptions

(1) Temporary medical exemptions may be granted for Marines newly diagnosed or with worsening medical condition or

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therapy who have followed the process in the sequence chart provided at enclosure (5). Marines with approved temporary medical exemptions will not be assigned to BCP or MAP during the current six-month period. Marines are subject to a medical records review by a medical evaluation board (MEB) if:

(a) Marine receives a temporary medical exemption for the same medical condition over two consecutive six-month periods that resulted in the member not participating in the BCP.

(b) Marine receives three temporary medical exemptions in the most recent four-year period for any medical condition that resulted in the member not participating in the BCP.

(c) The CO requests a MEB when the Marine's fitness/health is questionable for continued service.

(2) Pregnancy and post-partum: After confirmation from an authorized medical provider, Marines on BCP/MAP who are pregnant will be placed in an inactive BCP/MAP status. Pregnant and post-partum Marines not on BCP/MAP will not be evaluated for BCP or MAP. The period of inactive status and non-evaluation will include pregnancy, the 12 week (post-partum) convalescent period and for six months following RTFD. For pregnancies that do not come to full term, Marines will be required to meet weight standard requirements after consultation with an authorized medical provider and upon RTFD.

b. Waivers

(1) Marines who score 285 and higher on both the PFT and CFT are exempt from maximum weight and body fat limits. Height, weight and body fat will still be recorded and reported.

(2) Marines who score 250 and higher on both tests are granted an additional 1 percent body fat limit.

(3) Commanders/OICs possessing special courts-martial convening authority may submit a BCP assignment waiver for the "rare" Marine who exceeds established weight and body composition standards yet still presents a suitable military appearance. Because of the direct link between body composition, appearance, performance and leadership, Commanders/OICs are required to provide a detailed explanation behind the basis for their request and all relevant evaluation

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metrics. Marines being considered for a BCP waiver should display exceptional military appearance, possess a superior level of fitness and perform beyond all reasonable expectations, despite exceeding established height/weight and body composition standards.

For example, a 30-year old male staff sergeant who is 68 inches tall and weighs 182 pounds with a body composition of 20 percent, exceeds standards. However, he is PME complete, tactically and technically proficient, possesses expert rifle and pistol qualifications and routinely achieves a high PFT and CFT, but does not score 285+ on both. His performance and reputation is renowned throughout the command. He is routinely relied upon by seniors, respected by peers and emulated by subordinates. Most importantly, he displays superior military appearance as determined by the commander/OIC. BCP waiver requests will be submitted to the first General Officer in a Marine's chain of command. Evaluation criteria may include, but is not limited to the following:

- (a) Copy of NAVMC 11621 with commander's assessment.
- (b) Current photograph in Service 'C' uniform.
- (c) Current PFT score.
- (d) Current CFT score.
- (e) Most recent Proficiency/Conduct Marks, if applicable.
- (f) Chain of command endorsement(s).

(4) Approved BCP waivers are valid for one year from the date of approval or whatever time period is authorized by the waiver authority.

(5) Commanders may request a BCP or MAP waiver when it is determined that deployment to a combat zone prevents effective BCP or MAP management and participation.

(a) Approval will be dependent upon unit type, anticipated area of operation and command justification. To be eligible, commands must be serving in a combat zone and be in receipt of hostile fire pay. Upon approval, a BCP assignment waiver will apply to all Marines within the requesting command. Affected Marines will be placed in an inactive status and will

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not be evaluated by their commands. However, Marines should continue a reasonable attempt to conform to body composition standards and present a suitable military appearance. Should operating conditions change enabling effective BCP and MAP management, commands are encouraged to notify waiver authority and resume normal BCP and MAP management.

1. For separate organizations not commanded by a General Officer, requests to waive BCP or MAP assignment will be submitted to CG, MCCDC (C 466469).

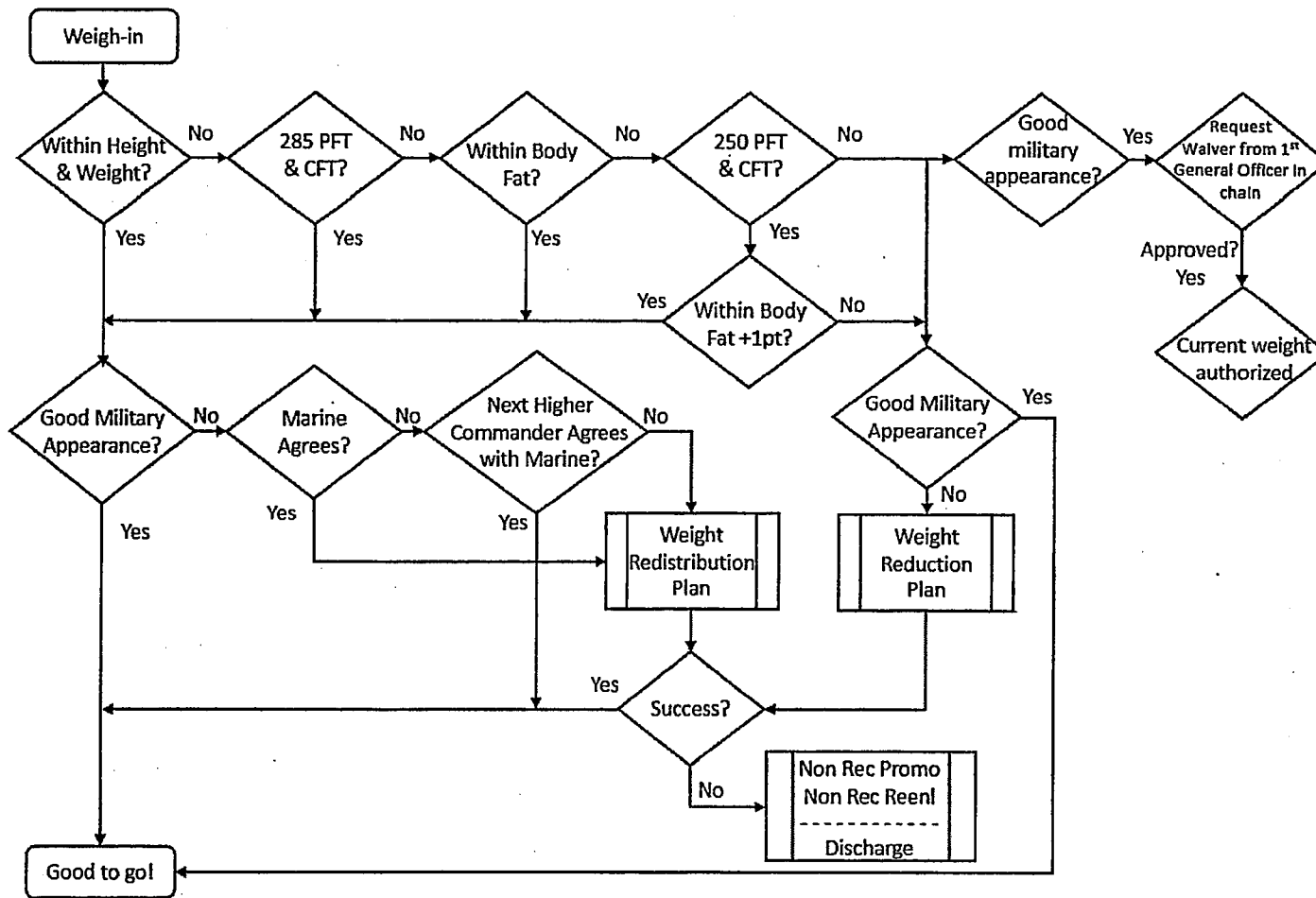
2. For Marine activities that are not tenants of Marine Corps posts or stations, requests to waive BCP or MAP management may be submitted to CG, MCCDC (C 466469).

3. A BCP medical waiver sequence chart is provided at enclosure (5). BCP waivers may be granted only if the member is in approved limited duty status for the medical condition prompting the BCA waiver request.

(b) Commands authorized by this Order to grant waivers must send a copy of the waiver response to CG, MCCDC (C 466469) within 30 days of disposition.

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MCBCMAP Sequence Chart



Commander's Body Composition/Military Appearance Programs

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DoD Height/Weight Standards Table

| Males | | | Females | | |
|----------|------------------|------------------|----------|------------------|------------------|
| Height | Maximum Standard | Minimum Standard | Height | Maximum Standard | Minimum Standard |
| (Inches) | (Pounds) | (Pounds) | (Inches) | (Pounds) | (Pounds) |
| 56" | 122 | 85 | 56" | 115 | 85 |
| 57" | 127 | 88 | 57" | 120 | 88 |
| 58" | 131 | 91 | 58" | 124 | 91 |
| 59" | 136 | 94 | 59" | 129 | 94 |
| 60" | 141 | 97 | 60" | 133 | 97 |
| 61" | 145 | 100 | 61" | 137 | 100 |
| 62" | 150 | 104 | 62" | 142 | 104 |
| 63" | 155 | 107 | 63" | 146 | 107 |
| 64" | 160 | 110 | 64" | 151 | 110 |
| 65" | 165 | 114 | 65" | 156 | 114 |
| 66" | 170 | 117 | 66" | 161 | 117 |
| 67" | 175 | 121 | 67" | 166 | 121 |
| 68" | 180 | 125 | 68" | 171 | 125 |
| 69" | 186 | 128 | 69" | 176 | 128 |
| 70" | 191 | 132 | 70" | 181 | 132 |
| 71" | 197 | 136 | 71" | 186 | 136 |
| 72" | 202 | 140 | 72" | 191 | 140 |
| 73" | 208 | 144 | 73" | 197 | 144 |
| 74" | 214 | 148 | 74" | 202 | 148 |
| 75" | 220 | 152 | 75" | 208 | 152 |
| 76" | 225 | 156 | 76" | 213 | 156 |
| 77" | 231 | 160 | 77" | 219 | 160 |
| 78" | 237 | 164 | 78" | 225 | 164 |
| 79" | 244 | 168 | 79" | 230 | 168 |
| 80" | 250 | 173 | 80" | 236 | 173 |
| 81" | 256 | 177 | 81" | 242 | 177 |
| 82" | 263 | 182 | 82" | 248 | 182 |

| Marine Corps Body Composition Standards | | |
|---|--------|--------|
| Age Group | Male | Female |
| 17-20 | 18% BF | 26% BF |
| 21-25 | 18% BF | 26% BF |
| 26-30 | 19% BF | 27% BF |
| 31-35 | 19% BF | 27% BF |
| 36-40 | 20% BF | 28% BF |
| 41-45 | 20% BF | 28% BF |
| 46-50 | 21% BF | 29% BF |
| 51+ | 21% BF | 29% BF |

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DoD Body Composition Standards Table (Males)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 60.0 | 60.5 | 61.0 | 61.5 | 62.0 | 62.5 | 63.0 | 63.5 | 64.0 | 64.5 |
| 13.5 | 9 | 9 | | | | | | | | |
| 14.0 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 9 | | |
| 14.5 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 10 | 10 |
| 15.0 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 11 | 11 |
| 15.5 | 15 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 12 |
| 16.0 | 16 | 16 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 |
| 16.5 | 17 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 |
| 17.0 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 |
| 17.5 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 | 17 |
| 18.0 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 |
| 18.5 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 |
| 19.0 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 |
| 19.5 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 |
| 20.0 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 |
| 20.5 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 |
| 21.0 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 |
| 21.5 | 27 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 |
| 22.0 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 25 |
| 22.5 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 26 |
| 23.0 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 |
| 23.5 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 24.0 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 24.5 | 32 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 |
| 25.0 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 | 30 |
| 25.5 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 26.0 | 34 | 34 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 |
| 26.5 | 35 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 |
| 27.0 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 |
| 27.5 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 28.0 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 |
| 28.5 | | | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 |
| 29.0 | | | | | 37 | 37 | 37 | 36 | 36 | 36 |
| 29.5 | | | | | | | | 37 | 37 | 36 |
| 30.0 | | | | | | | | | | |
| 30.5 | | | | | | | | | | |
| 31.0 | | | | | | | | | | |
| 31.5 | | | | | | | | | | |
| 32.0 | | | | | | | | | | |
| 32.5 | | | | | | | | | | |
| 33.0 | | | | | | | | | | |
| 33.5 | | | | | | | | | | |

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| | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|
| 34.0 | | | | | | | | | | |
| 34.5 | | | | | | | | | | |
| 35.0 | | | | | | | | | | |
| * Circumference Value = abdomen circumference – neck circumference (in inches) | | | | | | | | | | |

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DoD Body Composition Standards Table (Males)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 65.0 | 65.5 | 66.0 | 66.5 | 67.0 | 67.5 | 68.0 | 68.5 | 69.0 | 69.5 |
| 13.5 | | | | | | | | | | |
| 14.0 | | | | | | | | | | |
| 14.5 | 10 | 9 | 9 | | | | | | | |
| 15.0 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | |
| 15.5 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 10 | 10 |
| 16.0 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 11 |
| 16.5 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 12 |
| 17.0 | 16 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 |
| 17.5 | 17 | 16 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 |
| 18.0 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 16 |
| 18.5 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 |
| 19.0 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 |
| 19.5 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 |
| 20.0 | 22 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 |
| 20.5 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 |
| 21.0 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 |
| 21.5 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 |
| 22.0 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 |
| 22.5 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 | 24 |
| 23.0 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 |
| 23.5 | 28 | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 |
| 24.0 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 26 |
| 24.5 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 | 27 |
| 25.0 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 25.5 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 26.0 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 |
| 26.5 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 | 30 |
| 27.0 | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 27.5 | 34 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 32 |
| 28.0 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 | 32 |
| 28.5 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 33 |
| 29.0 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 |
| 29.5 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 |
| 30.0 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 |
| 30.5 | | | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 |
| 31.0 | | | | | | 37 | 37 | 36 | 36 | 36 |
| 31.5 | | | | | | | | | 37 | 37 |
| 32.0 | | | | | | | | | | |
| 32.5 | | | | | | | | | | |
| 33.0 | | | | | | | | | | |
| 33.5 | | | | | | | | | | |

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| | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|
| 34.0 | | | | | | | | | | |
| 34.5 | | | | | | | | | | |
| 35.0 | | | | | | | | | | |
| * Circumference Value = abdomen circumference – neck circumference (in inches) | | | | | | | | | | |

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DoD Body Composition Standards Table (Males)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 70.0 | 70.5 | 71.0 | 71.5 | 72.0 | 72.5 | 73.0 | 73.5 | 74.0 | 74.5 |
| 13.5 | | | | | | | | | | |
| 14.0 | | | | | | | | | | |
| 14.5 | | | | | | | | | | |
| 15.0 | | | | | | | | | | |
| 15.5 | 10 | 10 | 9 | 9 | 9 | | | | | |
| 16.0 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 9 | 9 |
| 16.5 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 10 |
| 17.0 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 11 |
| 17.5 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 |
| 18.0 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 |
| 18.5 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 15 |
| 19.0 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 16 |
| 19.5 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 17 |
| 20.0 | 19 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 |
| 20.5 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 |
| 21.0 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 20 | 19 |
| 21.5 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 20 | 20 |
| 22.0 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 |
| 22.5 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 |
| 23.0 | 25 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 |
| 23.5 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 |
| 24.0 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 |
| 24.5 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 | 25 |
| 25.0 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 |
| 25.5 | 29 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 27 |
| 26.0 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 28 | 27 |
| 26.5 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 27.0 | 31 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 27.5 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 30 | 29 |
| 28.0 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 31 | 30 | 30 |
| 28.5 | 33 | 32 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 |
| 29.0 | 33 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 31 |
| 29.5 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 | 32 | 32 |
| 30.0 | 35 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 30.5 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 33 |
| 31.0 | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 34 |
| 31.5 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 35 |
| 32.0 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 36 | 35 | 35 |
| 32.5 | | | | 37 | 37 | 36 | 36 | 36 | 36 | 36 |
| 33.0 | | | | | | | 37 | 37 | 36 | 36 |

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| | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|----|
| 33.5 | | | | | | | | | | | 37 |
| 34.0 | | | | | | | | | | | |
| 34.5 | | | | | | | | | | | |
| * Circumference Value = abdomen circumference – neck circumference (in inches) | | | | | | | | | | | |

DoD Body Composition Standards Table (Males)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 75.0 | 75.5 | 76.0 | 76.5 | 77.0 | 77.5 | 78.0 | 78.5 | 79.0 | 79.5 |
| 13.5 | | | | | | | | | | |
| 14.0 | | | | | | | | | | |
| 14.5 | | | | | | | | | | |
| 15.0 | | | | | | | | | | |
| 15.5 | | | | | | | | | | |
| 16.0 | | | | | | | | | | |
| 16.5 | 10 | 10 | 10 | 10 | 9 | 9 | | | | |
| 17.0 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 9 |
| 17.5 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 11 | 11 | 11 |
| 18.0 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 12 |
| 18.5 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 |
| 19.0 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 |
| 19.5 | 16 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 15 |
| 20.0 | 17 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 16 |
| 20.5 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 17 | 16 |
| 21.0 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 17 |
| 21.5 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 | 18 |
| 22.0 | 21 | 21 | 20 | 20 | 20 | 20 | 20 | 20 | 19 | 19 |
| 22.5 | 22 | 22 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 20 |
| 23.0 | 23 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 21 |
| 23.5 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 22 |
| 24.0 | 24 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 22 |
| 24.5 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 23 | 23 |
| 25.0 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 |
| 25.5 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 |
| 26.0 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 |
| 26.5 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 26 |
| 27.0 | 29 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 |
| 27.5 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 28 | 27 |
| 28.0 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 29 | 28 | 28 |
| 28.5 | 31 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 29 |
| 29.0 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 30 | 29 |
| 29.5 | 32 | 32 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 |

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| | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|
| 30.0 | 32 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 31 |
| 30.5 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 32 | 31 |
| 31.0 | 34 | 33 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 32 |
| 31.5 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 33 | 33 |
| 32.0 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 33 |
| 32.5 | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 |
| 33.0 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 34 | 34 |
| 33.5 | 37 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 |
| 34.0 | | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 36 | 35 |
| 34.5 | | | | | 37 | 37 | 37 | 36 | 36 | 36 |
| 35.0 | | | | | | | | 37 | 37 | 36 |
| * Circumference Value = abdomen circumference – neck circumference (in inches) | | | | | | | | | | |

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 58.0 | 58.5 | 59.0 | 59.5 | 60.0 | 60.5 | 61.0 | 61.5 | 62.0 | 62.5 |
| 45.0 | 19 | | | | | | | | | |
| 45.5 | 20 | 20 | 19 | | | | | | | |
| 46.0 | 21 | 20 | 20 | 20 | 19 | | | | | |
| 46.5 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | | |
| 47.0 | 22 | 22 | 22 | 21 | 21 | 20 | 20 | 20 | 19 | 19 |
| 47.5 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 |
| 48.0 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 |
| 48.5 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 21 |
| 49.0 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 |
| 49.5 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 |
| 50.0 | 27 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 |
| 50.5 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 |
| 51.0 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 |
| 51.5 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 52.0 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 52.5 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |
| 53.0 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 |
| 53.5 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 54.0 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 |
| 54.5 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 |
| 55.0 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 |
| 55.5 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 |
| 56.0 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 31 |
| 56.5 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 32 | 32 |
| 57.0 | 36 | 36 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 57.5 | 37 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |
| 58.0 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| 58.5 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 |
| 59.0 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 |
| 59.5 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 36 | 36 | 36 |
| 60.0 | 40 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 |
| 60.5 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 61.0 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 61.5 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 38 | 38 |
| 62.0 | 42 | 42 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 58.0 | 58.5 | 59.0 | 59.5 | 60.0 | 60.5 | 61.0 | 61.5 | 62.0 | 62.5 |
| 62.5 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 63.0 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 |
| 63.5 | 44 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 |
| 64.0 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 64.5 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 |
| 65.0 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 65.5 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 |
| 66.0 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 43 | 43 |
| 66.5 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 |
| 67.0 | | | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 67.5 | | | | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 68.0 | | | | | 47 | 47 | 46 | 46 | 46 | 45 |
| 68.5 | | | | | | | 47 | 46 | 46 | 46 |
| 69.0 | | | | | | | | 47 | 47 | 46 |
| 69.5 | | | | | | | | | | 47 |
| 70.0 | | | | | | | | | | |
| 70.5 | | | | | | | | | | |
| 71.0 | | | | | | | | | | |
| 71.5 | | | | | | | | | | |
| 72.0 | | | | | | | | | | |
| 72.5 | | | | | | | | | | |
| 73.0 | | | | | | | | | | |
| 73.5 | | | | | | | | | | |
| 74.0 | | | | | | | | | | |
| 74.5 | | | | | | | | | | |
| 75.0 | | | | | | | | | | |
| 75.5 | | | | | | | | | | |
| 76.0 | | | | | | | | | | |
| 76.5 | | | | | | | | | | |
| 77.0 | | | | | | | | | | |
| 77.5 | | | | | | | | | | |
| 78.0 | | | | | | | | | | |
| 78.5 | | | | | | | | | | |
| 79.0 | | | | | | | | | | |
| 79.5 | | | | | | | | | | |

* Circumference Value = waist circumference + hip circumference - neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 63.0 | 63.5 | 64.0 | 64.5 | 65.0 | 65.5 | 66.0 | 66.5 | 67.0 | 67.5 |
| 45.0 | | | | | | | | | | |
| 45.5 | | | | | | | | | | |
| 46.0 | | | | | | | | | | |
| 46.5 | | | | | | | | | | |
| 47.0 | | | | | | | | | | |
| 47.5 | 19 | 19 | | | | | | | | |
| 48.0 | 20 | 20 | 20 | 19 | | | | | | |
| 48.5 | 21 | 21 | 20 | 20 | 20 | 19 | | | | |
| 49.0 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | |
| 49.5 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 19 |
| 50.0 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 |
| 50.5 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 21 |
| 51.0 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 |
| 51.5 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 |
| 52.0 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 23 |
| 52.5 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 |
| 53.0 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 24 |
| 53.5 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 |
| 54.0 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 54.5 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 55.0 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |
| 55.5 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 |
| 56.0 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 56.5 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 |
| 57.0 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 |
| 57.5 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 58.0 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 |
| 58.5 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 31 |
| 59.0 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 |
| 59.5 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 33 |
| 60.0 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 |
| 60.5 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 |
| 61.0 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 |
| 61.5 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 |
| 62.0 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 35 |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 63.0 | 63.5 | 64.0 | 64.5 | 65.0 | 65.5 | 66.0 | 66.5 | 67.0 | 67.5 |
| 62.5 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 |
| 63.0 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 |
| 63.5 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 64.0 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 38 |
| 64.5 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 |
| 65.0 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 |
| 65.5 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 66.0 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 |
| 66.5 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 40 |
| 67.0 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 67.5 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 |
| 68.0 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 68.5 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 |
| 69.0 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |
| 69.5 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 44 |
| 70.0 | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 |
| 70.5 | | | 47 | 46 | 46 | 46 | 46 | 45 | 45 | 45 |
| 71.0 | | | | 47 | 47 | 46 | 46 | 46 | 45 | 45 |
| 71.5 | | | | | | 47 | 47 | 46 | 46 | 46 |
| 72.0 | | | | | | | 47 | 47 | 46 | 46 |
| 72.5 | | | | | | | | | 47 | 47 |
| 73.0 | | | | | | | | | | |
| 73.5 | | | | | | | | | | |
| 74.0 | | | | | | | | | | |
| 74.5 | | | | | | | | | | |
| 75.0 | | | | | | | | | | |
| 75.5 | | | | | | | | | | |
| 76.0 | | | | | | | | | | |
| 76.5 | | | | | | | | | | |
| 77.0 | | | | | | | | | | |
| 77.5 | | | | | | | | | | |
| 78.0 | | | | | | | | | | |
| 78.5 | | | | | | | | | | |
| 79.0 | | | | | | | | | | |
| 79.5 | | | | | | | | | | |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 68.0 | 68.5 | 69.0 | 69.5 | 70.0 | 70.5 | 71.0 | 71.5 | 72.0 | 72.5 |
| 45.0 | | | | | | | | | | |
| 45.5 | | | | | | | | | | |
| 46.0 | | | | | | | | | | |
| 46.5 | | | | | | | | | | |
| 47.0 | | | | | | | | | | |
| 47.5 | | | | | | | | | | |
| 48.0 | | | | | | | | | | |
| 48.5 | | | | | | | | | | |
| 49.0 | | | | | | | | | | |
| 49.5 | 19 | | | | | | | | | |
| 50.0 | 20 | 20 | 19 | | | | | | | |
| 50.5 | 21 | 20 | 20 | 20 | 19 | 19 | | | | |
| 51.0 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | | |
| 51.5 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 |
| 52.0 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 |
| 52.5 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 |
| 53.0 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 |
| 53.5 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 |
| 54.0 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 23 |
| 54.5 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 |
| 55.0 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 | 24 |
| 55.5 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 | 25 |
| 56.0 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 |
| 56.5 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 | 26 | 26 |
| 57.0 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 57.5 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 |
| 58.0 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 | 28 | 28 |
| 58.5 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 29 | 28 |
| 59.0 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 |
| 59.5 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 29 |
| 60.0 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 60.5 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 61.0 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 |
| 61.5 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 62.0 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 32 |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 68.0 | 68.5 | 69.0 | 69.5 | 70.0 | 70.5 | 71.0 | 71.5 | 72.0 | 72.5 |
| 62.5 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 33 | 33 |
| 63.0 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 34 |
| 63.5 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 34 | 34 |
| 64.0 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 |
| 64.5 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 |
| 65.0 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 |
| 65.5 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 | 36 |
| 66.0 | 40 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 |
| 66.5 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 37 |
| 67.0 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 |
| 67.5 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 | 39 | 38 |
| 68.0 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 |
| 68.5 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 39 |
| 69.0 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 |
| 69.5 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 | 41 | 41 |
| 70.0 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 70.5 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 42 |
| 71.0 | 45 | 44 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 71.5 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 |
| 72.0 | 46 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 |
| 72.5 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 44 |
| 73.0 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 45 | 44 | 44 |
| 73.5 | | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 74.0 | | | | 47 | 46 | 46 | 46 | 46 | 45 | 45 |
| 74.5 | | | | | 47 | 47 | 46 | 46 | 46 | 45 |
| 75.0 | | | | | | | 47 | 46 | 46 | 46 |
| 75.5 | | | | | | | | 47 | 47 | 46 |
| 76.0 | | | | | | | | | | 47 |
| 76.5 | | | | | | | | | | |
| 77.0 | | | | | | | | | | |
| 77.5 | | | | | | | | | | |
| 78.0 | | | | | | | | | | |
| 78.5 | | | | | | | | | | |
| 79.0 | | | | | | | | | | |
| 79.5 | | | | | | | | | | |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 73.0 | 73.5 | 74.0 | 74.5 | 75.0 | 75.5 | 76.0 | 76.5 | 77.0 | 77.5 |
| 45.0 | | | | | | | | | | |
| 45.5 | | | | | | | | | | |
| 46.0 | | | | | | | | | | |
| 46.5 | | | | | | | | | | |
| 47.0 | | | | | | | | | | |
| 47.5 | | | | | | | | | | |
| 48.0 | | | | | | | | | | |
| 48.5 | | | | | | | | | | |
| 49.0 | | | | | | | | | | |
| 49.5 | | | | | | | | | | |
| 50.0 | | | | | | | | | | |
| 50.5 | | | | | | | | | | |
| 51.0 | | | | | | | | | | |
| 51.5 | | | | | | | | | | |
| 52.0 | 20 | 19 | 19 | | | | | | | |
| 52.5 | 20 | 20 | 20 | 19 | 19 | | | | | |
| 53.0 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | | |
| 53.5 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 19 |
| 54.0 | 22 | 22 | 22 | 21 | 21 | 21 | 21 | 20 | 20 | 20 |
| 54.5 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 | 21 | 20 |
| 55.0 | 24 | 23 | 23 | 23 | 22 | 22 | 22 | 22 | 21 | 21 |
| 55.5 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 |
| 56.0 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 23 | 22 |
| 56.5 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 |
| 57.0 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 24 |
| 57.5 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 24 |
| 58.0 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 25 | 25 |
| 58.5 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 25 |
| 59.0 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 26 | 26 |
| 59.5 | 29 | 29 | 29 | 28 | 28 | 28 | 27 | 27 | 27 | 27 |
| 60.0 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 | 28 | 27 |
| 60.5 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 28 | 28 |
| 61.0 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 | 29 | 28 |
| 61.5 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 29 | 29 |
| 62.0 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 30 |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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DoD Body Composition Standards Table (Females)

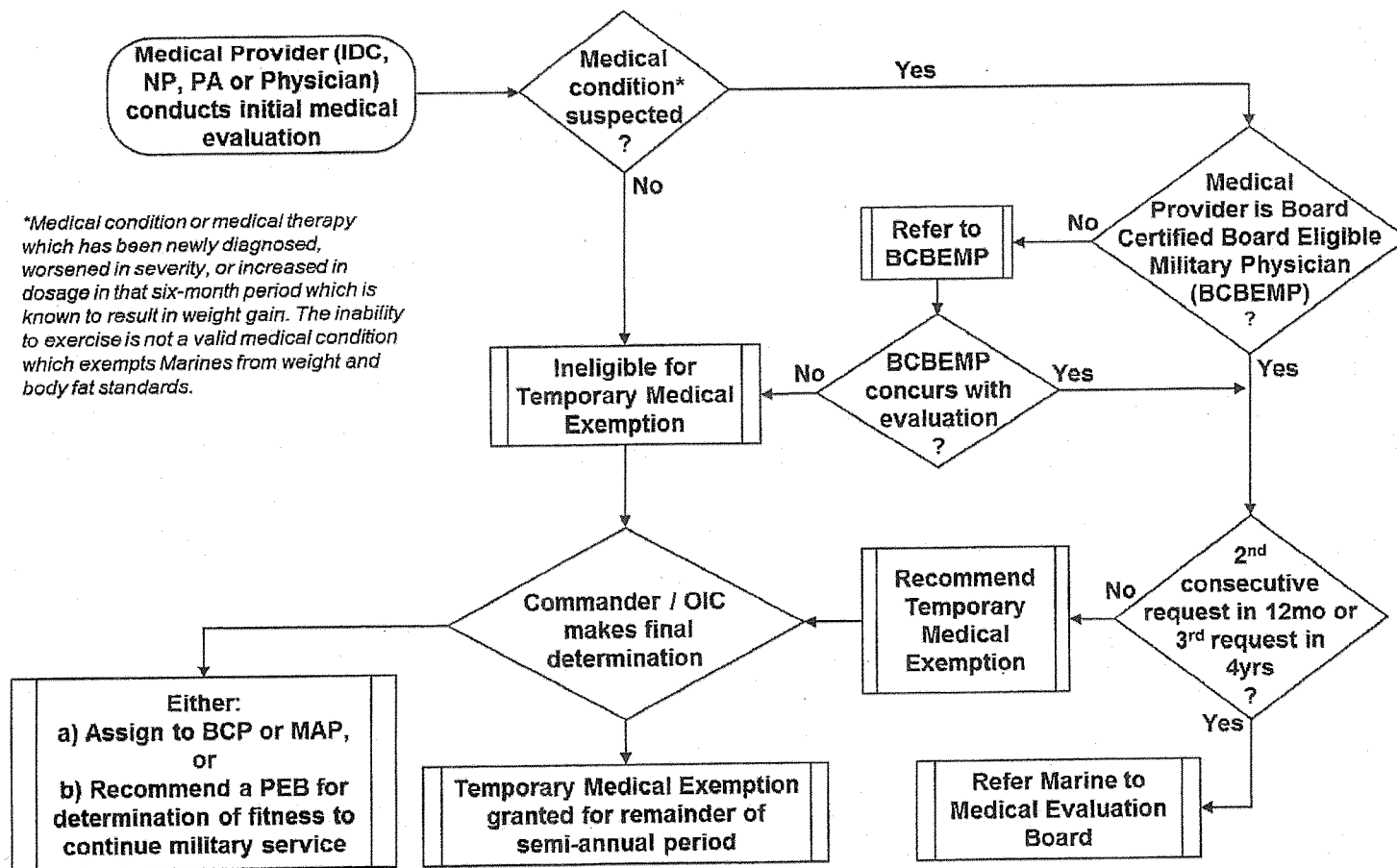
| Circumference Value* | Height (in) | | | | | | | | | |
|----------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 73.0 | 73.5 | 74.0 | 74.5 | 75.0 | 75.5 | 76.0 | 76.5 | 77.0 | 77.5 |
| 62.5 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 30 | 30 |
| 63.0 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 | 31 | 31 |
| 63.5 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 | 32 | 31 |
| 64.0 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 32 | 32 | 32 |
| 64.5 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 32 |
| 65.0 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 33 | 33 | 33 |
| 65.5 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 33 |
| 66.0 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 |
| 66.5 | 37 | 37 | 37 | 36 | 36 | 36 | 35 | 35 | 35 | 35 |
| 67.0 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 |
| 67.5 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 | 36 | 36 |
| 68.0 | 39 | 38 | 38 | 38 | 38 | 37 | 37 | 37 | 36 | 36 |
| 68.5 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 | 37 | 37 |
| 69.0 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 | 37 | 37 |
| 69.5 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 38 | 38 | 38 |
| 70.0 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 38 | 38 |
| 70.5 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 39 | 39 | 39 |
| 71.0 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 39 | 39 |
| 71.5 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 |
| 72.0 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 40 | 40 |
| 72.5 | 43 | 43 | 43 | 42 | 42 | 42 | 42 | 41 | 41 | 41 |
| 73.0 | 44 | 43 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 41 |
| 73.5 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 42 |
| 74.0 | 45 | 44 | 44 | 44 | 44 | 43 | 43 | 43 | 42 | 42 |
| 74.5 | 45 | 45 | 45 | 44 | 44 | 44 | 43 | 43 | 43 | 43 |
| 75.0 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 44 | 43 | 43 |
| 75.5 | 46 | 46 | 46 | 45 | 45 | 45 | 44 | 44 | 44 | 44 |
| 76.0 | 47 | 46 | 46 | 46 | 45 | 45 | 45 | 45 | 44 | 44 |
| 76.5 | | 47 | 46 | 46 | 46 | 46 | 45 | 45 | 45 | 44 |
| 77.0 | | | 47 | 47 | 46 | 46 | 46 | 45 | 45 | 45 |
| 77.5 | | | | | 47 | 47 | 46 | 46 | 46 | 45 |
| 78.0 | | | | | | 47 | 47 | 46 | 46 | 46 |
| 78.5 | | | | | | | | 47 | 47 | 46 |
| 79.0 | | | | | | | | | | 47 |
| 79.5 | | | | | | | | | | |

* Circumference Value = waist circumference + hip circumference – neck circumference (in inches)

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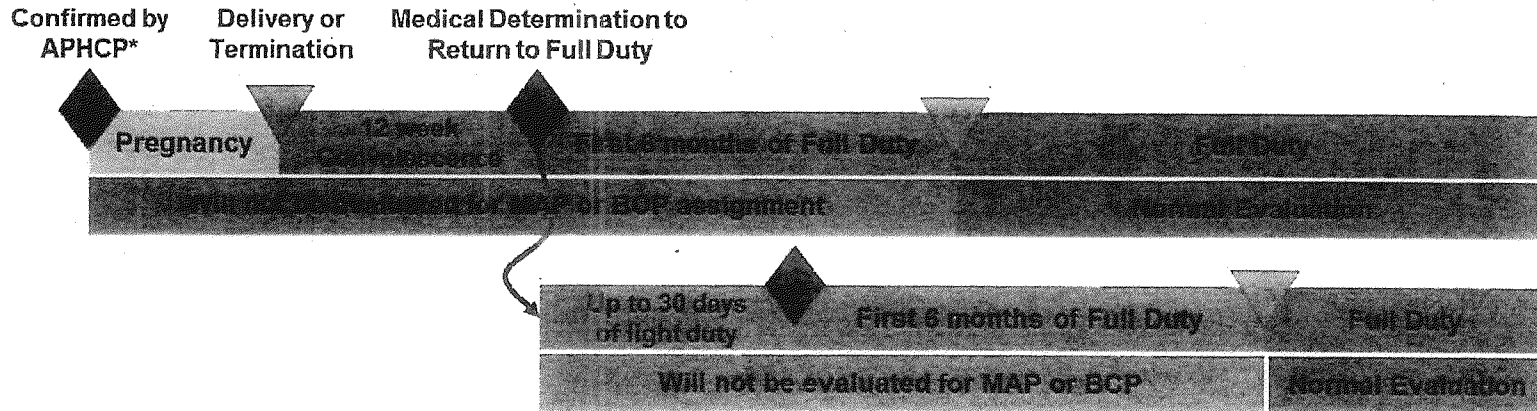
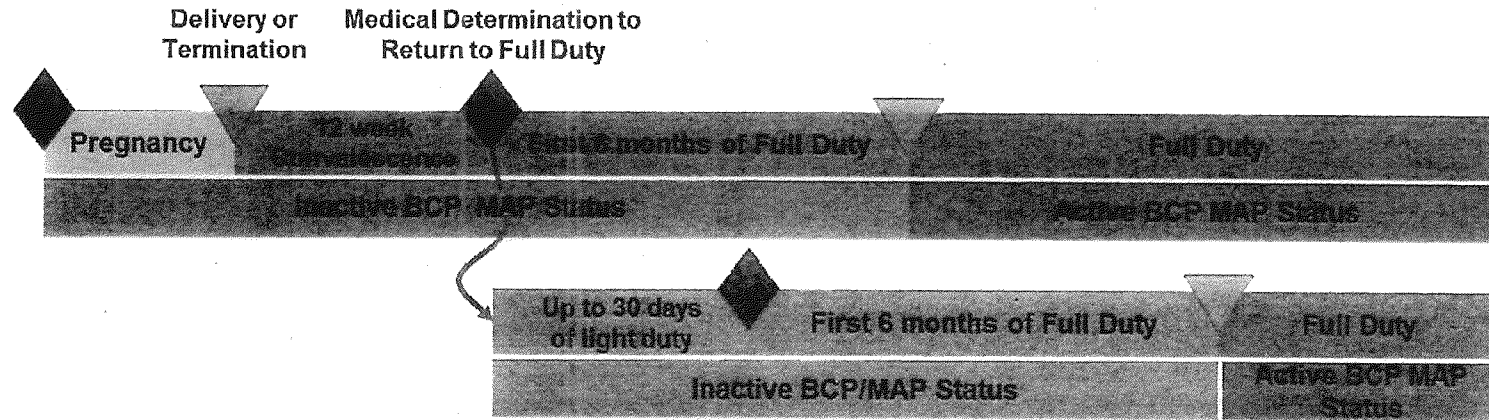
BCP Medical Waiver Sequence Chart Temporary Medical Exemption Process (new chart below)

Temporary Medical Exemption Process



Pregnancy and Post-Partum Policy Flowchart

If already on BCP/MAP:

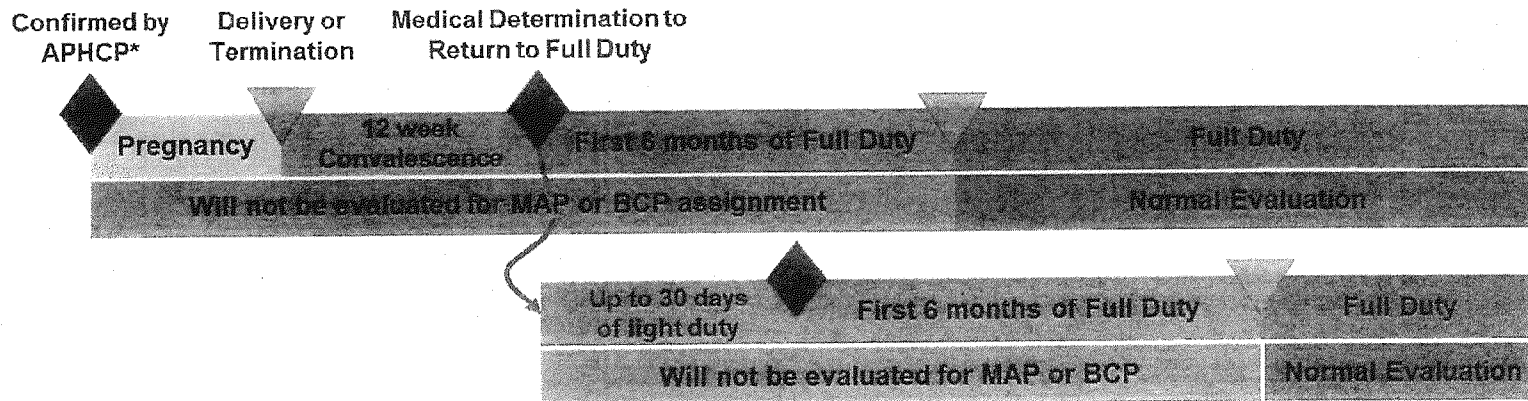
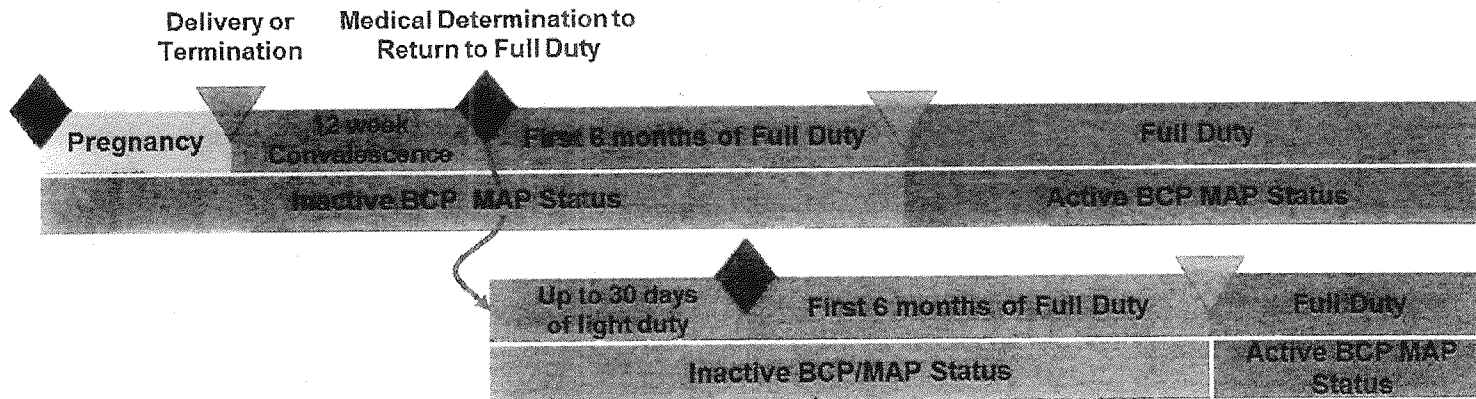


Board certified or board eligible military physician = (BCBEMP)

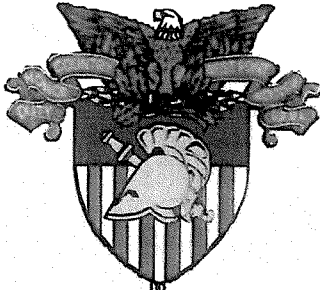
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Pregnancy and Post-Partum Policy Flowchart (cont.)

If already on BCP/MAP:



Board certified or board eligible military physician = (BCBEMP)



UNITED STATES
MILITARY ACADEMY

PHYSICAL PROGRAM
WHITEBOOK

AY 16 – 17

OFFICE OF THE COMMANDANT OF CADETS



Physical Program

Physical Program

FOREWORD

The Department of Physical Education mission is to **develop warrior leaders of character who are physically fit and mentally tough by engaging cadets in activities that promote and enhance physical excellence.**

Dedicated to producing commissioned leaders of character, the Physical Program is a 47-month transformational development process. The program strategic goals support the West Point Leader Development System (WPLDS) outcomes, while the DPE faculty is committed to providing inspired service as role models of all facets of the Army profession.

The Physical Program is designed to challenge cadets to develop and maintain optimal levels of physical strength, endurance, mobility, agility, speed, power, balance and coordination needed to meet the demands encountered in military service. DPE implements this comprehensive program by providing cadets with formal education, competitive sport opportunities, functional fitness testing, and frequent evaluation and feedback. This developmental experience culminates with the emergence of leaders of character who are physically fit, resilient, and prepared to lead Soldiers from the front.

The *Whitebook* articulates the Physical Program and its associated resources and requirements. It serves as a reference document that presents the components of the program. At the conclusion of the First Class year, cadets have been exposed to each component, and West Point's psychomotor, cognitive, and affective development of our emerging leaders in the physical domain is complete.

Set the Standard...Maintain the Standard!

NICHOLAS H. GIST
Colonel, Professor, USMA
Master of the Sword



Physical Program

Physical Program

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Physical Program

Physical Program

CHAPTER 1 INTRODUCTION

The Academy mission is to educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army.

Purpose of the Whitebook

The purpose of the *Whitebook* is to describe the components of the Physical Program. This includes the requirements for graduation and commissioning as well as the curriculum, policies, and programs that comprise the 47-month experience.

Physical Program Overarching Goal

Graduates are warrior leaders of character who are physically fit and mentally tough.

Department of Physical Education Vision Statement

The Department of Physical Education will create a cadet-centered educational environment that provides a militarily relevant and scientifically-based physical development program, which instills the warrior ethos of physical and mental superiority.

Department of Physical Education Mission Statement

The Department of Physical Education develops warrior leaders of character who are physically fit and mentally tough by engaging cadets in activities that promote and enhance physical excellence.



Physical Program Strategic Goals

1. Cadet Excellence

- 1.1 Demonstrate physical excellence
- 1.2 Plan, prepare, execute, assess and improve physical readiness training
- 1.3 Live honorably and develop effective teams
- 1.4 Demonstrate resiliency and courage
- 1.5 Commit to a lifetime of optimal physical performance

2. Faculty Excellence

- 2.1 Maintain a diverse and professional faculty
- 2.2 Develop and retain a high quality staff and faculty

3. Army Excellence

- 3.1 Provide disciplinary expertise to West Point and the Army through educational and research efforts to optimize physical performance
- 3.2 Provide disciplinary expertise to the Army through an academic major in exercise science – kinesiology

4. Programmatic Excellence

- 4.1 Provide contemporary educational and training facilities where cadets can optimize their physical fitness and movement skills
- 4.2 Provide opportunities for cadets to develop effective teams through sport and physical activity
- 4.3 Provide a comprehensive risk management strategy for all program activities to minimize risk while facilitating physical development

The Physical Program assists in the mission of developing commissioned leaders of character by providing a foundation for basic movement skills and then challenging cadets to employ what they have learned through advanced skill application. This development is accomplished through core physical education coursework, physical fitness testing, and participation in competitive sports.

The USMA Physical Program Pathway, through which all cadets must pass, is illustrated in Figure 1-1.



Physical Program

Physical Program

USMA PHYSICAL PROGRAM PATHWAY

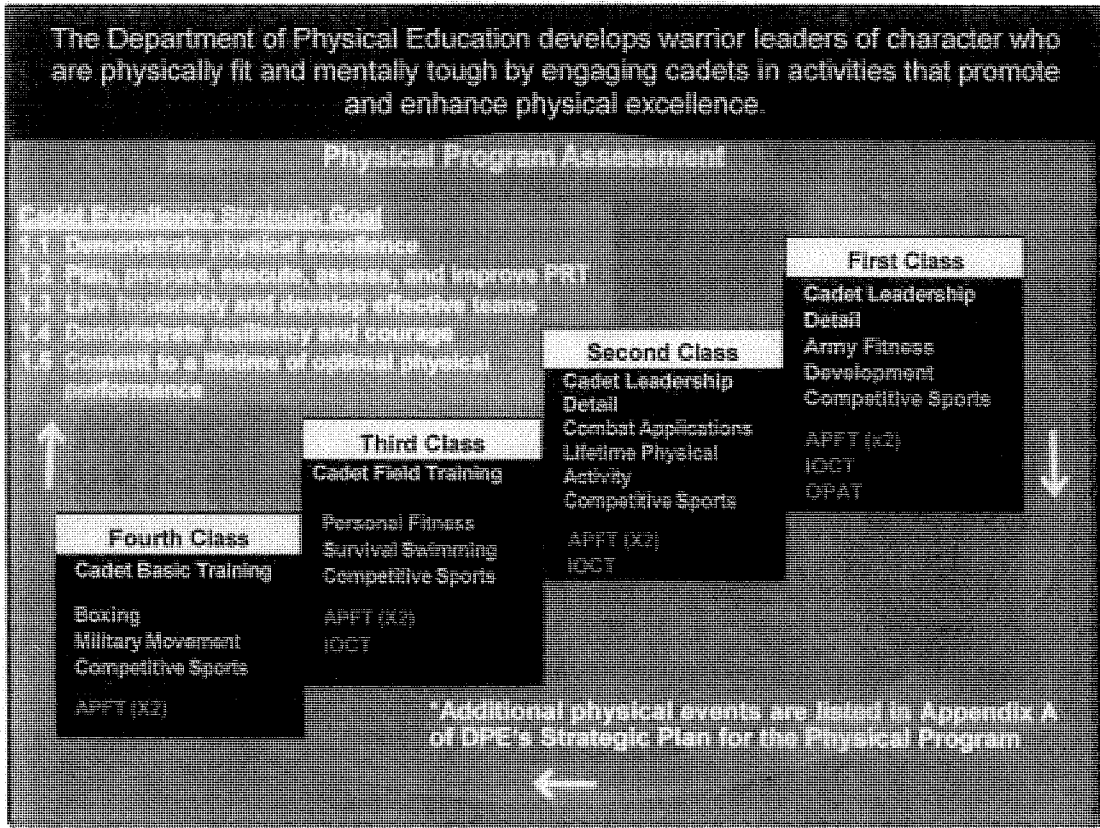


Figure 1-1

Overview of the Program

The Physical Program is a 47-month educational experience that begins on Reception Day when a new cadet enters Cadet Basic Training and ends on Graduation Day when the cadet is commissioned as a Second Lieutenant in the United States Army. The Physical Program is comprised of three complementary components: instructional coursework, physical fitness testing, and competitive sport participation (Figure 1-2). Cadets are evaluated annually in each component, with individual grades comprising each cadet's Physical Performance Score (PPS).



Physical Program

Physical Program

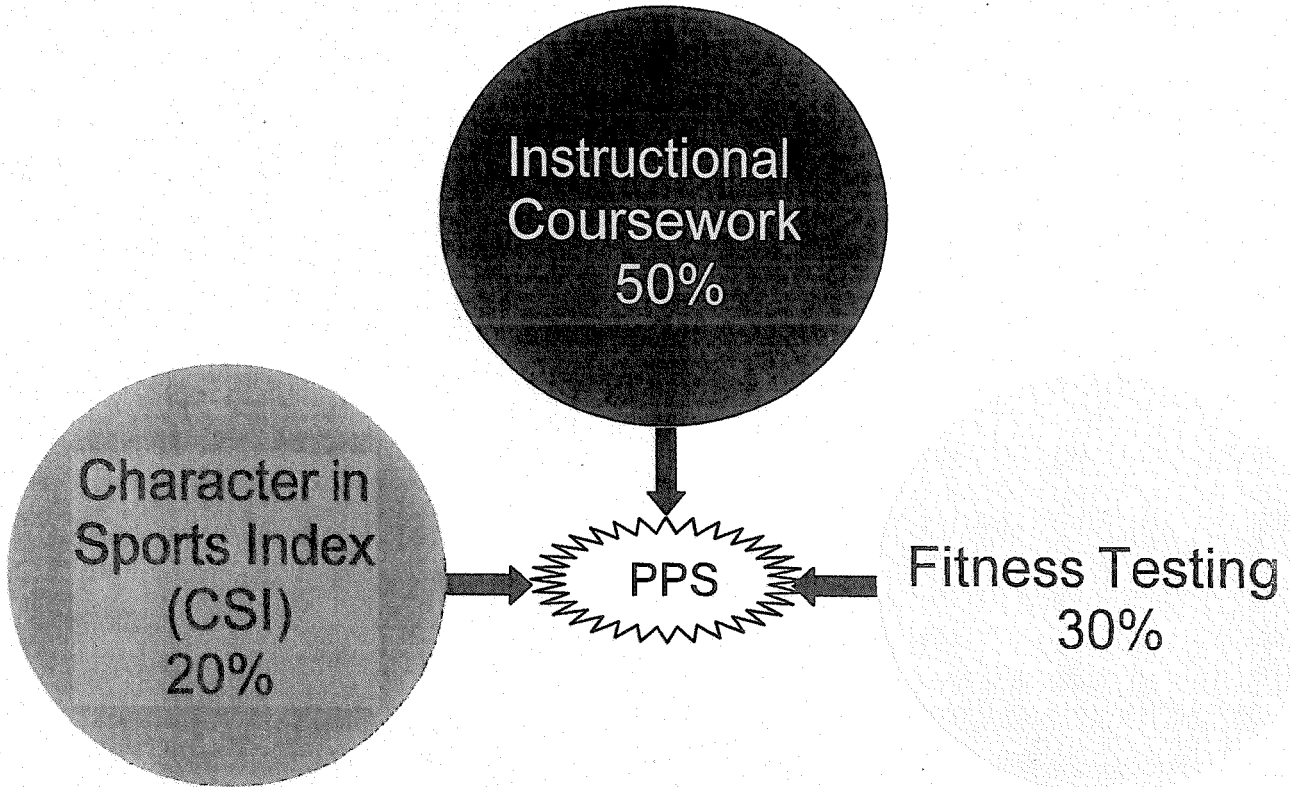


Figure 1-2

Instruction

The Instructional Program is accomplished through participation in the Basic Instruction Program (BIP) and a variety of Lifetime Physical Activity (LPA) courses. The BIP courses consist of PE116 - Boxing, PE117 - Military Movement, PE215 - Fundamentals of Personal Fitness, PE320:323 - Survival Swimming, PE360 - Combat Applications and PE450 - Army Fitness Development. The Lifetime Physical Activity (LPA) Program develops a cadet's foundation of knowledge, skills and personal attributes, which enables successful participation in skill-related activities. These courses motivate cadets to continue improving established skills and inspire them toward a lifetime commitment to an active lifestyle. The academic year is divided into two semesters. DPE further divides each 18 week term into two instructional rounds. BIP and LPA courses consist of 19 lessons.

Fitness Testing

Cadets are responsible for developing and implementing a personal physical fitness program while at the Academy.



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The Brigade Tactical Department administers the Army Physical Fitness Test (APFT) to the Corps of Cadets each semester.

Fourth Class cadets are introduced to and evaluated on the Indoor Obstacle Course Test (IOCT) as part of PE 117 – Military Movement. The Department of Physical Education administers a stand-alone IOCT to all Third, Second, and First Class cadets each year. All cadets are required to pass the Second Class IOCT in order to graduate.

Competitive Sports

All cadets are required to participate in the competitive sports program (1615-1830, Monday through Thursday). There are three categories of competition: company, club, and corps squad.

*Physical Program
Baseline Requirements*

Baseline requirements (Table 1-1) are those activities that all cadets must complete in order to satisfy the requirements of the Physical Program for graduation and commissioning purposes.

Table 1-1

| | SUMMER | ACADEMIC YEAR |
|---------------------|----------------------------|---|
| FOURTH CLASS | Cadet Basic Training (CBT) | PE 116 – Boxing PE 117 – Military Movement APFT (Fall and Spring) administered by BTD Competitive Sports |
| THIRD CLASS | Cadet Field Training (CFT) | PE 215 – Fundamentals of Personal Fitness PE 320:323 – Survival Swimming APFT (Fall and Spring) administered by BTD IOCT Competitive Sports |



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| | | |
|---------------------|---|--|
| SECOND CLASS | Cadet Leadership Detail Cadet Leader Development Training (CLDT) | PE 220:268 – Lifetime Physical Activity Course PE 360 – Combat Applications APFT (Fall and Spring) administered by BTD IOCT – (must pass Second Class IOCT) Competitive Sports |
| FIRST CLASS | Cadet Leadership Detail CLDT Cadet Troop Leader Training (CTLT) | PE 450 – Army Fitness Development APFT (Fall and Spring) administered by BTD IOCT – (must pass Second Class IOCT) Competitive Sports |

Graduation Requirements

To graduate from the United States Military Academy, a cadet must meet the following Physical Program requirements:

- successfully complete all required physical education coursework
- successfully complete the Second Class Indoor Obstacle Course Test during the Second or First Class year
- achieve a Physical Program Score Cumulative (PPSC) of 2.00
- meet the four-year requirement of participation in a competitive athletic activity at the Intercollegiate, Club, or Company Athletic level, unless excused for medical reasons

The Commandant will forward the names of cadets who are deficient in one or more Program requirements to the Academic Board for final resolution.



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CHAPTER 2 INSTRUCTION

The Instructional Directorate is responsible for the instruction, supervision and administration of all core basic activity courses, the Fitness Leader series, and elective lifetime physical activity courses, as well as support for faculty development, facilities and equipment.

FOURTH CLASS PROGRAM

The Fourth Class instructional program ensures that each cadet achieves baseline competencies in movement and combatives skills. In the Fourth Class program, cadets develop the self-confidence to meet the future physical requirements of the Academy and the Army. All cadets are required to achieve a passing grade in PE117 – Military Movement and PE 116 – Boxing. Additionally, some cadets may be required to complete PE 109 – Foundations of Aquatics or PE 107 – Foundations of Movement. Female cadets from classes prior to YG20 who have not completed their fourth class Combatives requirement will have the option of taking PE116, Boxing or PE115, Fundamentals of Combatives. All DPE basic instruction courses meet for 50 minutes for 19 lessons. Course descriptions for all DPE offerings can be found in the Redbook.

THIRD CLASS PROGRAM

The Third Class instructional program is designed to ensure that cadets develop a baseline competency in aquatic skills and enhance personal fitness, movement and sport skills, and physical readiness. Cadets must achieve a passing grade in PE 215 – Fundamentals of Personal Fitness and PE 320:323 – Survival Swimming.

SECOND CLASS PROGRAM

The Second Class instructional program is designed to provide a capstone combatives experience and develop in cadets a lifetime commitment to physical activity. Cadets are required to achieve



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a passing grade in PE 360 – Combat Applications and in one Lifetime Physical Activity course (PE 220:268).

FIRST CLASS PROGRAM

The purpose of the First Class instructional program is to ensure cadets understand and can apply the principles and theories that lead to a healthy, active lifestyle for themselves and their units. Cadets are required to achieve a passing grade in PE 450 – Army Fitness Development.

KINESIOLOGY MAJOR

The Kinesiology major is an academically rigorous, laboratory-based major. It encompasses a wide spectrum of performance topics involving muscular and cardiovascular physiology, exercise psychology, biomechanics, nutrition, and motor control. Specifics on the Kinesiology major are in the Redbook. For additional information see Chapter 9.



Physical Program

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CHAPTER 3 TESTING

The Department of Physical Education recommends that all cadets spend at least 45 minutes per day (6 days per week) in rigorous physical development and conditioning IAW generally accepted national guidelines. Doing so will best prepare cadets to meet the requirements of the Physical Program.

Indoor Obstacle Course Test (IOCT)

The Indoor Obstacle Course Test is administered to the Third, Second, and First Classes. Passing the Second Class IOCT is a graduation requirement. USMA cadets must meet the minimum performance standard of 3:30 (men) or 5:29 (women) by the end of the academic year in order to remain proficient in the Physical Program with their class. To facilitate a successful outcome for cadets, the Department of Physical Education offers multiple record IOCTs throughout the academic year (AY). Test dates are published via memorandum and briefed to Company Physical Development Officers each semester during Reorganization Week.

To further encourage cadets to engage the IOCT at the highest level of performance, anyone may retest the IOCT for grade replacement. Cadets are permitted to retake the IOCT (regardless of their current score) during designated spring term IOCT dates. Only the highest grade earned **during each academic year** will be used to compute the Physical Program Score Cumulative (PPSC).

All Third, Second, and First Class cadets are required to test IAW the annually published IOCT schedule. All First Class cadets who have not satisfied the Second Class IOCT graduation requirement must report to all IOCT offerings until the graduation requirement is met. If any cadet fails to pass an IOCT by his/her designated Class test, he/she must take every subsequent IOCT until a passing grade is achieved. Authorized absences will not be granted for any cadet who has not passed an IOCT by his/her designated Class test.



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CHAPTER 4

COMPETITIVE SPORTS

The competitive sports program is an integral part of the West Point curriculum. Every cadet participates in athletics in a category of competition consistent with one's ability and interest. There are three categories of competition at West Point: company athletics, competitive club athletics, and corps squad (intercollegiate) athletics.

Every Cadet an Athlete

Following World War I, Superintendent Douglas MacArthur introduced major changes in the athletics program at West Point in recognition of the intense physical demands of modern warfare. MacArthur required every cadet to participate in athletic competition because he was convinced that those who had taken part in organized sport made the best Soldiers.

MacArthur's quote, "Upon the fields of friendly strife are sown the seeds that upon other fields, on other days, will bear the fruits of victory," serves as the bedrock philosophy for sports at West Point. MacArthur believed athletic participation produced fortitude, self-control, resolution, courage, mental agility, and physical development, characteristics he believed were fundamental and necessary for all Soldiers.

MacArthur Time is the name designated for athletic participation starting at 1615 and ending at 1830. A cadet's place of duty during MacArthur Time is in competitive sports (company, club, or corps squad).

West Point's competitive sports program supports the Army values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage. It is designed to teach these values in an athletic setting. The nature of competitive sports provides opportunities that are difficult to replicate in the conventional classroom, in other extracurricular activities, or in military field training.

Competitive Sport Outcomes

The Competitive Sport Office seeks to develop *warrior athletes of character* and build *teams of significance* through its competitive sports program.

Warrior Athlete of Character

A warrior athlete of character is a team player who combines mental toughness, perseverance, and athletic skill with exemplary sportsmanship and fair play. The warrior athlete of character



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has a teachable spirit and demonstrates the drive, will, and courage to stay committed and succeed, regardless of the challenge.

Team of Significance

A team of significance is a group of warrior athletes that bonds together into a single, selfless unit and accomplishes memorable feats through a commitment to excellence. Six essential components for a team of significance are character, competency, commitment, courage, cohesion, and communication.

Categories of Competition

Company Athletics

Company Athletics offer 10 sports annually - five in the fall season and five in the spring season. Fall sports include basketball, flag football, soccer, functional fitness, and wrestling. Spring sports include flickerball, floor hockey, ultimate frisbee, submission grappling, and swimming. Select cadets are also authorized to complete the fall and spring term competitive sport requirement through participation in Sandhurst.

The Bankers Association of New York Trophy is inscribed annually with the designation of the cadet company ranking first in each regiment based on team success in the 10 sports. The Bankers Trophy has been presented every year at West Point since 1924.

USCC Circular 28-1 (Company Athletics SOP) standardizes operations, reports, and actions necessary to accomplish the mission of DPE company athletics. It provides details on the company athletics program, including: seasons, participation, eligibility, assignments, duties, team strength, reconditioning, chain of command responsibilities, championships, awards, and the Character in Sports Index (CSI). The circular also addresses Sandhurst competition and its relationship to the company athletics program.

Cadets may not miss company athletics practices or record contests for Tactical Officer appointments, additional instruction, medical appointments, or any extracurricular activity unless approved through the DPE sport educator responsible for their respective sport.

If a cadet becomes injured during the company athletics season, he/she will report immediately to the DPE Sports Medicine Office for evaluation and referral. If the DPE Sports Medicine staff determines that the cadet can no longer fulfill his/her competitive sports requirement, the place of duty for the injured cadet during company athletics time is in DPE reconditioning.

Physical ProgramPhysical Program

Competitive Club Athletics

DPE is the supervising agency for the competitive club athletics program, and the Directorate of Cadet Activities (DCA) is responsible for providing administrative and financial support. The DPE Competitive Sports club manual, published each year by the Competitive Sports Office, provides a current listing (with authorized strength) of all competitive clubs supervised by the DPE.

Competitive club athletics fulfill a cadet's term competitive sports baseline requirement through participation with their club. Every competitive club athlete must be listed on an official club roster maintained by the DCA and receive an authorization from DPE to participate in order to meet the term baseline competitive sport requirement. Cadets on the official team roster have no company athletics requirement for that term. Each competitive club team has a specified number of authorizations. The Commandant approves the number of authorizations for all competitive club athletics teams based on minimum requirements to sustain the company athletics program.

Club OICs must lock-in their official team roster at the beginning of each academic term to ensure accountability for athletic participation. If a cadet is removed from a club by the Academy leadership, that cadet is still required to meet the baseline requirements through participation on a corps squad, competitive club, or company athletics team. Ultimately, it is the cadet's responsibility to ensure that he/she meets the athletic participation requirement for each academic term.

Competitive clubs may receive Chain of Command Time (CCT) authorizations due to the necessity for all team members to be present to hold effective practices. The Commandant approves CCT authorizations based on the unique training requirements of each sport (*USCC Circular 28-1*). Since competitive club athletics fulfill the baseline competitive sports requirement, teams are normally authorized to practice during MacArthur Time Monday through Thursday (1615-1830 hours).

Corps Squad Athletics

The Director of Intercollegiate Athletics (DIA) has responsibility for the conduct of the corps squad athletic program. *USMA Regulation 350-12* provides specific details pertaining to the administration and execution of the intercollegiate athletics program. Corps squad athletes fulfill their term competitive sports baseline requirement by participating with their team. Every cadet involved in a corps squad sport must be on the official team roster. Athletes on the official team roster have no company athletics or competitive club athletics requirement for that term. DPE Competitive Sports will establish a date within the first three weeks of each semester for DIA to set their team rosters. This action allows athletes not selected by DIA teams to be assigned to Company Athletics in order to meet their Competitive Sports requirement. Once these rosters are set, DIA will notify DPE whenever an athlete is released from a roster for any reason. Cadets that depart DIA teams before the mid-season grade cutoff (late September in the fall; mid-March in the spring) will be assigned to a Company Athletic where they will receive their CSI grade for the



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semester. Athletes that depart DIA teams after the mid-season grade cutoff will also be assigned to Company Athletics for accountability; however, they will receive their CSI grade from the DIA team they departed.

Corps Squad Team Managers are required to participate in Company or Club Athletics in the fall semester of their plebe year, prior to assuming duties as a manager. As a yearling, managers are required to participate in Company or Club Athletics in either the fall or spring semester. As a Cow and a Firstie, managers are exempt from participation in either Club or Company Athletics if they maintain a PPSC of 2.5 or higher. If their PPSC is lower than 2.5 as a Cow or Firstie, then a manager is still required to participate in either Company or Club athletics during one semester. Teams are reminded to properly organize their managers so they may meet this requirement (USMA Regulation 350-12).

Character in Sports Index (CSI)

The cadet chain of command (coaches, CICs, team captains, officials, etc.), in conjunction with their officer chain of command (CoC), will use the Character in Sports Index (CSI) to measure and evaluate cadet performance. The cadet CoC will provide CSI grade input to the competitive sport Officer in Charge (OIC - DPE Sport Educator, Club/Corps Squad Coach, Club/Corps Squad Officer Representative...etc.) at the end of each season. The competitive sport OIC is responsible for verifying the grades and submitting grades no later than the end of each term. The CSI is based upon the following components: fair play/sportsmanship, mental toughness, perseverance, winning spirit, unselfishness, coachability, attitude, teachable spirit, playing ability, time, and competitive performance.



Physical Program

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CHAPTER 5

GUIDANCE

Grading Philosophy and Policies

Cadets are evaluated based on their achievement of established course objectives. The goal is to challenge cadets to meet or surpass announced standards of performance and assign grades based upon their success. Once standards are established, the principal responsibility for performance rests with the individual cadet.

Instructors provide safe and sound instruction, accurate measurement of cadet achievement, and additional instruction as required. Instructors strive to motivate and inspire cadets to achieve their full academic and physical potential.

Compiled numerically, letter grades ranging from A+ to F are the standard means of communicating academic achievement. Instructors promptly provide cadets an evaluation of each graded course requirement.

The Director, Department of Physical Education, approves course grades at the end of each round of instruction prior to final grades being posted.

Physical Program Performance Score (PPS)

The Physical Program Performance Score (PPS) is used to compute the performance of cadets in the Physical Program. The PPS, combined with the Academic Program Score (APS) and Military Program Score (MPS), comprises the Cadet Performance Score (CPS). The Cadet Performance Score (CPS) reflects a cadet's success in academic, military, and physical performance and equates to the graduation order of merit. The CPS formula is:

$$\text{CPS} = .55 (\text{APS}) + .30 (\text{MPS}) + .15 (\text{PPS}).$$

Three components comprise the Physical Program Performance Score for all cadets: instructional coursework, fitness testing, and the Character in Sports Index (CSI). The formula is:

$$\text{PPS} = .50 (\text{Coursework}) + .30 (\text{Testing}) + .20 (\text{CSI})$$

A Physical Program Performance Score Term (PPST) and a Physical Program Performance Score Cumulative (PPSC) are computed at the end of every academic term. The Physical Program Performance Score Year (PPSY) is calculated at the end of each academic year. The PPSC is used to determine the number one male and female cadet in physical performance over four years. Additionally, the PPSC is used to determine the number one male and female cadet in physical performance for each class at the end of each academic year. Cadets must complete all Physical Program requirements for that year to be eligible. The PPSC is also used to identify cadets deficient in the Physical Program.

PPSTs vary depending upon the courses taken during the respective term. Generally, there is a minimum of one course and a CSI grade for each term.



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Deficiency Status in the Physical Program

Cadets are considered deficient in the Physical Program and subject to enrollment in STAP for any of the following reasons:

- Failure to meet the minimum year-group PPSC 'peg' point at the conclusion of the respective academic term. The following table presents the minimally acceptable PPSC for each year group by the end of the respective term:

| TERM | YEAR | PPSC 'PEG' POINT |
|-------------|----------------|------------------|
| Fall Term | 4 ^o | - |
| Spring Term | 4 ^o | 1.80 |
| Summer Term | 4 ^o | 1.80 |
| Fall Term | 3 ^o | 1.90 |
| Spring Term | 3 ^o | 2.00 |
| Summer Term | 3 ^o | 2.00 |
| Fall Term | 2 ^o | 2.00 |
| Spring Term | 2 ^o | 2.00 |
| Summer Term | 2 ^o | 2.00 |
| Fall Term | 1 ^o | 2.00 |
| Spring Term | 1 ^o | 2.00 |
| Summer Term | 1 ^o | 2.00 |

- Failure of a DPE course.
- "No Credit" for any course in DPE.
- Failure of a record IOCT, unless successfully remediated during the academic term on a record IOCT retest.

USCC permits cadets who are deficient on their PPSC to participate in only one extra-curricular activity during any academic semester.

DPE Coursework Failures/No Credits

Cadets who fail a DPE course are considered deficient in the Physical Program and must be reviewed by the Academic Board before remediation can occur. The DPE Department Head may recommend to the Academic Board that a cadet be separated with the right to re-exam or repeat the course. Cadets who fail the same course twice in the same academic year may be separated without the right to re-exam. The Department of Physical Education reserves the right to recommend deficient cadets for separation upon an initial course failure. This recommendation is based upon input from previous instructors and is approved by the DPE Department Head.



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Cadets may be classified as an academic no-credit if they are unable to complete a course during the appropriate academic year. The cadet will be tracked as a no-credit until the course is completed. No-credit cadets may be remanded to STAP to resolve their no-credit status. Cadets must resolve all no-credits to complete the Physical Program and graduate from the United States Military Academy. Cadets who receive a no-credit during the academic year are not eligible for the Commandant's or Superintendent's Award.

If a cadet is injured during later stages of enrollment in a DPE course and the injury prohibits further participation, DPE may award a cadet a final letter grade if the cadet has completed all or most of the course requirements, has met course objectives, and full participation in the course would not have changed the final outcome. A failing grade may be assigned if the injury, and subsequent missed classes, is not the primary cause for failure, and it is mathematically impossible for the cadet to receive a passing grade given the time, engagement, and evaluation opportunities remaining in the course.

Procedures for Turnback Cadets

Turnback cadets automatically assume the Physical Program curriculum requirements of their new class. Turnback cadets must resolve any no credit under their old curriculum, and/or complete all requirements for their new class curriculum. Exceptions may be made for cadets who have successfully completed similar coursework under their old curriculum.

A December graduate retains the curricular requirements of his/her original class. December graduates must complete all curricular requirements during the academic year in which they were supposed to graduate. During their final Fall (graduation) Term, December graduates must participate in a competitive sport (company, club, or corps squad) and pass a final term APFT administered by the BTD.

Fragile Cadet Policy

Any cadet who fails to meet any non-academic requirement of the Physical Program for 18 consecutive months is subject to separation IAW paragraph 6-28, AR 210-26, *United States Military Academy*.

Participation in Designated USMA Enrichment Programs

There are minimum Physical Program requirements that cadets must meet in order to be eligible for the Service Academy Exchange Program, the Semester Abroad Program, and the Individual Advanced Development (IAD) Program (academic, military, or physical IAD).

A cadet who is deficient due to any of the reasons listed below may not be recommended for approval to participate in the Service Academy Exchange Program, the Semester Abroad Program, or any type of IAD (academic, military, or physical):

- "No credit" (NC) for any DPE core course
- NC on an IOCT



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- Unremediated IOCT failure
- Unremediated PE course failure
- PPSC < 2.0 (cadets with < 2.5 PPSC may not be recommended for DPE approval for SAEP, SAP or IAD if their physical performance history indicates a strong possibility of poor performance on IOCT or coursework in the immediate future).

Program requirements for Service Academy Exchange Program /Semester Abroad cadets:

- Physical fitness tests. Cadets going on exchange/abroad during the fall term have no immediate IOCT testing requirement (those cadets will take the IOCT during the spring term). Second Class cadets going on exchange/abroad during the spring term must make-ahead the IOCT during their Second Class fall semester.
- PE Courses. Cadets are highly encouraged to participate in PE courses while on exchange/abroad in order to take advantage of the opportunity to learn physical activities that are not available at USMA. The grade earned in this lifetime physical activity course will not be included in the PPS, but will be included on the cadet's transcripts and will count towards completion of this requirement. In order to receive credit for taking a LPA while on exchange or abroad, cadets must get approval prior to taking the course.

Program requirements for exchange personnel (cadets/midshipmen) coming to USMA:

- Athletic participation. U.S. service academy personnel and foreign exchange cadets must complete a competitive sport experience at the company, club, or corps squad level during their semester at the USMA. Exchange personnel do not count against club authorizations, and will not receive a competitive sport index grade for athletic participation during the semester.
- Physical fitness tests. Exchange personnel are encouraged to take the IOCT, but it is not mandatory.
- Physical Education Courses. Exchange personnel are encouraged to take courses in physical education. They will follow the same procedures as USMA cadets to enroll in lifetime physical activity courses. The Service Academy Exchange Program coordinator will take the cadets' preferences and try to add courses that fit into the individual cadet's academic schedule. Exchange personnel may take multiple courses provided that there is room in the class and that it fits into their academic schedule. The grade earned in this lifetime sport will be documented through normal grade reporting procedures.



Physical Program

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CHAPTER 6

PHYSICAL PROGRAM PERFORMANCE AWARDS

Master of the Sword's Award

The Master of the Sword's Award is earned by cadets who have demonstrated exceptional performance in the Physical Program. To earn this award during an academic year, cadets must:

- Achieve a PPSY ≥ 3.667
- Earn the APFB on at least one of two record APFTs
- Be within body composition standards outlined in AR 600-9
- Resolve all no-credits
- Third, Second, and First Class cadets must take and pass the IOCT

This award is presented at the beginning of the next academic year and may be worn on the Gym Alpha uniform IAW the USCC SOP.

The Commandant's Unit Fitness Excellence Award

The Commandant's Unit Fitness Excellence Award is earned by cadet companies that epitomize physical fitness excellence. The Commandant will recognize one company per regiment for physical excellence. It is awarded annually, at the end of the AY, based on performance on:

- The spring record APFT
- The IOCT
- Sandhurst ranking within the regiment
- The company PPSY
- The Company Athletics ranking within the regiment

The cutoff date for award determination is the last day of classes of the Spring Term.

a. Criteria for the award include:

1) APFT Average: Company average on the spring record APFT (not using the extended scale). Companies are ranked 1 through 9 within each regiment. If companies are tied, the companies' extended scale averages will be used as the tiebreaker.

2) IOCT Average: Company average of individual IOCT scores. Companies are ranked 1 through 9 in each regiment.



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Physical Program

3) Sandhurst ranking within the regiment: Final Sandhurst standing within the regiment, ranked 1 through 9.

4) Physical Performance Score Year: Company average of individual PPSY. Companies are ranked 1 through 9 in each regiment.

5) Company Athletics rank: Companies receive points IAW their regimental finish in each sport, either by regular season record or playoff results.

b. Scoring for each event will be broken down as follows: 1st - 100 points, 2nd 80 - points, 3rd - 70 points 9th - 10 points. The company selected from each regiment will have the highest combined average rank for the 5 categories.

Companies earning the Commandant's Unit Fitness Excellence Award will receive a streamer embroidered with the words "Commandant's Physical Excellence" to be carried on the company guidon for the following academic year. Companies must subsequently re-earn the award to continue to carry the streamer.

306th Infantry Award

West Point Chapter, Daughters of the United States Army Award

At the end of the First Class year, USMA will recognize the number one man (306th Infantry Award) and number one woman (West Point Chapter, Daughters of the United States Army Award) cadets based on PPS over the four-year experience. In the event of a tie, the sequence for breaking the tie will be PPSY in descending year order.

#1 Cadet in the Physical Program by Grad Year

At the end of the academic year, the number one man and woman cadets will be identified for the rising upper three classes. The #1 cadet in each class must have completed all PE courses required of his or her year group. PPSC (computed to three decimal places) for the preceding years will be used to determine these cadets. In the event of a tie, the sequence for breaking the tie is as follows:

- Average of all testing scores
- Coursework
- CSI



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Indoor Obstacle Course Test Tab

To qualify for the IOCT tab, a cadet must score an A- or above on the IOCT (Men: 2:38 or faster; Women: 3:35 or faster; no event failures). Cadets are authorized to wear the IOCT tab on the right thigh of the Gym Alpha shorts IAW USCC SOP.

Army Physical Fitness Badge

A cadet must achieve the following standards to earn the Army Physical Fitness Badge (APFB):

- Earn a 270 or above on the APFT.
- Earn 90 or more scale points on each event of the APFT (push-ups, sit-ups, and the two mile run). For badge purposes only, points scored above 100 on an event will not contribute to the overall point total.

Cadets are authorized to wear the APFB on the front right thigh of the Gym Alpha shorts IAW the USCC SOP.

A cadet may not earn the APFB by taking a modified or alternate test.

All APFTs are administered by the BTD.

Brigade Champion Trophy, Certificate and Patch

Trophies:

Trophies are awarded to the Brigade Championship teams in each sport at the conclusion of each season. Company Athletic Officers are responsible for ensuring that the trophies remain in the possession of the company and are maintained in a secure location. Trophies will be returned to DPE Competitive Sports Office prior to TEEs each May.

Certificates:

Each company that participates in a Brigade Championship will be awarded a certificate (Champion or Runner up) to be displayed in their company area.

USCC Monogram Patch:

All cadets on Brigade Championship teams will be awarded a "USCC" monogram patch for wear on the As-for-Class jacket.



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The Bankers Association of New York Trophy

The "Bankers Trophy" is inscribed annually with the designation of the Cadet Company ranking first in each regiment in Company Athletics. In addition, the winning companies receive a Bankers Trophy certificate to be displayed in the company area. The award was first presented in 1924.

Bankers Trophy Point System:

Companies receive points IAW their Regimental finish in each sport during the regular season. Point distribution follows:

| | | |
|----------------------------|-----------------------------|----------------------------|
| | 1 st Place - 100 | |
| 2 nd Place - 80 | | 6 th Place - 40 |
| 3 rd Place - 70 | | 7 th Place - 30 |
| 4 th Place - 60 | | 8 th Place - 20 |
| 5 th Place - 50 | | 9 th Place - 10 |

In cases of a tie in team standings (except ties for first place), the Bankers Trophy Points involved will be divided and distributed equally among the tied teams. (Example: a three way tie for 2nd place would divide and distribute the 2nd, 3rd and 4th place points or 70 points for each team).

The Mike Krzyzewski Teaching Character through Sport Award

The Mike Krzyzewski Teaching Character through Sport Award recognizes West Point athletes, and one coach (sport educator) for their outstanding commitment to the development of noble character through athletic participation and leadership.

There are three divisions of athletics: Company Athletics, Competitive Club Athletics, and Corps Squad Athletics. Each year, one cadet-athlete and one coach (sport educator) from each division receives the Mike Krzyzewski Award for Excellence in Teaching Character through Sport.

Nomination due dates are published during the fall and spring seasons. Nominations must be in the form of one page or less and justify the criterion above. The selection committee will review all nominees and select one cadet winner and one coach (sport educator) from each division.



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Coach Mike Krzyzewski presents the awards each spring to the recipients and addresses the Corps of Cadets on the importance of value-based athletics. Winners receive a medallion and plaque during the ceremony and their names are added to a permanent plaque in Arvin honoring the award winners.

The LTG (R) Hal Moore Warrior Athlete of Excellence Award

The LTG (R) Hal Moore Warrior Athlete of Excellence Award recognizes one male and female cadet that best demonstrate the leadership qualities of General Moore (Mental Toughness, Perseverance, Winning Spirit, Humility) and the tenets of the warrior ethos in the DPE competitive sports and combatives programs.

Eligibility requirements include:

| Event | Standard |
|------------------------------------|---|
| PE116 or PE115 | B+ or higher |
| PE360 | Top 5% of year group (Male / Female) |
| CSI (Character in Sports Index) | B+ or higher (average) during 4 th , 3 rd , and 2 nd Class years |
| IOCT (Indoor Obstacle Course Test) | B+ or higher |
| DPE Core Courses | No failures |
| APFT | C- or greater on all record tests |

Nominations must be one page or less and justify the criteria above. The selection committee will review all nominees and select the winners.

The award presentation will occur during the fall season. Winners receive a certificate during the ceremony and their names are added to a permanent plaque in Arvin honoring the award winners.



Physical Program

Physical Program

CHAPTER 7

CADET SUMMER PHYSICAL READINESS TRAINING

The Physical Program includes an intense and progressive summer Physical Readiness Training (PRT) program. This program is designed to prepare cadets for the physical demands of cadet/military service and the combat environment. Summer training provides each cadet repeated opportunities to apply principles learned during the academic year's physical education curriculum. Specifically, the summer training program integrates military and physical training. This integration provides a forum where cadets are taught to apply and model the knowledge, psychomotor skills, attitudes and behaviors which result in a sustained high level of physical fitness and enhanced combat readiness.

For the upperclass cadet leaders, the leadership roles at both Cadet Basic Training and Cadet Field Training provide opportunities to:

- Develop leadership skills through exposure to a variety of physical training methods and experiences
- Implement the fitness principles and skills acquired during curricular instruction
- Improve and maintain personal fitness levels and those of subordinates
- Enhance unit morale, cohesion, and teamwork through rigorous physical activity and competition

Cadet Basic Training (CBT)

CBT is the new cadet's initial exposure to the Army's PRT program. CBT integrates an intense and rigorous physical sequence designed to:

- Prepare cadets for the physical demands of the summer training program and the academic year's physical education requirements
- Introduce new cadets to the Army's physical conditioning program
- Foster positive behaviors and attitudes toward physical fitness
- Develop the attributes of leadership, character, teamwork, self-confidence, and mental and physical courage

The physical readiness training program of instruction for CBT is planned and monitored by DPE to comply with the Commandant's guidance and intent. Implementation and execution of the CBT physical readiness training program is the responsibility of the upper-class cadet leadership.



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Physical Program

Cadet Field Training (CFT)

Following the end of the Fourth Class year, rising Third Class cadets report to Camp Buckner for military field training. CFT is designed to be physically and mentally demanding and simulates Army experiences as realistically as possible. Cadets experience how physical training is conducted in an Army unit in both garrison and field conditions.

The CFT physical readiness training program is planned, implemented and executed by the upperclass cadet cadre. To develop their company physical readiness training plans, the cadet leadership uses the Army physical fitness training doctrine described in FM 7-22 and AR 350-1. Additionally, the cadet leadership is expected to adhere to the concept of "METL Focused PT". The Brigade Tactical Department, and specifically the company tactical officer and noncommissioned officer, monitor the cadet leadership's execution of their company's physical readiness training program.

In concert with the cadet company physical fitness training plans, DPE may also plan and supervise special physical training events during CFT. These physically and mentally demanding events are designed to challenge each cadet while fostering teamwork, mental and physical courage, and a feeling of pride upon successful accomplishment.



Physical Program

Physical Program

CHAPTER 8 SUMMER TERM PROGRAMS

Summer Term Academic Program (STAP)

DPE STAP begins during Graduation Week and runs for approximately 3 weeks. The primary objective of DPE STAP is to remediate all DPE academic course failures, "No Credits" (NCs), and PPSC deficient cadets. Cadets will generally be enrolled in only one DPE STAP course. Cadets facing separation for a course failure in the physical program are not encouraged to participate in Voluntary Academic STAP.

PPSC Remediation

PPSC deficient cadets who did not fail a required DPE course may be remanded to DPE STAP and enrolled in the DPE course in which they previously received their lowest DPE course grade.

Medical Excusals

Cadets remanded to DPE STAP who are on a Cadet Medical Excusal (CME) that extends into or through the STAP period may be required to enroll in and complete the required DPE course within the limitations of the CME. All cadets who are NC in a DPE course or are PPSC deficient based upon the PPSC 'peg' points listed in Chapter 5 must personally contact the DPE Guidance Office before making plans for term-end leave. STAP takes precedence over personal leave and other summer assignments such as military development schools and individual advanced development opportunities.

Physical Individual Advanced Development (PIAD)

PIAD opportunities provide a means to enhance the experience of the baseline Physical Program. Cadets are ineligible for a DPE PIAD if they fail to meet minimum standards on all DPE academic year coursework and all required fitness testing by the end of the spring term. Consistent with budget and faculty availability, DPE conducts the following PIADs:

- *PE 471 - Advanced Sport Development (2.0 credit hours)*: designed for cadets with an interest in total fitness, adventure sports and a SCUBA diving experience
- *PE 472 - Outer Limits/Mountain Leader (2.0 credit hours)*: an opportunity to develop sound mountaineering skills as well as to explore mental and physiological limits
- Kinesiology PIAD – cognitive/curricular or research enrichment opportunity



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Physical Program

CHAPTER 9 KINESIOLOGY MAJOR

The Discipline

Kinesiology is defined as the scientific study of human movement and is generally divided into the physiological, psychological, and mechanical aspects of movement. The physiological aspects of kinesiology encompass the study of the short-term responses and long-term adaptations of organisms and systems to the challenge of exercise, physical activity, or movement. From a neuromuscular perspective, kinesiology relates to how humans learn and control movements. The psychological aspects of kinesiology relate to the effects of human behavior on physical activity levels and performance. The mechanical aspects of kinesiology encompass the biodynamics of human movements as they relate to exercise and human performance.

Kinesiology is a broad, interdisciplinary field of study that includes diverse specialties such as anatomy, exercise physiology, biomechanics, nutrition, exercise psychology, and fitness testing and prescription. Areas of inquiry range in scope from the study of the molecular response of cells to the response and adaptation of the whole body. The major encompasses a wide spectrum of performance issues involving muscular and cardiovascular physiology, energy balance, exercise adherence, skill acquisition, and motor control.

Course Requirements

Courses in the Kinesiology major are sequenced in the following order:

- | | |
|-------------|--|
| Foundation: | CH 375 – Advanced Biology CH 387 – Human Physiology KN 355 – Functional Anatomy |
| Core: | KN 360 – Biomechanics of Human Movement KN 365 – Nutrition for Performance KN 455 – Psychology of Exercise KN 460 – Exercise Physiology KN 465 – Motor Control and Learning |
| Advanced: | KN 470 – Fitness Assessment and Prescription KN 480 – Theory/Practice of Advanced Performance PL 361 – Research Methods I KN 495 – Honors Thesis |



Physical Program

Physical Program

Human Performance Laboratory

The Human Performance Laboratory (HPL) is a state-of-the-art research facility designed to conduct basic and applied research toward a fundamental understanding of physical training and biological adaptation, and apply this knowledge to improve the physical development and well-being of the Corps of Cadets and the U.S. Army. The HPL serves as a cadet-centered resource for information and guidelines concerned with maximizing physical development for military and sport applications. The HPL also serves the academic mission of the USMA by providing opportunities for cadet participation in developing, implementing, and publishing independent research projects.

Functions

The HPL performs a variety of functions related to the physical development needs of the Corps of Cadets and the Army:

- Conduct research defined in two domains: Basic Research and Applied Research
 - Basic Research: Hypothesis-driven, organ-systems approach to the study and understanding of the physiological, biochemical, biomechanical, and psychological determinants of physical activity, training, and biological adaptation
 - Applied Research: Application of the basic principles of training and adaptation to issues that address specific needs, primarily of the Corps of Cadets and potentially of the Army with regard to development and implementation of guidelines for physical training, physical assessment and combat readiness
- Contribute to the scientific body of knowledge by publication of research in scientifically-relevant journals and through participation in professional societies and scientific meetings
- Develop a network for the dissemination of research findings and information regarding principles and practices associated with optimal physical development of cadets
- Promote collaborative research ventures within USMA and with other Army, Department of Defense, and federal agencies
- Develop an extramural funding program that will provide a financial basis of support for the research and programmatic initiatives of the HPL
- Enhance cadet academic development through support of the Department of Physical Education academic major in kinesiology by providing research opportunities for cadets enrolled in independent study and thesis courses
- Enhance cadet academic development by providing laboratory course structure that coincides with classroom lectures to augment the learning of cadets enrolled in the Kinesiology major



Physical Program

Physical Program

Appendix: Acronyms

APFB — Army Physical Fitness Badge
APFT — Army Physical Fitness Test
APS — Academic Program Score
ASD — Advanced Sport Development
BIP — Basic Instruction Program
BTD — Brigade Tactical Department
CBT — Cadet Basic Training
CFT — Cadet Field Training
CGO — Company Guidance Officer
CPS — Cadet Performance Score
CSI — Character in Sports Index
DPE — Department of Physical Education
HPL — Human Performance Laboratory
IAD — Individual Advanced Development
IOCT — Indoor Obstacle Course Test
LPA — Lifetime Physical Activity
MOS — Master of the Sword
MPS — Military Program Score
ODIA — Office of the Directorate of Intercollegiate Athletics
PPS — Physical Program Performance Score
PPSC — Physical Program Performance Score Cumulative
PPST — Physical Program Performance Score Term
PPSY — Physical Program Performance Score Year
PRT — Physical Readiness Training
SAP — Selected Athlete Program
STAP — Summer Term Academic Program
USCC — United States Corps of Cadets
USMA — United States Military Academy



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COMBATIVES

TC 3-25.150

FEBRUARY 2017

**HEADQUARTERS
DEPARTMENT OF THE ARMY**

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***TC 3-22.150**

Training Circular
No. 3-25.150

Headquarters
Department of the Army
Washington, DC, (2016 Draft)

Combatives

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Preface

This publication outlines combatives techniques, requirements for safe combatives training, and rules for combatives competitions. Included in the intended audience are commanders and certified combatives master trainers, basic combatives course graduates, and tactical combatives course graduates.

This publication is divided into six chapters and three appendixes:

Chapter 1 provides an introduction to this manual.

Chapter 2 outlines the strategy for combatives training.

Chapters 3, 4, and 5 display techniques found in basic combatives course, tactical combatives course and combatives master trainer course training.

Chapter 6 depicts contact weapons training.

Appendix A outlines competition rules and regulations.

Appendix B contains basic drills and training evaluation.

Appendix C provides information about training areas.

All uniform references "Army" will refer to respectable service equivalent.

Unless this publication states otherwise, masculine nouns and pronouns may refer to either men or women.

Terms that have joint or Army definitions are identified in both the glossary and the text. Terms for which this publication is the proponent TC are indicated with an asterisk in the glossary.

This publication applies to the Active Army, the United States Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR) unless otherwise stated.

The proponent of this publication is the United States Army Training and Doctrine Command (TRADOC).

The preparing agency is the U.S. Army Maneuver Center of Excellence (MCOE). Send comments and recommendations by any means, U.S. mail, e-mail, fax, or telephone, using the format of DA Form 2028, *Recommended Changes to Publications and Blank Forms*. Point of contact information is as follows.

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Chapter 1 Overview

Combatives training stands apart from the vast majority of martial arts training, in that producing the individual's actual fighting ability is of primary concern. The mental and physical benefits of training, gain their worth from their usefulness in producing more capable Soldiers

PURPOSE

1-1. Combatives, the art of hand-to-hand combat, bridges the gap between physical training and tactics. The products of a good physical training plan—strength, endurance, and flexibility—must be directed toward the mission, and Soldiers must be prepared to use different levels of force in an environment where the intensity of a conflict changes quickly. Many military operations, such as peacekeeping missions or noncombatant evacuation, may restrict the use of lethal force. Combatives training prepares the Soldier to use the appropriate amount of force for any situation.

1-2. Combatives training includes arduous physical training that is mentally demanding and carries over to other military pursuits. This training produces Soldiers who—

- Understand controlled aggression and remain focused while under duress.
- Possess the skills requisite to the mission, at all levels in the spectrum of force.
- Have the attributes that make up the Warrior Ethos—personal courage, self-confidence, self-discipline, and esprit de corps.

SYSTEM PRINCIPLES

1-3. Throughout modern history, attempts to build a successful combatives system have failed or have been met with limited success. This has happened for several reasons. Quite naturally, commanders desire a system that doesn't require any training time to learn and maintain. Further, training has often been conducted by experts in civilian martial arts. These experts use training

methodologies that are designed more for the civilian hobbyist than the realities of war.

1-4. Often, combatives training has been approached by allowing a Soldier versed in a civilian martial art to use a limited amount of training time, usually during another course (such as initial entry training [IET] or specialist training), to teach a useful technique. Blinded by his civilian training, the trainer demonstrates what he thinks are simple, effective, and easy-to-learn techniques selected based on a situation Soldiers may find themselves in or the tactical niche of the specialist training. He teaches the Soldiers these techniques, but due to the limited amount of training time, the Soldiers quickly forget them. To overcome these tendencies, a combatives training system must be based on certain principles, and then maintained. These principles are—

- Systematic training.
- Foundation.
- Continuous training.
- Competition.
- Drills.
- Live training.
- Integrated training.
- Combat feedback.

SYSTEMATIC TRAINING

1-5. Learning to fight is a process, not an event. To be effective, combatives training must be part of a system. Until Soldiers learn the techniques that form the system's foundation, they are unprepared for follow-on training; short cuts or teaching Soldiers "what they need to know" is counterproductive, much as advanced tactical training is counterproductive if a

Chapter 1

Overview

Soldier has not first been taught how to operate his weapon. Army combatives training must be based in a system that both lays a foundation of abilities that Soldiers take with them wherever they are assigned and is flexible enough to fit the wide range of specialized missions Soldiers and units are asked to perform.

FOUNDATION

1-6. Army institutional training should build a foundation for combatives training. Training should concentrate on the fundamentals of the combatives system—from learning basic combatives techniques in IET, and advanced individual training (AIT) to leading a successful unit program in the leadership courses of the Noncommissioned Officer Education System (NCOES) and Officer Education System (OES).

CONTINUOUS TRAINING

1-7. Combatives training must not end upon graduation from a training course. For Soldiers to develop their abilities, the majority of the training must happen outside of the institutional training environment. Units must develop their own combatives programs to spur troop involvement and encourage commanders to invest resources.

COMPETITION

1-8. Competition is the principal motivational tool used to spur combatives training. Competitions should not only be used to encourage excellence by giving Soldiers a chance to be unit champions, but also to make fighting ability an integral part of Soldiering.

DRILLS

1-9. Combatives drills reinforce Soldiers' basic skills through repetition. They can be used as part of a warm-up and integrated with calisthenics. Combatives drills should be an integral part of daily physical training.

LIVE TRAINING

1-10. Live training involves training against a fully resistant training partner; which approaches the reality of combat. There are many different methods of live training. Each has its own strengths and weaknesses; therefore, leaders should combine several approaches to ensure proper training.

INTEGRATED TRAINING

1-11. Combative engagements do not happen in a vacuum; they happen as part of a mission. To give Soldiers the tools they need to successfully complete their missions, combatives must become an integral part of the training.

COMBAT FEEDBACK

1-12. When Soldiers are engaged in hand-to-hand combat, they acquire new information about combatives. These lessons must be captured and analyzed so that the Combatives Program evolves to fit the needs of Soldiers. Through combat feedback, the following lessons have been learned:

- Every fight is a grappling fight. Of course, this does not mean that there is no striking; every fight also involves striking, but always as an integral part of grappling. Every fight is over weapons. Control of this element will most likely determine the outcome of the fight.
- There is no shortcut to developing fighting skill. It can only be developed by a systematic approach to training. Or in any realistic environment that combatives may be needed. Train first, to build skills and then putting them in the context of the mission.

SAFETY

1-13. The Combatives Program has been specifically designed to train the most competent Soldiers in a timely and safe manner. Ignorance and loss of control are principal reasons for most combatives-related training injuries.

RISK ASSESSMENT

1-14. The deliberate risk assessment worksheet (DRAW) is the Army's primary decision-making process for identifying and controlling risks across the

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full spectrum of Army missions, functions, operations, and activities. The DRAW process should be used to make sound individual and leadership risk decisions.

Note. Refer to ATP 5-19 for more information about the DRAW process.

1-15. Combatives training has inherent risks. These risks may not be readily apparent and are sometimes counterintuitive to the untrained person; therefore, a combatives instructor certified at the appropriate level should be involved in the DRAW process to mitigate these risks.

1-16. This manual outlines training events suitable to the level of technical and medical expertise available to commanders at the appropriate levels. Training intensity and severity should not exceed the recommended levels without command supervision.

Note. See chapter 2 for more information about the risks inherent in combatives training.

GENERAL SAFETY PRECAUTIONS

1-17. Army combatives techniques should be taught in the order presented in this manual. They are arranged for a natural progression; the more dangerous techniques are presented after the Soldiers have established a familiarity with the dynamics of general combatives techniques. This will result in fewer serious training injuries from the more dynamic moves.

CAUTION

Soldiers performing combatives movements could cause or receive a body or head injury. Commanders are encouraged to have a medic present during all levels of combatives training. Soldiers who sustain injuries, especially those of the head, neck, and back, should not be moved until checked by a medic. Soldiers who receive these injuries should seek immediate medical care. Soldiers who lose consciousness during training should be checked by a medical doctor before returning to training.

TRAINING AREAS

1-18. According to a report published by the Armed Forces Health Surveillance Center, 730 individuals who served in an active or Reserve component of the Army, Navy, Air Force or Marine Corps were hospitalized or medically evacuated for injuries incurred while performing wrestling, judo, and unarmed combat training between January 2002 and December 2009. This averages to roughly 100 personnel per year during an eight-year period. Table 1-1 details the types of injuries of these individuals and the percentage of instance.

1-19. The following paragraphs detail trends identified during this study and provide more information about one of the most severe injuries that can occur during combatives training, traumatic brain injury.

INJURIES DURING UNSUPERVISED BOUTS

1-20. It should be noted that 194 personnel (40 percent of those hospitalized and 26.6 percent of all injuries) were injured while off-duty or have unknown duty status. Unsupervised execution of combatives techniques is strongly discouraged; training should be supervised by a trainer certified at appropriate level.

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AREAS OF THE BODY MOST COMMONLY INJURED

1-21. Of the injuries documented in the study, a large percentage (45.6 percent) occurred in the lower extremities. In fact, fractures, primarily of the ankle, tibia, or fibula, accounted for nearly one-half (50 percent) of the injuries. Table 1-1 shows the distribution of the injuries documented in the study. Table 1-2 shows the areas of the body most commonly injured.

Table 1-1. Distribution of the injuries

| <i>INJURY</i> | <i>PERSONNEL INJURED</i> | <i>FREQUENCY</i> |
|--|--------------------------|------------------|
| Other fractures | 363 | 50% |
| Sprains and strains | 95 | 13% |
| Dislocations | 60 | 8% |
| Arthropathies, dorsopathies, and rheumatism | 54 | 8% |
| Skull or bone fractures, intercranial injuries | 43 | 6% |
| Other injuries | 27 | 4% |
| Concussion, unspecified head injuries | 22 | 3% |
| Traumatic complications, unspecified injuries | 22 | 3% |
| Internal injuries | 16 | 2% |
| Contusions | 10 | 1% |
| Nerve or spinal cord injuries | 10 | 1% |
| Wounds | 4 | 1% |
| Crushing injuries | 2 | 0% |
| Disorders of the eye, adnexa | 1 | 0% |
| Injuries to blood vessel | 1 | 0% |

Note. The full results of this study can be viewed at http://www.afnsc.mil/viewMSMR?file=2010/v17_n02.pdf.

TRAUMATIC BRAIN INJURY

1-22. The Armed Forces Health Surveillance Center study concluded that a relatively small percentage (15.5 percent) of combatives-related injuries occur in the head, back, neck, and nervous system; however, these injuries can have disastrous consequences, which can include traumatic brain injury.

Table 1-2. Areas of the body most commonly injured (Armed Forces Health Surveillance Center study)

| <i>PERCENTAGE OF INJURIES</i> | <i>AREAS INJURED</i> |
|-------------------------------|--------------------------------------|
| 15.5% | Head, back, neck, and nervous system |
| 24.0% | Upper extremity |
| 45.6% | Lower extremity |
| 14.9% | Other, unspecified |

1-23. Traumatic brain injury occurs when a sudden trauma or head injury disrupts the function of the brain, initiating the onset or worsening of the following symptoms:

- Loss of or a decreased level of consciousness.
- Loss of memory for events immediately before or after the injury (post-traumatic amnesia).
- Alteration in mental state at the time of the injury (confusion, disorientation, slowed thinking, and so forth.).
- Neurological deficits (weakness, loss of balance, change in vision, praxis, paresis/plegia, sensory loss, aphasia, etc.) that may or may not be transient.
- Intracranial lesion.

1-24. The trauma or head injury may have been caused by any of the following events:

- Head being struck by an object.
- Head striking an object.

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- Brain undergoing acceleration/deceleration without direct external trauma to the head.
- Foreign body penetrating the brain.
- Forces generated from events such as blast or explosion, or other force yet to be defined.

1-25. Traumatic brain injury symptoms can appear immediately or weeks to months following the injury. Should a Soldier exhibit any of the symptoms below, he should seek immediate emergency evaluation and treatment:

- Altered consciousness.
- Unusual drowsiness.
- Dilated or asymmetrical pupils.
- Blood or other fluid draining from the ears, nose, or mouth.
- Seizures.
- Nausea or vomiting.
- Blurred vision or double vision.
- Severe or worsening headache.
- Cannot recognize people or disoriented to place.
- Unusual behavior or is confused, irritable, or unable to concentrate.
- Slurred speech.
- Unsteady on feet, balance difficulties.
- Weakness or numbness in arms or legs.
- Convulsions or seizures.
- Ringing in the ears.
- Temperature above 100.5 with or without neck stiffness.

1-26. Should traumatic brain injury be suspected, but the Soldier does not exhibit the symptoms above, the Soldier should be watched for symptoms and should perform the following actions:

- Eat a light diet.
- Do not take any sedatives or consume any alcoholic beverages.
- Immediately go to the emergency room if any symptoms begin to occur.
- Do not take more than two extra-strength acetaminophen tablets or three regular-strength acetaminophen tablets for headaches.

- Do not take aspirin, ibuprofen, or other pain medications.

DANGER
Should a Soldier exhibit any of the symptoms of traumatic brain injury, he should seek immediate emergency evaluation and treatment.

SAFETY PRECAUTIONS RELATED TO TECHNIQUES

1-27. With all training, there is some element of risk in the execution of combatives training. The following paragraphs provide general guidance to ensure safe implementation of certain techniques.

CHOKES

1-28. Chokes are the most effective way to end a fight without a weapon; they incapacitate an enemy. With supervision chokes can be applied in training exactly as a Soldier would on the battlefield.

CAUTION
For training purposes, hold chokes only until your opponent taps. Holding the choke for lengthy periods may cause injury or death.

JOINT LOCKS

1-29. Attacks on most large joints (for example, elbow, shoulder, or knee) are painful long before causing injury, which allows Soldiers to conduct full-force training without significant risk of injury. The exceptions are wrist attacks and twisting knee attacks; therefore, these attacks should be taught with great care and should not be allowed during sparring.

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CAUTION

Wrist and twisting knee attacks should not be allowed during sparring. The wrist is very easily damaged, and twisting the knee does not become painful until it is too late to prevent damage. Soldiers with prior injuries should exercise caution when practicing grappling techniques.

STRIKING

1-30. Striking is not the most efficient way to incapacitate an enemy and often results in injury to the striker. However, striking is an important part of an overall fight strategy; strikes can be very effective in manipulating the opponent into unfavorable positions. Striking can be practiced with various types of protective padding, such as boxing gloves. Defense can be practiced using reduced-force blows.

CAUTION

Striking often results in injury to the striker. Use protective padding, such as boxing gloves, when practicing strikes.

Repeatedly striking a person in the head can result in traumatic brain injury. DO NOT use full-force blows when practicing defense.

TREATMENT OF UNCONSCIOUS OR INJURED FIGHTERS

1-31. Unconscious or injured fighters require prompt medical attention.

PROTOCOL FOR INJURED SOLDIERS

1-32. In addition to receiving medical treatment, Soldiers who are injured are subject to additional protocols.

PLACEMENT ON THE ILL AND UNAVAILABLE LIST

1-33. If a fighter suffers an injury, has been knocked unconscious, or has participated in an unusually punishing bout, the fighter will be placed on the ill and unavailable list for such period of time as may be recommended by medical staff.

SUSPENSION FOR DISABILITY

1-34. Any fighter rejected by the medical staff will be suspended until he is proven to be physically fit for further training. The trainer will provide a report listing the terms of suspension to the Soldier's chain of command.

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CAUTION

If a competitor becomes unconscious, the trainer should perform the following steps:

1. Before separating the fighters, control the unconscious fighter's head to prevent unnecessary movement.
2. Loosen the unconscious fighter's uniform around the collar and check for respiration and an open airway.
3. If the athlete does not regain consciousness within 20 seconds or his vital signs fluctuate (for example, respiratory distress, weak pulse, and so forth.), call for medical attention.

If a competitor becomes unconscious due to a violent fall, throw, or may have a cervical injury, the trainer should carefully separate the fighters, while calling for medical attention. **DO NOT** move the injured fighter.

If other injuries occur, the trainer should carefully separate the fighters, while calling for medical attention.

REPORT OF INJURY

1-35. Documentation of injuries is critical to the identification of injury trends during training and to the modification of techniques in order to prevent these injuries. The medical staff must report all cases in which the fighters have been injured during training or have applied for medical aid after training.

TRAINING AREAS

1-36. During training, leaders should use training areas appropriate to the type of training. Most training should be conducted in areas with soft footing, such as grassy or sandy areas. If training mats are available, they should be used.

Note. Hard surfaces are inappropriate for combatives training.

SAFETY EQUIPMENT

1-37. Safety equipment should be used appropriately—to prevent injury, not pain. Overpadding during training will cause unrealistic responses on the battlefield, which can endanger Soldiers' lives.

1-38. Further, the effects of using safety equipment are not always clear. For example, boxing headgear is designed to protect the wearer from superficial wounds, such as a cut or scrapes and scratches, but it does not significantly reduce the risk of more serious injuries, such as brain trauma. In certain situations, it may make traumatic injury more likely by creating the illusion of safety.

CAUTION

While safety equipment may protect the wearer from superficial wounds, such as a cut or a broken nose, it may not significantly reduce the risk of more serious injuries, such as brain trauma. In certain situations, it may make traumatic injury more likely by creating the illusion of safety.

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Chapter 2 Training

The military profession is inherently dangerous. Commanders must train their units to tough standards under the most realistic conditions possible.

— ADP 7-0, Training Units and Developing Leaders

This chapter discusses the combatives training program—from institutional training to operational unit training, training areas, teaching techniques, and safety precautions that must be considered before conducting combatives training.

DELIBERATE RISK ASSESSMENT WORKSHEET

2-1. It is vital to identify unnecessary risks by comparing potential benefit to potential loss. The DRAW process allows units to identify and control hazards, conserve combat power and resources, and complete the mission. This process is cyclic and continuous; it must be integrated into all phases of operations and training.

2-2. There are five steps to the DRAW process:

Identify hazards.

- Assess hazards to determine risk.
- Develop controls and make risk decisions.
- Implement controls.
- Supervise and evaluate.

Note. Risk decisions must be made at the appropriate level.

2-3. Combatives training places Soldiers into contact situations, where injuries can occur. When identifying hazards, leaders should consider—

2-4. Different levels of complexity imply different hazards.

TECHNIQUES AND EQUIPMENT UTILIZED

2-5. Techniques such as joint manipulation, muscle manipulation, and chokes require supervision. The inclusion of weapons and equipment in training offers additional hazards and requires greater supervision.

HOW NEW ELEMENTS IMPACT KNOWN HAZARDS

2-6. Ground-fighting is the safest method of sparring. However, adding new elements, such as controlled sparring, to ground-fighting will change specific known hazards. Each added training technique must be thoroughly tested and hazards identified before the training is conducted.

ASSESS HAZARDS TO DETERMINE RISK

2-7. Once identified, hazards are assessed by considering the likelihood of its occurrence and the potential severity of injury without considering any control measures. When assessing hazards, leaders should consider the Soldiers' current state of training.

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EXAMPLE

Injury due to the arm bar:

- A Soldier can expect to be on medically limiting profile for 90 days—marginal.
- This injury can occur occasionally.
- The resultant risk is moderate.

DEVELOP CONTROLS AND MAKE RISK DECISIONS

2-8. Leaders must apply three types of control measures to combatives risk assessments:

- Educational controls.
- Physical controls.
- Avoidance controls.

2-9. The unit commander's controls should be clear, concise, executable orders.

Note. Most vital to developing DRAW controls is mature, educated leadership.

EDUCATIONAL CONTROLS

2-10. Educational controls occur when adequate training takes place. They require the largest amount of planning and training time. Leaders implement educational controls using two sequential steps:

- Supervisors and instructors must be certified.
- Soldier training must be executed.

PHYSICAL CONTROLS

2-11. Physical controls are the measures emplaced to reduce injuries. This includes not only protective equipment (e.g., gloves, headgear, and mats), but also certified personnel, such as referees or safeties, to supervise the training. Unrestrained physical controls are, in themselves, a hazard.

AVOIDANCE CONTROLS

2-12. Avoidance controls are a graduated set of rules in training and sparring (i.e., crawl—walk—run). Established by basic, standard, intermediate, advanced, and scenario-based competition rules, these controls limit the authorized techniques. Experience enables Soldiers to advance from one set of rules to the next; it also enables supervisors and instructors to select Soldiers eligible for advancement.

Note. Avoidance controls must accompany educational controls. Before a Soldier attempts a technique in sparring, it should be taught correctly and drilled extensively.

IMPLEMENT CONTROLS

2-13. When leaders implement the controls, they must match the controls to the Soldier's skill level (e.g., seasoned Soldiers competing at a division tournament would use advanced rules). They must also enforce every control measure as a means of validating its adequacy.

SUPERVISE AND EVALUATE

2-14. This step allows leaders to eliminate unnecessary risk and ineffective controls by identifying unexpected hazards and determining if the implemented controls reduced the residual risk without interfering with the training.

2-15. Combatives instructor training consists of three levels. Each level is designed to standardize the instruction of specific fighting skills and, more importantly, prepare instructors for the responsibilities of training progressively larger units. The courses must be taken progressively, with sufficient intervals between them to allow mastery of the course material and sufficient teaching experience at each level.

2-16. The three levels of combatives instructor certification are—

- Basic Combatives Course (BCC).
- Tactical Combatives Course (TCC).
- Combatives Master Trainer Course (CMTCC).

BASIC COMBATIVES COURSE INSTRUCTION

2-17. BCC instruction is designed to produce fire team, squad, and platoon trainers who can teach the basic tasks and drills that all Soldiers must know.

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Note. Soldiers must be certified by a certified CMTC instructor, with the training validated by the first O-5 in the chain of command. Each certificate must contain the signature of the certifying instructor. The United States Army Combatives Course (USACC) must receive a memorandum of training for all basic combatives course graduates.

DUTIES OF BASIC COMBATIVES COURSE-CERTIFIED INSTRUCTORS

- 2-18. BCC-certified instructors—
- Enforce proper fighting habits.
 - Ensure that students understand the fundamentals. Supervise fire team, squad, and platoon scenario/tactical-based training.

Note. See appendix A for more information about fire team, squad, and platoon competitions.

TACTICAL COMBATIVES COURSE INSTRUCTION

2-19. TCC instruction provides explanations for the techniques addressed in basic combatives course instruction, teaches additional ground-fighting techniques, and introduces throws and clinches.

Note. Soldiers must be certified by a certified CMTC instructor, with the training validated by the first O-5 in the chain of command. Each certificate must contain the signature of the certifying instructor. The USACC must receive a memorandum of training for all BCC and TCC students upon completion of the course which must be registered on ATTRS.

DUTIES OF TACTICAL COMBATIVES COURSE CERTIFIED INSTRUCTORS

- 2-20. TCC-certified instructors—
- Review platoon trainers' training plans to ensure quality control and safety.
 - Serve as assistant instructors for basic combatives course certifications (conducted by a battalion master trainer).
 - Act as punchers during the Option 3 drill.

Note: See appendix B for more information about the Option 3 drill.

- 2-21. At the company level, they—
- Plan for, conduct, and supervise company competitions.

Note. See appendix A for more information about company competitions.

- Advise company leaders on how to make their units' combatives training more productive.

COMBATIVES MASTER TRAINER COURSE INSTRUCTION

2-22. CMTC instruction addresses all ranges of the fight by training striking skills and introduces Soldiers to integrating combatives training into the rest of their Warrior tasks and drills (e.g., incorporating combatives training into close quarters combat training and unit mission training).

Note. Certified CMTC instructors must receive their certification from the USACC at Fort Benning, Ga..

DUTIES OF COMBATIVES MASTER TRAINER COURSE CERTIFIED INSTRUCTORS

- 2-23. CMTC-certified instructors—
- Instruct BCC courses at the battalion level.

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- Plan, conduct, and supervise quarterly battalion competitions.
- Act as judges or referees during regimental competitions.

Note. See appendix A for more information about battalion and regimental competitions.

- Act as assistant instructors for regimental TCC courses under the supervision of the brigade CMTC master trainer.
- Advise battalion leaders on how to improve unit combatives programs.
- Provide platoon and company leaders resources for integrating combatives into unit mission training and situational training exercises.
- Teach Soldiers the fundamentals of striking and stand-up fighting.
- Act as primary safeties when Soldiers conduct sparring sessions.
- Secure the battalion’s combatives training equipment.
- Provide quality assurance and control for battalion and company master trainers.
- Assist brigade and battalion leaders in mitigating risk for institutional and non-institutional combatives training.
- Teach battalion and company trainers to develop training strategies.
- Act as primary instructors for all regimental TCC certifications.
- Act as assistant instructors for post CMTC mobile training teams (MTTs) from the USACC.
- Plan, conduct, and supervise quarterly or biannual brigade tournaments.
- Oversee standard and intermediate competitions.
- Supervise advanced and scenario competitions.
- Oversee battalion master trainers during standard competitions.

Note. See appendix A for more information about brigade tournaments, and standard, intermediate, advanced and scenario competition rules.

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- Serve as installation master trainers.
- Integrate combatives safely into unit mission training and situational training exercises.
- Act as points of contact for emerging doctrine changes originating from USACC.
- Ensure that Soldiers have opportunities to be champions at every level.

RESPONSIBILITIES OF INSTRUCTORS

2-24. Diligent effort is needed to perfect the various combatives techniques, to apply them instinctively, and to teach others to safely master them. The following instructor responsibilities are the core of planning and execution of combatives training:

- Seek maximum efficiency with minimum effort. Continually strive to reduce all unnecessary explanations, movement, and activity. Streamline the training without compromising content or safety.
- Stress cooperation and technical mastery. Promote suppleness and controlled aggression.
- Reinforce the details of each technique, and provide positive feedback when warranted. Use occasional humor to motivate Soldiers, but avoid degrading or insulting them.
- Ensure that a sufficient number of serviceable training aids are present.
- Ensure that training areas are well-maintained and free of dangerous obstructions.
- Ensure that unit instructors and assistant instructors are qualified and prepared before all training sessions. Conduct instructor training weekly to maintain a high skill level.
- Develop as many skilled combatives instructors for each unit as possible. Instructor-to-Soldier ratios should be one instructor per platoon in operational units and one instructor per 12 students in instructor certification courses. Encourage after-duty training and education for instructors.
- Require strict discipline of all Soldiers.

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SAFETY PRECAUTIONS

2-25. To prevent injuries, the instructor must consider the following safety precautions before conducting combatives training: Supervise all practical work closely and constantly. Never leave a group unsupervised.

- Familiarize Soldiers with each maneuver by providing thorough explanations and demonstrations before they attempt the moves.
- Do not allow Soldiers to get ahead of the instruction.
- Ensure that training partners offer some resistance, but allow maneuvers to be freely executed during the learning stages and while perfecting the techniques.
- Ensure that there is adequate space between Soldiers during all practical work (i.e., allow at least an 8-square-foot training space for each Soldier).
- Ensure that Soldiers empty their pockets and remove their jewelry and identification tags before training.
- Ensure that Soldiers understand physical and verbal tapping signals to indicate when to release the training partner during grappling and choking techniques.
- Make sure Soldiers warm up properly before practical work.

INSTITUTIONAL TRAINING

2-26. For the Combatives Program to be successful, there must be a systematic approach to training. Soldiers and leaders must be taught the appropriate elements at each stage of their career.

INITIAL MILITARY TRAINING

2-27. Combatives training, like marksmanship training, should begin at the earliest stage of a Soldier's career. Table 2-1 on page 2-6 contains information about combatives instruction during initial military training.

NONCOMMISSIONED OFFICER EDUCATION SYSTEM

2-28. Noncommissioned officers are the core of a unit's combatives training program, but only a few of these NCOs will have the opportunity to become certified combatives instructors. Table 2-2 on page 2-7 contains information about combatives instruction in the NCOES.

OFFICER EDUCATION SYSTEM

2-29. Platoon leaders through captain should have received initial combatives instruction before graduating from an officer training academy. Although officers are not the primary combatives instructors, training them in the art of combatives ensures that they can apply those skills to control a given situation. Table 2-3 on page 2-9 contains information about combatives instruction in the OES.

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Table 2-1. Combatives instruction during initial military training

| TRAINING | LENGTH OF INSTRUCTION | STUDENT REQUIREMENTS |
|--|--|--|
| Initial Military Training (IMT) | A minimum of 10 hours Training blocks consist of no more than 2 hours, with no more than 1 week between sessions. | <ul style="list-style-type: none"> • Receive at least 10 hours of instruction. • Exhibit understanding of the core competencies in Drills 1 through 3. • Participate in four 2-minute bouts. |
| Officer Candidate School (OCS) | | |
| Advanced Individual Training (AIT) | A minimum of 10 hours Training blocks consist of a minimum of 2 hours, with no more than 1 week between sessions. | <ul style="list-style-type: none"> • Receive at least 10 hours of instruction. • Sustain core competencies outlined in Drills 1 through 3. • Complete the basic combatives maneuvers, including— <ul style="list-style-type: none"> -Rear naked choke. -Bent arm bar. -Straight arm bar from the mount. -Straight arm bar from the guard. -Sweep from the attempted straight arm bar. • Participate in two 2-minute bouts. |
| One Station Unit Training (OSUT) | | |
| OCS enlisted and officer training | | |
| <p>Note. All bouts follow the basic combatives rules outlined in appendix A. See appendix B for information about Drills 1 through 3.</p> | | |

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Table 2-2. Combatives instruction in the Noncommissioned Officer Education System

| TRAINING | LENGTH OF COMBATIVES INSTRUCTION | STUDENT REQUIREMENTS |
|------------------------------|---|---|
| Basic Leader Course (BLC) | A minimum of 20 hours | <ul style="list-style-type: none"> • Receive at least 20 hours of instruction. • Sustain basic combatives skills and receive an introduction to scenario-based training. • Participate in four bouts. • Demonstrate (on command and with a partner) Drills 1 through 3 and the front and rear takedown. |
| Advanced Leader Course (ALC) | <p>A minimum of 20 hours</p> <p>If ALC allows for 40 hours of instruction, BCC C certification should be offered.</p> | <ul style="list-style-type: none"> • Receive at least 20 hours of instruction. • Gain the ability to teach basic combatives and develop scenario-based training, and understand standard competition rules. • Pass a hands-on, performance-oriented test on basic combatives techniques, including the following maneuvers: <ul style="list-style-type: none"> -Escape the mount, trap and roll. -Pass the guard. -Achieve mount from side control. -Arm push and roll to the rear mount. -Escape the rear mount. -Escape the mount, shrimp to the guard. -Scissors sweep. -Rear naked choke. -Cross-collar choke from the mount and guard. -Bent arm bar. -Straight arm bar from the mount. -Straight arm bar from the guard. -Sweep from the attempted straight arm bar. -Close the gap and achieve the clinch. -Front takedown to the mount. -Rear takedown. -Front guillotine choke. • Pass a written exam on the Combatives Program and standard combatives rules. • Conduct at least one scenario-based training exercise. <p>BCCI certification requires additional instruction, including—</p> <ul style="list-style-type: none"> • Receive 20 additional hours of training. • Perform the Option 3 drill. |

Note. All bouts follow the basic combatives rules outlined in appendix A. See appendix B for information about Drills 1 through 3 and the Option 3 drill.

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Table 2-2. Combatives instruction in the Noncommissioned Officer Education System (continued)

| TRAINING | LENGTH OF COMBATIVES INSTRUCTION | STUDENT REQUIREMENTS |
|--|----------------------------------|--|
| Senior Leader Course (SLC) | A minimum of 10 hours | <ul style="list-style-type: none"> • Receive at least 10 hours of instruction. • Exhibit understanding of the processes involved in the creation and operation of a safe and successful platoon combatives training program. • Conduct at least four bouts. • Pass a written exam on— <ul style="list-style-type: none"> -Combatives Program. -Standard competition rules. -Referee procedures. -Risk mitigation (emphasis on head trauma). -Controlling hazing. • Conduct written practical exercises for scenario-based training development and risk mitigation. |
| First Sergeants or Master Leader Course (MLC) | A minimum of 10 hours | <ul style="list-style-type: none"> • Receive at least 10 hours of instruction. • Exhibit understanding of the processes involved in supervising a company combatives program. • Pass a written test on— <ul style="list-style-type: none"> -Combatives Program. -Risk mitigation. -Controlling hazing. |
| US Army Sergeants Major Academy (USASMA) | A minimum of 6 hours | <ul style="list-style-type: none"> • Receive at least 6 hours of instruction. • Exhibit understanding of the levels of combatives training, and the administrative duties of planning training for a battalion- or higher-level combatives program. • Pass a written test on— <ul style="list-style-type: none"> -Combatives Program. -Risk mitigation. -Controlling hazing. |
| Note. All bouts follow the basic combatives rules outlined in appendix A. | | |

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Table 2-3. Combatives instruction in the Officer Education System

| TRAINING | LENGTH OF COMBATIVES INSTRUCTION | STUDENT REQUIREMENTS |
|---|----------------------------------|---|
| Basic Officer Leader Course II (BOLC II) | A minimum of 20 hours | <ul style="list-style-type: none"> • Receive at least 20 hours of instruction. • Exhibit familiarity with basic combatives and scenario-based training. • Participate in at least four combatives bouts. • Demonstrate (on command and with a partner) the following maneuvers: <ul style="list-style-type: none"> - Escape the mount, trap and roll. - Pass the guard. - Achieve mount from side control. - Arm push and roll to the rear mount. - Escape the rear mount. - Escape the mount, shrimp to the guard. - Scissors sweep. - Rear naked choke. - Cross-collar choke from the mount and guard. - Bent arm bar. - Straight arm bar from the mount. - Straight arm bar from the guard. - Sweep from the attempted straight arm bar. - Close the gap and achieve the clinch. - Front takedown to the mount. - Rear takedown. - Front guillotine choke. • Conduct at least one scenario-based training exercise. |
| <p>Note. All bouts follow the standard competition rules outlined in appendix A.</p> | | |

Chapter 2

Training

Table 2-3. Combatives instruction in the Officer Education System (continued)

| TRAINING | LENGTH OF COMBATIVES INSTRUCTION | STUDENT REQUIREMENTS |
|---|---|---|
| Basic Officer Leader Course III (BOLC III) | A minimum of 20 hours If BOLC III allows for 40 hours of instruction, BCC certification should be offered. | <ul style="list-style-type: none"> • Receive at least 20 hours of instruction. • Exhibit the ability to supervise a platoon combatives program, and familiarity with standard competition rules and scenario-based training. • Conduct at least four bouts. • Pass a hands-on, performance-oriented test on basic combatives techniques, including the following maneuvers: <ul style="list-style-type: none"> - Escape the mount, trap and roll. - Pass the guard. - Achieve mount from side control. - Arm push and roll to the rear mount. - Escape the rear mount. - Escape the mount, shrimp to the guard. - Scissors sweep. - Rear naked choke. - Cross-collar choke from the mount and guard. - Bent arm bar. - Straight arm bar from the mount. - Straight arm bar from the guard. - Sweep from the attempted straight arm bar. - Close the gap and achieve the clinch. - Front takedown to the mount. - Rear takedown. - Front guillotine choke. • Conduct at least one scenario-based training exercise. • Pass a written exam on the Combatives Program and standard combatives rules. • Receive a class on risk mitigation, with an emphasis on head trauma. BCC certification requires additional instruction, including— <ul style="list-style-type: none"> • Receive 20 additional hours of training. • Perform the Option 3 drill. |
| <p>Note. All bouts follow the standard competition rules outlined in appendix A. See appendix B for information about Drills 1 through 3 and the Option 3 drill.</p> | | |

Chapter 2

Training

Table 2-3. Combatives instruction in the Officer Education System (continued)

| TRAINING | LENGTH OF COMBATIVES INSTRUCTION | STUDENT REQUIREMENTS |
|---|----------------------------------|---|
| Captains Career Course (CCC) | A minimum of 20 hours | <ul style="list-style-type: none"> • Receive at least 20 hours of instruction. • Exhibit the ability to supervise a company combatives program. • Conduct at least two bouts. • Pass a hands-on, performance-oriented test on basic combatives techniques, including the following maneuvers: <ul style="list-style-type: none"> -Escape the mount, trap and roll. -Pass the guard. -Achieve mount from side control. -Arm push and roll to the rear mount. -Escape the rear mount. -Escape the mount, shrimp to the guard. -Scissors sweep. -Rear naked choke. -Cross-collar choke from the mount and guard. -Bent arm bar. -Straight arm bar from the mount. -Straight arm bar from the guard. -Sweep from the attempted straight arm bar. -Close the gap and achieve the clinch. -Front takedown to the mount. -Rear takedown. -Front guillotine choke. • Conduct at least one scenario-based training exercise. • Pass a written test on— <ul style="list-style-type: none"> -Combatives Program. -Risk mitigation. -Controlling hazing. <p>BCC certification requires additional instruction, including—</p> <ul style="list-style-type: none"> • Receive 20 additional hours of training. • Perform the Option 3 drill. |
| <p>Note. All bouts follow the standard competition rules outlined in appendix A. See appendix B for information about Drills 1 through 3 and the Option 3 drill.</p> | | |

Chapter 2

Training

UNIT TRAINING

2-30. Successful unit combatives programs continue to focus on the core techniques taught to Soldiers during their initial military training. Mastery of these moves—not exposure to a large number of techniques—will result in more proficient fighters.

SUCCESSFUL UNIT TRAINING PROGRAMS

2-31. For unit combatives training to be successful, it must become an integral part of the unit’s culture. Successful unit combatives programs have four characteristics:

- Training is for every Soldier.
- Set standards and hold people accountable for them.
- Motivate Soldiers and leaders to achieve excellence.
- Integrate combatives into mission training.

TRAINING IS FOR EVERY SOLDIER

2-32. For unit combatives training to be successful, combatives training must be for every Soldier and leader. Combatives remains a part of the Physical Readiness Training (PRT) program. It should be incorporated into daily PRT programs.

Note. All combatives competitions should be conducted in accordance with the rules established in appendix A.

SET STANDARDS

2-33. To be a useful tool for instilling the Warrior Ethos, combatives training must be for every Soldier. To ensure this, leaders should expect every Soldier to demonstrate proficiency in the basic combatives tasks and drills.

Note. See appendix B for more information about basic combatives tasks and drills.

MOTIVATE SOLDIERS

2-34. Every Soldier should be willing and able to fight when called upon. Commanders should hold regular competitions using the appropriate set of rules to motivate Soldiers to achieve excellence. Every Soldier— from fire team level to the entire Army—should know who the best fighter in their unit is.

Note. Unit competitions should be held periodically, using the appropriate rules for the size of the unit.

INTEGRATE INTO MISSION TRAINING

2-35. Only when a comprehensive skill development plan is in place can effective mission training begin. Skills must be put into context by scenario-based mission training focused on the unit’s mission-essential task list (METL).

2-36. Combatives training must address both the doctrinal requirements and the need to effectively respond to man-to-man contact in the contemporary operating environment (COE). Leaders should consider the following:

- Provide Soldiers with battle-focused training that includes engagements inside of the striking range.
- Conduct live training that allows Soldiers to work through the entire spectrum of force.
- Make Soldiers execute weapons transition, while engaged with the enemy.

PHYSICAL TRAINING

2-37. Once combatives drills have been formally trained, they should be incorporated into daily PT. This can be achieved by utilizing the last 10 to 15 minutes of the PT session to reinforce Drills 1 through 3 and conduct ground-sparring

Note. See appendix B for more information about drills.

Chapter 2

Training

**Every Day Mission-Essential Task List
Tasks Requiring the Use of Combatives
Skills**

1. A compliant subject at a traffic control point suddenly becomes non-compliant.
2. The battalion indicates that an intelligence subject must be captured. During the search and seizure mission, the lead man in the search team encounters hostile opposition and has a weapon malfunction.
3. When turning a corner in a bunker complex, an enemy grabs a Soldier's weapon and pins him to the wall.
4. In close quarters, an enemy attacks a Soldier under zero illumination.

- Promoting a fighting spirit.
- Instilling esprit de corps by giving exceptional Soldiers opportunities to become champions.

Note. See appendix A for more information about combatives competitions.

UNIT SUSTAINMENT TRAINING PROGRAM

2-38. Command emphasis is the key to the sustainment of a successful combatives program. Training sessions should be included regularly on unit training schedules at the company and platoon level.

TRAINERS

2-39. Regular sessions with trainers ensure the quality of training at the small unit level.

2-40. Primary trainers should be designated at all levels:

- Team trainers must be BCC certified.
- Platoon trainers must be TCC certified.
- Company through installation trainers must be CMTC certified.

2-41. Primary trainers should be of the appropriate rank (e.g., a platoon primary trainer should be a team or squad leader)

COMPETITION

2-42. Competition supports sustainment by—

- Encouraging Soldiers to further develop their fighting skills through continued training.

CONDUCT TRAINING

2-43. This section discusses various teaching techniques, training equipment, and training areas to use while conducting combatives training.

CRAWL—WALK—RUN APPROACH

2-44. Unit training should be conducted using the crawl—walk—run approach. The crawl—walk—run approach ensures a high skill level throughout the unit and minimizes the risk of training injuries by ensuring that Soldiers do not proceed to the next phase before they master the skills presented in the current phase. This approach may be applied on two levels:

- Initial training session.
- Unit combatives programs.

Initial Training Session

2-45. Instructors should use these phases during each initial training session.

Crawl Phase

2-46. During this phase, instructors introduce, teach, and demonstrate new techniques, and use execution by the numbers.

Walk Phase

2-47. During this phase, Soldiers practice the new techniques by the numbers, but with more fluid movement and less instructor guidance.

Run Phase

2-48. During this phase, Soldiers execute the techniques at combat speed with supervision.

Chapter 2

Unit Combatives Programs

2-49. Instructors use the crawl—walk—run approach when developing unit combatives programs.

Crawl Phase

2-50. During this phase, the instructor introduces combatives to the unit, emphasizing the basic ground-fighting and range-controlling techniques and gradually introducing stand-up fighting and fight strategy. This ensures that the movements are correctly programmed into the Soldier's subconscious after a few repetitions.

Walk Phase

2-51. In this phase, instructors introduce Soldiers to more advanced ground-fighting techniques and begin training on closing with the enemy to include contact front, contact rear, and react to hand-to-hand combat and takedowns. Soldiers engage in full sparring and competitive matches.

Run Phase

2-52. In this phase, Soldiers spar with strikes during ground-fighting, practice takedowns against an opponent with boxing gloves, and participate in scenario-driven training (e.g., training with multiple opponents or restrictive equipment). This phase produces troops able to perform techniques at full speed against a fully resistant opponent.

TALK-THROUGH METHOD OF INSTRUCTION

2-53. The talk-through method of instruction has two phases:

- Execution by the numbers.
- Execution at combat speed.

Execution by the Numbers

2-54. Instructors should use execution by the numbers to break techniques into step-by-step phases so that Soldiers can see the mechanics of each movement and technique. This teaching method allows the instructor to detail the sequence of each movement.

Note. Assistant instructors move freely throughout the training formation and make on-the-spot corrections.

EXAMPLE

On the command "PHASE ONE, MOVE," the attacker throws a right-hand punch to the defender's face. At the same time, the defender steps to the inside of the attacker, off the line of attack, and moves into position for the right Hip Throw.

Execution at Combat Speed

2-55. When the instructor is confident that the Soldiers being trained are skilled at executing a technique by the numbers, he has them execute it at combat speed. Executing movements at combat speed enables Soldiers to see a technique's effectiveness and allows them to develop a clear understanding of the principles behind the technique. This builds Soldiers' confidence in the technique and in their ability to perform it during an attack.

Note. Combat speed does not always mean very quickly. Speed requires space, and space often favors the defender.

EXAMPLE

"PASS THE GUARD AT COMBAT SPEED, MOVE." The Soldiers execute this technique from start to finish.

WARM-UPS

Note. See appendix B for more information about warm-up exercises.

2-56. Before combatives training, the Soldier must be prepared for the upcoming physical stress. To begin warm-up exercises, Soldiers rotate the major joints—neck, shoulders, hips, and knees—to their maximum range of motion.

Note. Range of motion should not be forced, but will expand naturally as Soldiers' joints become healthier.

Chapter 2

Training

DEMONSTRATIONS

2-57. Well-coordinated demonstration and professional demonstrators are crucial for successful Soldier learning. Unrehearsed presentations or inadequately trained demonstrators can immediately destroy the credibility of the training. Two methods are appropriate for demonstrating combative techniques based on the size of the group to be taught.

COMPANY-SIZE FORMATION OR LARGER

2-58. Using the talk-through method of instruction, the primary instructor talks the demonstrators through the techniques by the numbers, and then the demonstrators execute at combat speed so that Soldiers can see how to apply the move. The primary instructor is free to control the rate of the demonstration and to stress key teaching points.

PLATOON-SIZE FORMATION OR SMALLER

2-59. For smaller formations, the primary instructor can apply the technique being taught to an assistant instructor. The primary instructor talks himself through the demonstration, stressing correct body movement and key teaching points.

DRILLS

Note. See appendix B for more information about drills.

2-60. Training drills are conducted at the beginning of each training session, after the initial warm-up, to—

- Warm up.
- Reinforce the importance of dominant body position.
- Perfect Soldiers' basic skills.

2-61. During drills, Soldiers repeat basic positions, with a different detail emphasized during each session. This allows for the maximum use of training time by simultaneously building muscle memory, refining basic combatives techniques, and enabling Soldiers to warm up.

TRAINING LIVE

2-62. Live training is executing techniques in real time with a fully resistant opponent. In combatives, live training includes various types of sparring:

- Ground-sparring.
- Clinch-sparring.
- Standing strikes sparring.
- Full sparring.

GROUND-SPARRING

2-63. Ground-sparring is limited to ground-fighting techniques. In ground-sparring, fighters begin by facing each other on their knees. While sparring, both fighters display aggressiveness and superior technique.

2-64. Ground-sparring techniques consist of—

- Situational sparring.
- Limited sparring.
- Sparring with strikes.

SITUATIONAL SPARRING

2-65. In situational sparring, Soldiers assume a set position to work on a specific technique and reset upon meeting certain objectives. This type of training is key to developing well-rounded fighters.

EXAMPLE

Soldier A begins within Soldier B's guard. They spar until Soldier A passes the guard, is swept, or is submitted. In this example, Soldier A is working on his guard-passing skills, while Soldier B is working on his guard-passing defense.

LIMITED SPARRING

2-66. In limited sparring, Soldiers can use only a limited number of techniques (e.g., sparring for dominant position, submissions with chokes only).

Chapter 2

GROUND-SPARRING WITH STRIKES

2-67. When ground-sparring with strikes, open hand strikes should be used to the head, and closed fist strikes should be used to the body. The appropriate level of force should be used to promote safety and provide sufficient motivation to learn proper defense.

CLINCH-SPARRING

2-68. Clinch-sparring occurs at a close range. Clinch-sparring techniques consist of—

- Pummeling.
- Clinch with knee strikes.
- Sparring for takedowns.
- Clinch with knee strikes to a takedown.

Pummeling

2-69. Pummeling is sparring for dominant arm position only. In pummeling, Soldiers begin in a neutral position and fight for dominant position (e.g., double underhooks or neck control).

Clinch with Knee Strikes

2-70. While pummeling for dominant arm position, Soldiers try to create openings in their training partner's position to land controlled strikes with their knees. This allows Soldiers to better understand the actions involved in creating, exploiting, and defending openings.

Note. For best results, this type of sparring should be done lightly and for longer periods of time (twenty minutes or more is common).

CAUTION

When throwing knee strikes, fighters must take care to avoid injury to their training partners. All strikes should have no power behind them.

Sparring for Takedowns

2-71. Sparring for takedowns involves sparring from the standing position. This type of training will typically cause Soldiers to take a lower, crouching stance, which makes them vulnerable to knee strikes. Instructors should follow this training with clinch-sparring to reinforce good posture.

Notes. Sparring for takedowns can and should be conducted both with and without a uniform top.

Soldiers must be able to exploit an enemy's clothing, but should not become dependent on it.

Clinch with Knee Strikes to a Takedown

2-72. The clinch with knee strikes to a takedown combines all techniques of the clinch range. When using this technique, Soldiers begin with their arms in a neutral posture and pummel for dominant position, while effecting strikes and takedowns. This type of clinch-sparring is the most effective, but requires it a high level of skill and cooperation from both training partners.

STANDING STRIKES SPARRING

2-73. To be effective in standing strike sparring, fighters must be within striking range of the opponent to apply full-force strikes and kicks. Standing strikes sparring techniques consist of—

- Jab sparring.
- Body boxing.
- Boxing.
- Kickboxing.
- Kickboxing with takedowns.

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Training

Jab Sparring

2-74. Jab sparring is used as an introduction to sparring with strikes and remains important as a means of developing both a good jab and the ability to defend the jab.

Body Boxing

2-75. Usually used for beginners only, body boxing is boxing where only body punches are allowed. This type of sparring allows new fighters to become comfortable with sparring before punches to the head are allowed. Body boxing also forces fighters to become accustomed to exchanging blows with a partner at a close range.

Note. Allowing punches to the head too early can cause some fighters to become punch shy (overly cautious of being hit), which hinders their development.

Boxing

2-76. Boxing is sparring where only punches to the head and torso are allowed. Boxing is the foundation of striking skill development and should not be neglected.

CAUTION

Boxing is the most dangerous type of training in the combatives program. The key to safe and effective boxing is diligent supervision.

Kickboxing

2-77. Kickboxing is sparring where punches and kicks are allowed.

Note. Kicks should not be limited to the upper body, as is common in some martial arts.

Kickboxing with Takedowns

2-78. Kickboxing with takedowns can be done with boxing gloves, headgear, and no uniform top, or with no gloves and a uniform top (lack of gloves

makes grasping it possible). In the latter, open hand strikes to the head and closed fist strikes to the body are allowed.

FULL SPARRING

2-79. Full sparring combines all other methods of sparring. It is less useful than other forms of sparring because the more skillful or physically gifted fighter only trains in his best position and his partner in his worst.

CONTACT WEAPONS

2-80. Contact weapons are any weapons that require physical contact with the enemy for proper employment. The use of contact weapons is seldom a Soldier's principal means of defeating an enemy. Considering the wide variety of possible weapons, contact weapons training must not only focus on specific weapons, but on giving Soldiers the ability to utilize any weapon effectively.

Note. Training partners should have the same skill level. The opponent must attack with a speed that offers the fighter a challenge, but does not overwhelm him. Training should not be a contest.

2-81. As Soldiers progress in their training, contact weapons fighting techniques should merge with the other elements of hand-to-hand fighting to produce a Soldier who is capable of operating across the full spectrum of force.

2-82. Continued training leads to sparring; Soldiers become adept enough to understand the principles of weapon attacks, defense, and movements so they can respond freely when attacking or defending from any angle.

Note. For more information about contact weapons, see chapter 6.

TRAINING PADS AND OTHER PROTECTIVE EQUIPMENT

2-83. Dummy pads or martial arts striking pads are recommended to enhance training (figure 2-1 on page 2-19). They allow Soldiers to strike with full force, while protecting their training partners. Pads enable Soldiers to understand the effectiveness of striking techniques and to develop power in their striking.

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CAUTION

While safety equipment may protect the wearer from superficial wounds, such as a cut or a broken nose, it may not significantly reduce the risk of more serious injuries, such as brain trauma. In certain situations, it may make traumatic injury more likely by creating the illusion of safety.

2-84. Pads are recommended for knee strike and kicking drills. Ideally, pads are placed on the outside of the training partner's thigh, protecting the peroneal

Training

nerve. Pads can also be held against the forearms in front of the head and face to allow practice of knee or elbow strikes to this area.

2-85. Other protective equipment, such as shin guards and impact reduction suit, can also be useful to practice with improvised weapons.

Note. Training pads NSN No. 8465-01-589-8803) can be requisitioned through supply channels or purchased locally.

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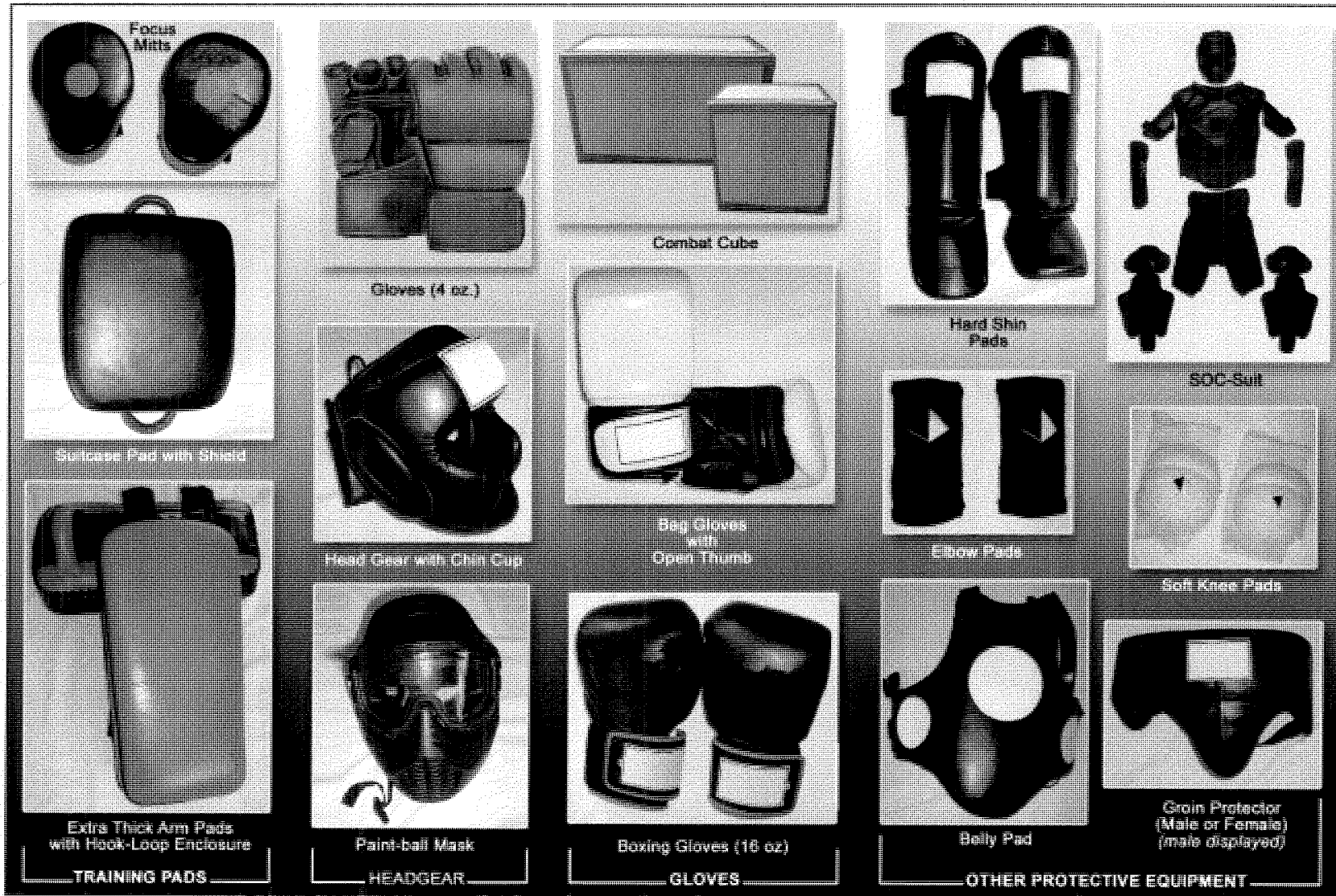


Figure 2-1. Protective equipment

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Training

TRAINING AREAS

Note. See appendix C for more information about training areas.

2-86. Combatives training can be conducted almost anytime or anywhere with little preparation of the training area; large, grassy outdoor areas free of obstructions are suitable for training.

2-87. Each Soldier should have an 8-square-foot (64 feet) training space. Instructors also pair Soldiers according to height and weight.

Note. When practicing throws or disarming techniques, Soldiers need twice the normal interval between ranks.

2-88. Formations used for PT may also be used for combatives training.

Note. If the extended rectangular formation is used, the first and third ranks should face the second and fourth ranks. Ensure that ranks are even in number so that each Soldier has a partner. See FM 7-22 for more information about formations used for physical training.

2-89. Combatives training equipment varies according to the skills being trained. Training equipment includes rubber knives, bayonet scabbards, air guns, and electrically charged knives or stun guns of no more than 100,000 volts (figure 2-2 on page 2-21).

2-90. When using combatives training equipment, instructors should adhere to the following safety guidelines:

- Ensure that the Soldier to be disarmed does not place his finger in the trigger guard during rifle and bayonet disarming.
- Make sure Soldiers keep scabbards on knives and bayonets firmly attached to rifles while learning bayonet disarming methods.
- Use electrically charged knives or stun guns of no more than 100,000 volts; bayonet scabbards; or rubber knives during knife disarming training.

CAUTION

To minimize weapon damage, limit weapon-to-weapon contact to half speed during training.

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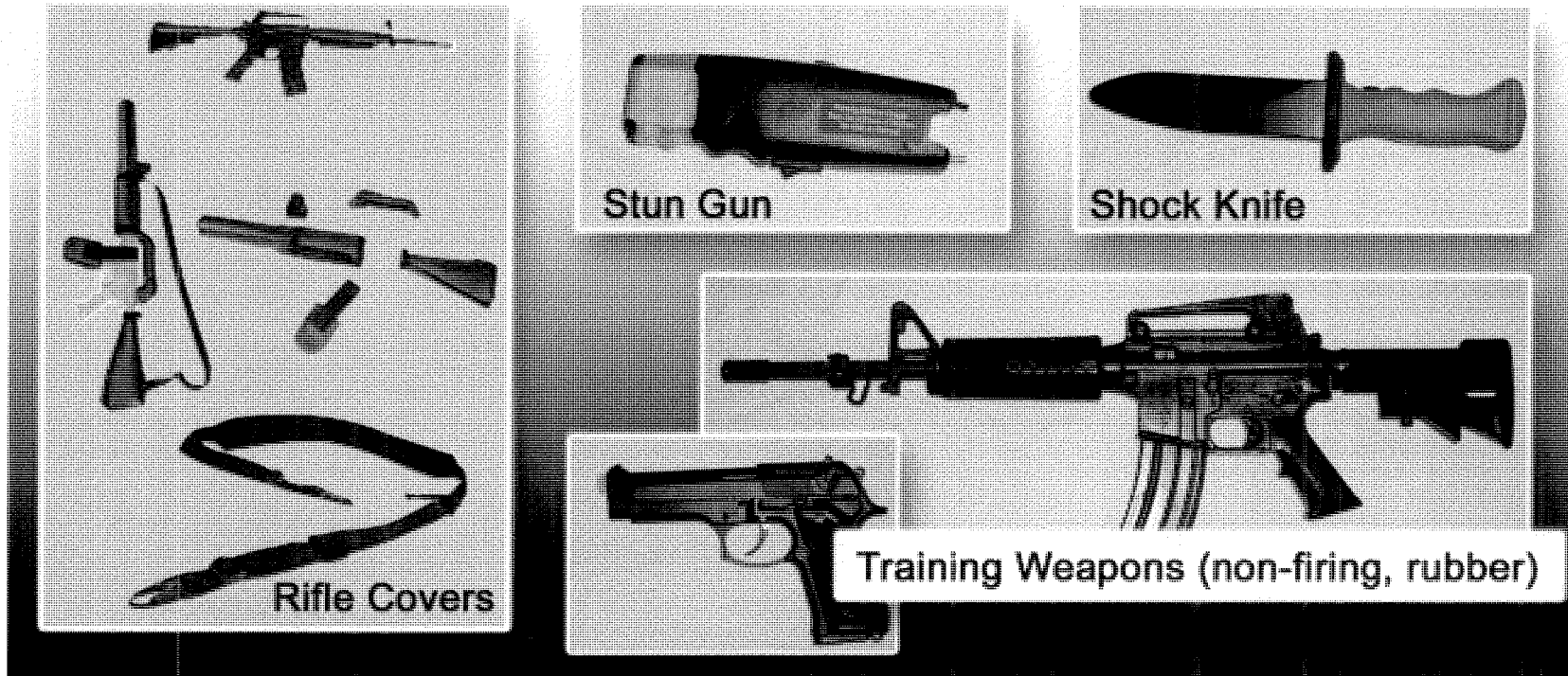


Figure 2-2. Training equipment

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Chapter 3

Basic Ground Fighting Techniques

Basic ground-fighting techniques build a fundamental understanding of dominant body position, and should be one of the primary focuses before moving on to more advanced techniques.

BASIC FIGHT STRATEGY

3-1. When two untrained fighters meet, they instinctively fight using the *universal fight* plan; they pummel each other with their fists until one of them receives enough damage that they cannot fight back effectively. Most forms of martial arts training are designed to make fighters better at executing this strategy. However, this approach has two drawbacks:

- One or both fighters are unarmed.
- Progress is solely dependent on the development of skill.
- Bigger, stronger, and faster fighters have a natural advantage. Developing enough skill to overcome these advantages requires more time than can be dedicated during institutional training.

3-2. The Combatives Program uses a more efficient approach, Fighting is taught in the context of strategy: the basic techniques serve as an educating metaphor to teach the *basic fight* strategy. Fighters learn to defeat an opponent by controlling the elements of the fight: *range, angle, and level*. The No.1 element of a fight is range. The Combatives Program has four phases:

- Projectile.
- Striking.
- Clinching.
- Grappling.

3-3. This chapter provides Soldiers with these basic techniques, taking them through the basic levels of defending against an unarmed enemy. According to the circumstances surrounding the conflict, fighters can use these techniques to disable an opponent or force the opponent to submit.

3-4. Combatives tasks are based on an array of conditions and are supported by graphics that depict a step-by-step process.

CREATE SPACE

3-5. When in combat, a Soldier's primary goal should be to establish space between him and his attacker. He must create enough space to transition to his primary weapon.

MAINTAIN SPACE

3-6. When in combat, Soldiers may be unable to create enough space and transition to their primary weapon. If unable to do so, they may need to maintain space to transition to their secondary weapon or close the distance, gain dominant body position and finish the fight.

CLOSE THE DISTANCE

3-7. When training Soldiers, the primary goal should be instilling the courage to close the distance. The willingness to close with the enemy is a defining characteristic of a Warrior, and the ability to do so against an aggressive opponent is the first step in using range to control a fight.

GAIN DOMINANT POSITION

3-8. An appreciation for dominant position is fundamental to becoming a proficient fighter; it ties together what would otherwise be a list of unrelated techniques.

FINISH THE FIGHT

3-9. If a finishing technique is attempted from dominant position and fails, the fighter can simply try again; if a finishing technique is attempted from any other position and fails, it will usually mean defeat.

Chapter 3

GROUND GRAPPLING

3-10. Ground grappling provides a sound basis for more difficult techniques. Ground grappling is also where technique can be most easily used to overcome size and strength. Before any time is spent on the more complex techniques presented later in this manual, the fighter must master these basics.

BASIC TECHNIQUES

3-11. The basic techniques provide an introduction to a systematic method of ground fighting.

3-12. Basic techniques include—

- Stand in base/stand in base with primary weapon.
- Fighting stance.
- Opposing thumbs grip.
- Wrestler's grip.
- Thumb/thumbless grip.

DOMINANT BODY POSITIONS

3-13. Before any finishing or disabling technique can be applied, the Soldier must first gain and maintain dominant body position. The leverage gained from dominant body position allows the fighter to defeat a stronger opponent.

3-14. Dominant body positions include—

- Rear mount.
- Mount.
- Guard.
- Side control.

BASIC BODY POSITIONING MOVES

3-15. To perform basic body positioning moves, the ground fighter must have a feel for the dominant body positions and how they relate to each other.

3-16. Basic body positioning moves include—

- Arm trap and roll.
- Pass the guard.
- Achieve the mount from side control.
- Arm push and roll to the rear mount.

Basic Ground Fighting Techniques

- Escape the rear mount.
- Escape the mount, shrimp to the guard.

BASIC FINISHING MOVES

3-17. Once the fighter has achieved the dominant body position, he can attempt to finish the fight secure in the knowledge that, if an attempt fails— as long as he maintains dominant body position—he may simply try again.

3-18. Basic finishing moves include chokes and joint locks. These include—

- Rear naked choke.
- Cross-collar choke from the mount and guard.
- Bent arm bar from the mount and side control.
- Straight arm bar from the mount.
- Straight arm bar from the guard.
- Guillotine choke.

CHOKES

3-19. Chokes are the most effective method of disabling an opponent. There are two kinds of chokes: blood and air.

- Blood chokes attack the blood supply to the brain.
- Air chokes attack the air supply. These chokes take longer to cause unconsciousness.

JOINT LOCKS

3-20. Joint locks are designed to damage a given joint, such as the shoulder or elbow, and involve applying slow, steady pressure to either break the joint or force the opponent to submit.

TAPPING PROCEDURES

3-21. The safety of these procedures is dependent on the proper use of tapping. Tapping is a prearranged signal for submission.

3-22. A Soldier can submit in two ways:

- He can "tap" his opponent or the ground two or more times.
- He can submit verbally.

Chapter 3

Note. Any straining or grunting noise should be treated as a tap. The sound a person makes when trying to lift a heavy object is very similar to the sound he makes when he is injured.

WARNING

To prevent injury, a Soldier should NEVER hold a technique after his training partner has tapped.

BASIC SWEEPS

3-23. Sweeps can be used to reverse positions with the opponent. They are techniques that transition the fighter from beneath a guard to a mount, where he can apply attacks more readily.

3-24. Basic sweeps include—

- Scissors sweep.
- Sweep from the attempted straight arm bar.

CLINCH FIGHTING

3-25. For a fighter to control a stand-up fight, he must control the range between him and his opponent. When training Soldiers, leaders must recognize that stand-up fighting skills are difficult to master in a short amount of time. Trainers should compare takedowns to the basic tackle.

Basic Ground Fighting Techniques

OPTION 3 DRILL

3-26. The clinch is the optimum way to hold an opponent after a fighter has successfully closed the distance, but has not yet executed a successful takedown.

3-27. BCC clinch-fighting moves:

- Close the distance.
- Modified seatbelt clinch.
- Rear clinch.
- Double underhooks clinch.
- Wall clinch.
- Post, frame, hook and head control.

Note. The Modern Army Combatives Course training support package (TSP) provides more information about the Option 3 drill. This TSP is available at <https://www.benning.army.mil/Armor/316thCav/129/Combatives>.

BASIC TAKEDOWNS

3-28. All BCC throws and takedowns assume that the fighter has already achieved the clinch.

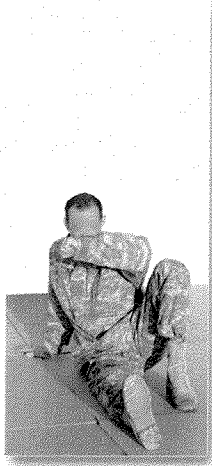
3-29. Basic takedowns include—

- Front takedown.
- Rear takedown.
- Hip check turndown.
- Pull away from the knee inside sweep.
- Pull towards the knee inside hook.

GROUND GRAPPLING—BASIC TECHNIQUES

STAND IN BASE

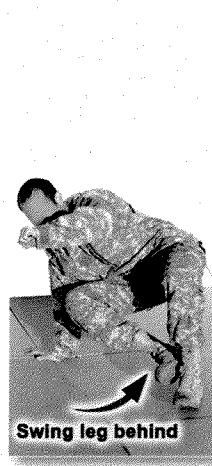
Stand in base allows the fighter to stand in the presence of an opponent or potential opponent without compromising his base and making himself vulnerable to attack. Leaders should reinforce the principles of body movement inherent in this technique every time a fighter stands up.



1) Sit like a fighter. Place your dominant hand behind you on the ground to provide a base. Bend your non-dominant leg at the knee. Post your foot on the ground. Bend your non-dominant arm at the elbow, and place the elbow near the knee of your non-dominant leg, with the palm of your hand in front of your head facing your opponent to defend blows. Keep the striking foot of your dominant leg parallel to the ground. Use it to kick your opponent to create space to stand.



2) Placing your weight on your dominant hand and non-dominant foot, pick up the rest of your body.



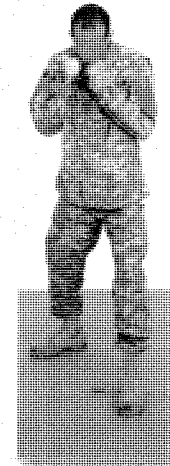
3) Swing the leg between the two posts.

WARNING
NEVER bend over at your waist. This will allow your opponent to strike your face with knees and kicks.



4) Place the foot behind your dominant hand.

Note. Keep the knee behind your same-side arm, as shown.

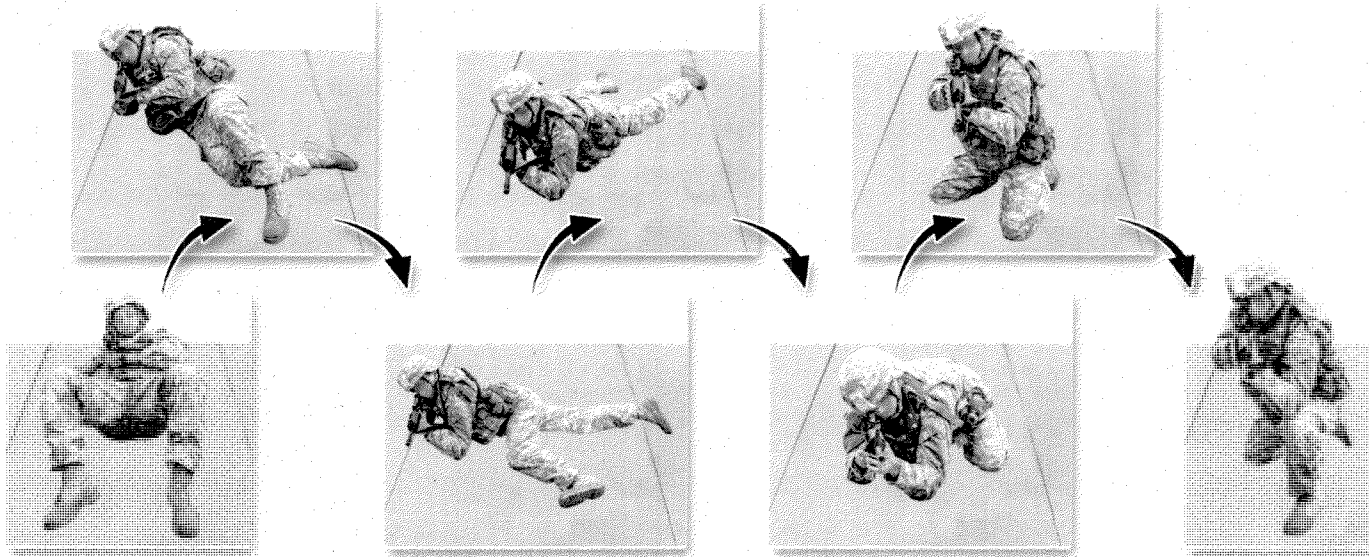


5) After placing your weight on both feet, lift your hand from the ground, and assume a fighting stance.

GROUND GRAPPLING—BASIC TECHNIQUES

STAND IN BASE WITH PRIMARY WEAPON (PRONE POSITION)

During an altercation, a Soldier might find himself on the ground. He must quickly stand up, while maintaining positive identification on the enemy and positioning his weapon to place accurate fire upon his enemy. The stand in base with a primary weapon is the technique of choice to do so. This technique can be performed from the prone position.

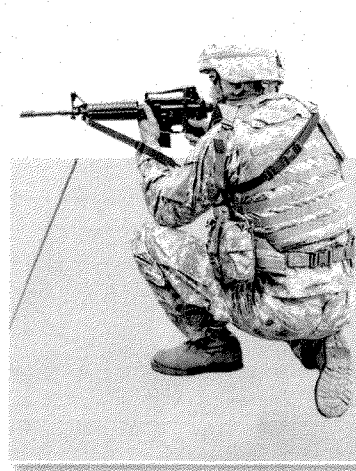


- 1) From the supine position, rotate your body to lie on your firing shoulder using the Shrimp technique.
- 2) Thread your dominant leg under your other leg. You should now be lying in the prone unsupported firing position.
- 3) Bring your knees toward your head one at a time to raise your upper body off the ground. Post your non-dominant foot on the ground to move yourself to the kneeling firing position, ready to engage a target with your primary weapon.
- 4) Push off the posted leg (shin box motion), and move to a standing firing position.

GROUND GRAPPLING—BASIC TECHNIQUES

STAND IN BASE WITH PRIMARY WEAPON (SUPINE POSITION)

During an altercation, a Soldier might find himself on the ground. He must quickly stand up, while maintaining positive identification on the enemy and positioning his weapon to place accurate fire upon his enemy. The stand in base with a primary weapon is the technique of choice to do so. This technique can be performed from the supine position.



- 1) When you fall and land on your back, sit up immediately, and spread your feet and knees so that you have clear sight of the enemy. Slightly bend at your knee to counter balance your weight, and point your weapon at the enemy.
- 2) Rotate the heel of your dominant leg toward the center of your body, and transition your weight forward over the same leg to move to a seated firing position.
- 3) Thrust your hips forward to move to a kneeling firing position.
- 4) Push off with the posted foot (shin box motion) to move to a shooter stance.

Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC TECHNIQUES

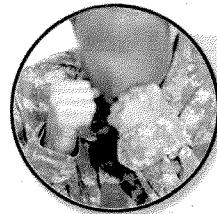
FIGHTING STANCE

The fighting stance allows the Soldier to assume an offensive posture conducive to attack, while still being able to move and defend himself. The fighting stance is not only a platform for unarmed fighting; it can also be used for various weapons, from close-range contact weapons to projectile weapons.

Hold your hands high, with the palms facing each other in a loose fist. Keep your line of sight just above the hands.

Keep your chin tucked. Look just beneath your eyebrows at your opponent. Block the side of your face with your lead shoulder

Place your lead foot 12 to 18 inches in front of your trail foot, and turn your lead foot about 15 degrees inward. Position your feet approximately shoulder-width apart. Turn your trail foot about 45 degrees outward to provide stability in all directions. Keep the heel of your trail foot off the ground, and carry your body weight on the balls of your feet.



Eyes on the opponent, hands held high, and chin tucked



Body weight on the balls of the feet

Elbows tucked

Lead knee bent and pushed forward

Turn your waist slightly so that the lead hip is facing your opponent, but keep your head and shoulders above your hips.

Keep your elbows tucked into your body to cover the sides of your torso; they should not fly out horizontally while punching. Hold your forearms perpendicular to the ground so that your elbows are positioned over your knees.

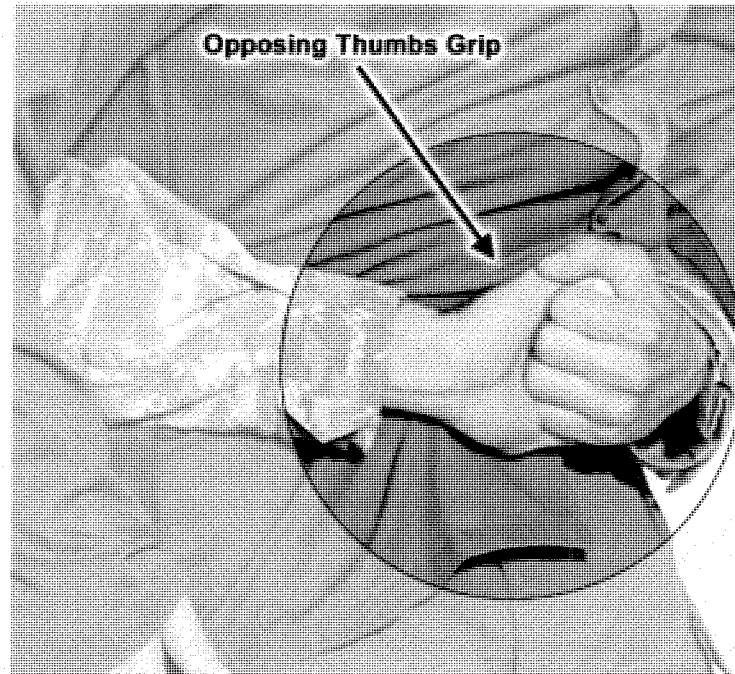
Bend your lead knee, and push it forward so that your knee is directly above your toe. Bend your trail knee slightly.

Note. The lead foot is the non-dominant foot. The trail foot is the dominant foot.

GROUND GRAPPLING—BASIC TECHNIQUES

OPPOSING THUMB GRIP

The fighter uses the opposing thumb grip when his opponent may be able to attack his grip by peeling back his fingers; for example when his hands are positioned to the front of his opponent.



Grasp hands tightly together, with one thumb facing up and other facing down. Tuck both thumbs tightly.

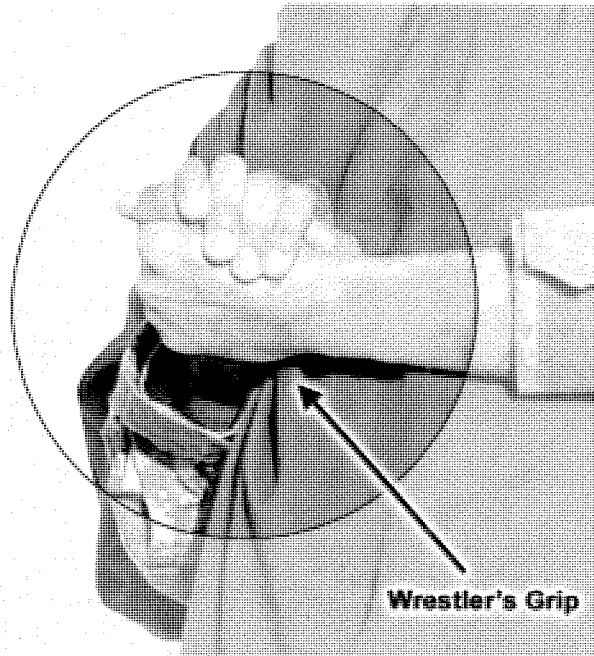
Note. DO NOT interlock your fingers. This may allow your opponent to break your fingers or escape the lock.

Keep all fingers together, and use each hand as one unit

GROUND GRAPPLING—BASIC TECHNIQUES

WRESTLER'S GRIP

The fighter never uses the wrestler's grip when his hands are positioned in front of his opponent.



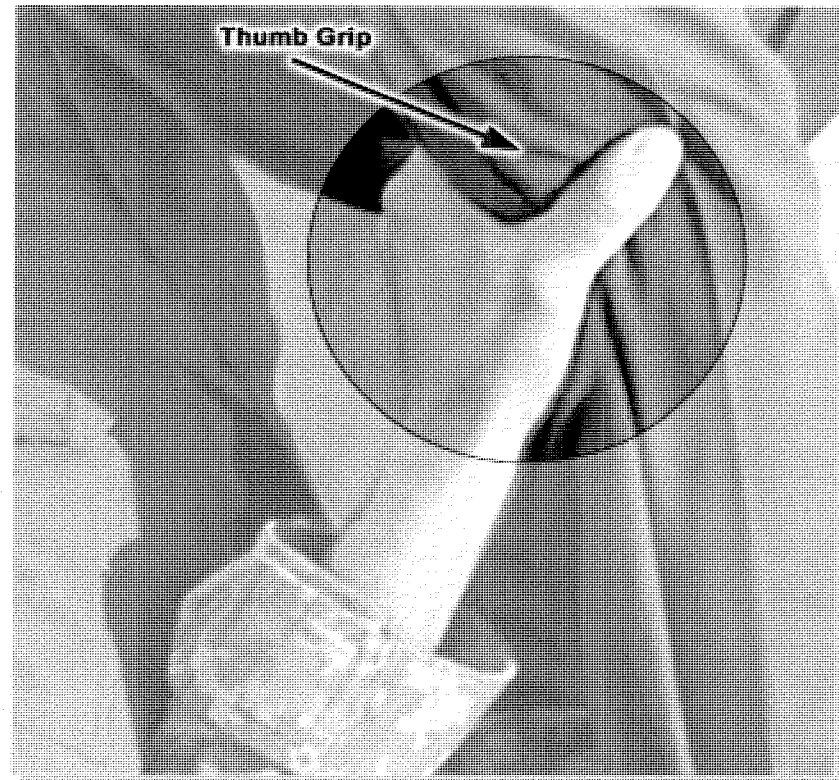
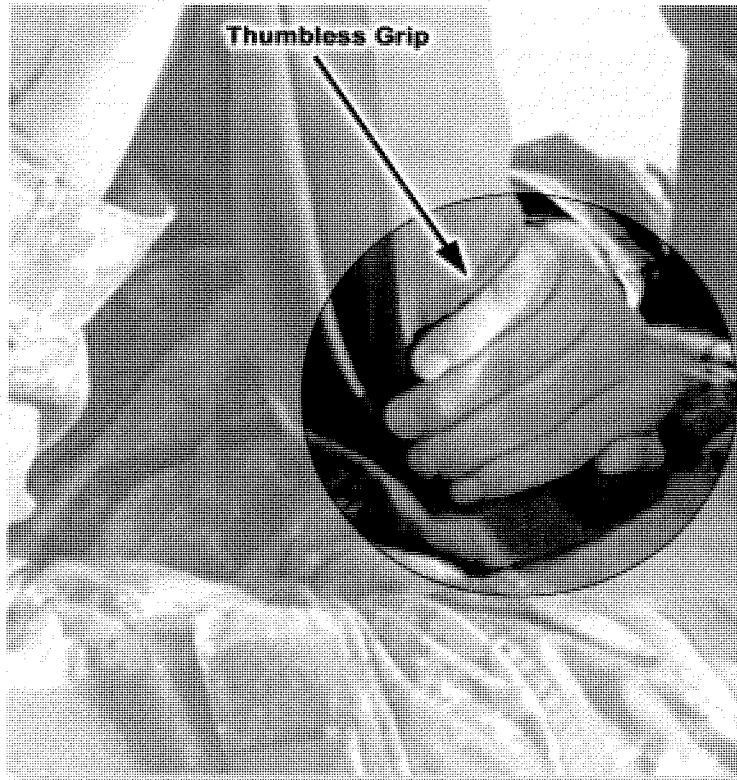
Hold hands together as though clapping.
Tuck both thumbs.

Tuck the bottom thumb to prevent your
opponent from escaping.

GROUND GRAPPLING—BASIC TECHNIQUES

THUMB/THUMBLESS GRIP

The thumbless grip is very strong in the direction of the fingers and when clamping against something, such as a fighter's chest. The thumb grip can provide more control, but is very weak in the direction of the thumb and fingertips.



Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—DOMINANT BODY POSITIONS

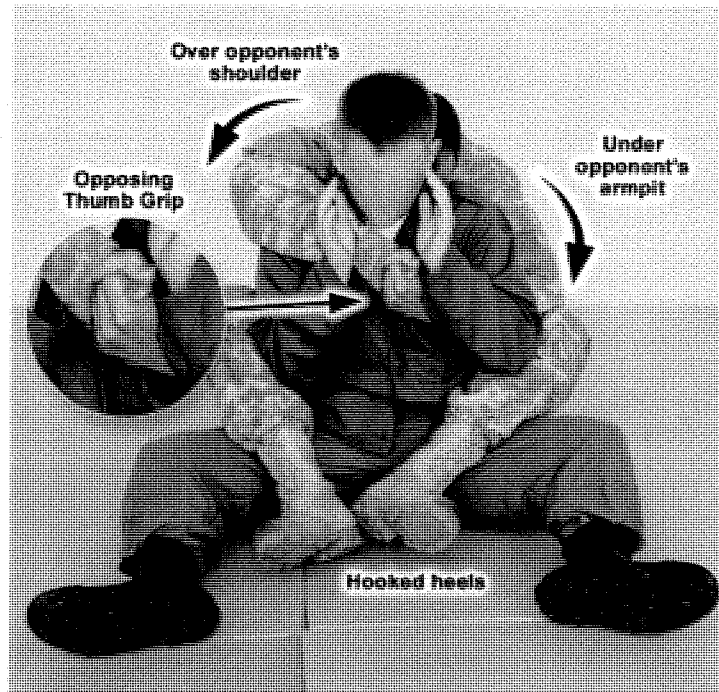
REAR MOUNT

The rear mount gives the fighter the best control of the fight. From this position, it is very difficult for the opponent to defend.

Place one arm under your opponent's armpit and the other over his opposite shoulder.

Clasp your hands in an opposing thumb grip.

Wrap both legs around your opponent, with your heels "hooked" inside his legs.



Note. Keep your head tucked to avoid head butts.

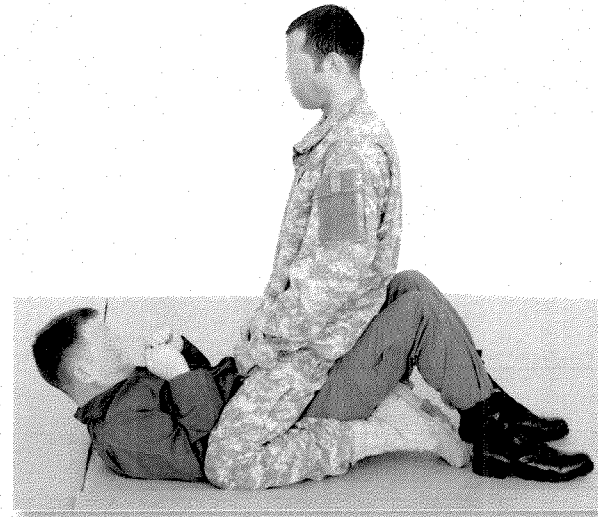
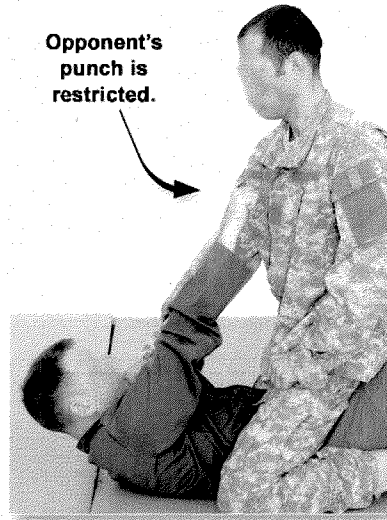
WARNING
When in the rear mount, do not cross your feet; this provides your opponent an opportunity for an ankle break.

GROUND GRAPPLING—DOMINANT BODY POSITIONS

MOUNT

The mount allows the fighter to strike the opponent with punches, while restricting the opponent's ability to deliver effective return punches. The mount provides the leverage to attack the opponent's upper body with chokes and joint attacks.

Note: The mount allows the fighter to strike the opponent with punches, while restricting the opponent's ability to effectively deliver return punches.



Position your knees as high as possible toward the opponent's armpits.

WARNING
Place your toes in line with or inside of your ankles to avoid injuring your ankles when your opponent attempts to roll you over.

TRAINING INSTRUCTIONS

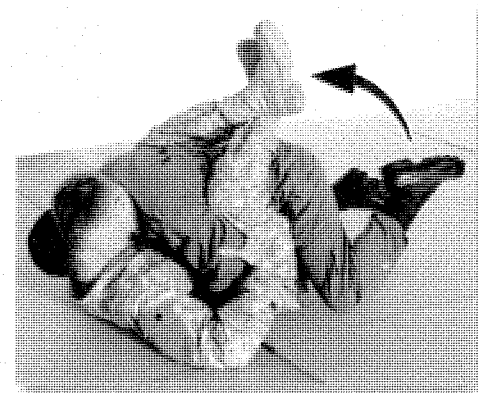
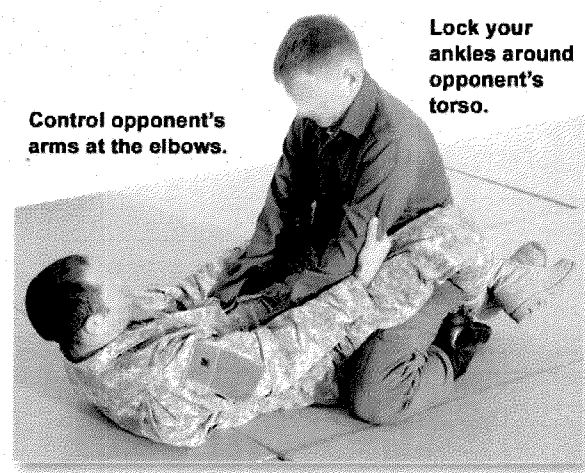
When practicing this position, the Soldier assuming the role of the opponent should position himself using the instructions below:

- 1) Lie on your back, bend your knees, and post both feet on the ground.
- 2) Pull your elbows tightly into your sides, and keep them on the ground to prevent your opponent from assuming a high mount.
- 3) Hold your head off of the ground to prevent secondary impact concussions from strikes.
- 4) Keep your hands up to protect your head.

GROUND GRAPPLING—DOMINANT BODY POSITIONS

GUARD

A fighter never wants to be under his opponent; the guard enables him to defend himself and transition off of his back into a more advantageous position. The guard allows the bottom fighter to exercise a certain amount of control over the range by pushing out or pulling in his opponent with his legs and hips. With skill, the bottom fighter can defend against strikes and even apply joint locks and chokes.



The Guard allows the bottom fighter to exercise a certain amount of control over the range by pushing out or pulling in his opponent with his legs and hips.

TRAINING INSTRUCTIONS

When practicing this position, the Soldier assuming the role of the opponent should position himself using the instructions below:

- 1) Assume a good posture by establishing a wide base with your knees, keeping your toes inside of your ankles to prevent breaking them if you are swept.
- 2) With your elbows turned inward, place your hands on your opponent's hips maintaining a good upright defensive posture.

WARNING

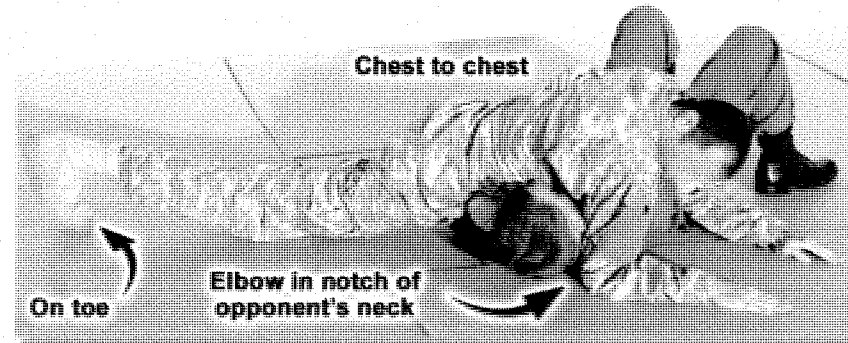
The Soldier defending against the guard must keep his toes inside of his ankles to prevent breaking them if he is swept.

GROUND GRAPPLING—DOMINANT BODY POSITIONS

SIDE CONTROL

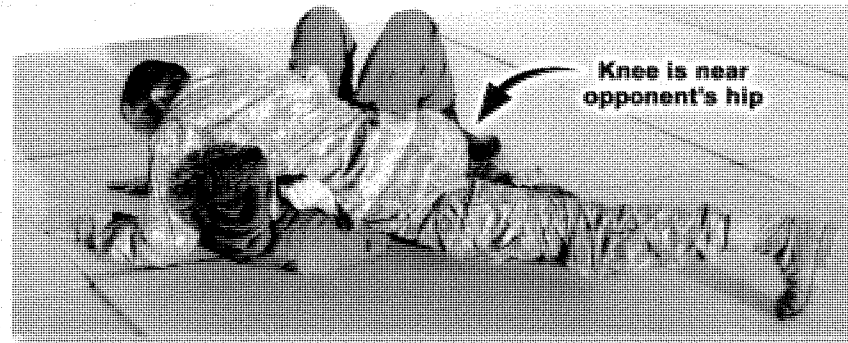
Although the side control position is less dominant, it allows the fighter to hold his opponent down and inflict damage, and if reversed, allows the fighter to avoid being positioned underneath his opponent. Further, side control is a transitioning position; a fighter can strike or submit an opponent while in this position.

Keep the leg closest to your opponent's head straight, and bend the other leg so that the knee is near your opponent's hip.



Keep your head turned away to avoid knee strikes.

Place your elbow on the ground in the notch created by your opponent's head and shoulder (elbow notch). Position your other hand palm down on the ground under the opponent's near-side hip.



GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ARM TRAP AND ROLL

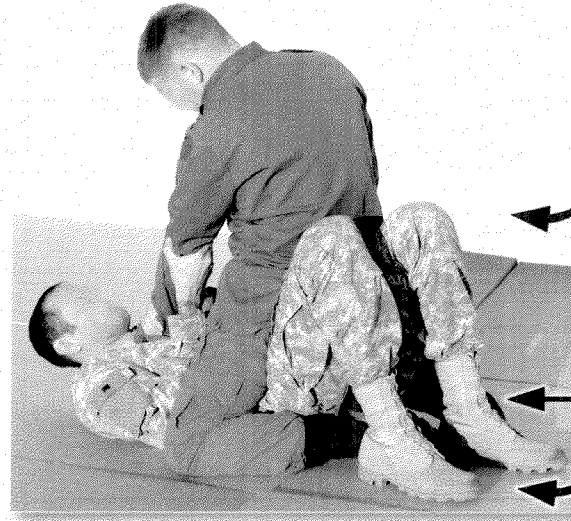
A fighter applies the arm trap and roll when his opponent secures the mount and invests his hands or arms into a choke. The non-dominant fighter must remain relaxed and fight the position, but not focus his energy on attempting to defeat the submission until a better position has been achieved.

Note. Conduct this technique when you are on your back on the ground and your opponent is sitting on top of you with both knees and feet on the ground near your ribs.



Thumbless Grip around opponent's wrist

Elbows in and on the ground



Align opposite-side knee with center of opponent's spine.

Raise knees up by sliding feet back.

Foot on the same side as the trapped arm is planted outside opponent's foot.

- 1) Trap one of your opponent's arms. Wrap one hand around his wrist with a thumbless grip, and with the other, grab above his elbow notch with your thumb on the outside. Pull your elbow to the ground if possible.

- 2) Plant the foot on the same side as the trapped arm on the ground outside of the opponent's foot.
- 3) Align your opposite-side knee with the center of your opponent's spine.

Note. Keep your elbows in and on the ground, even while your opponent is choking you. Raising your arms will allow your opponent to secure a high mount or arm lock.

Note. Align your opposite-side knee with the center of your spine to avoid the grapevine.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES
ARM TRAP AND ROLL (continued)

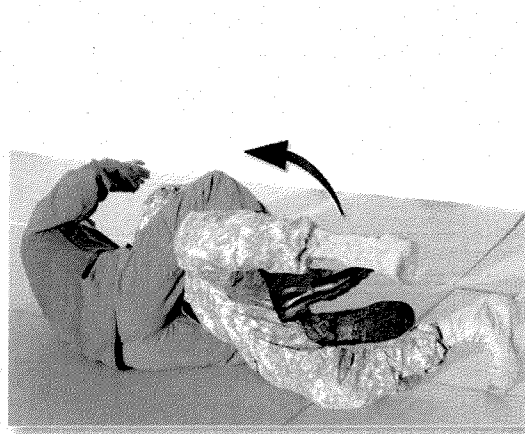
TRAINING INSTRUCTIONS

WARNING

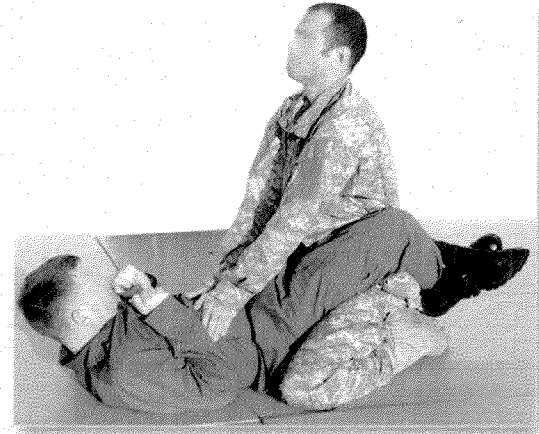
When performing this technique, the top fighter must position his toes in line with or inside his ankles to prevent severe ankle injury.



4) Thrust upward with your hips, driving your opponent's head to the ground.



5) Roll your opponent over, to the side that is trapped.



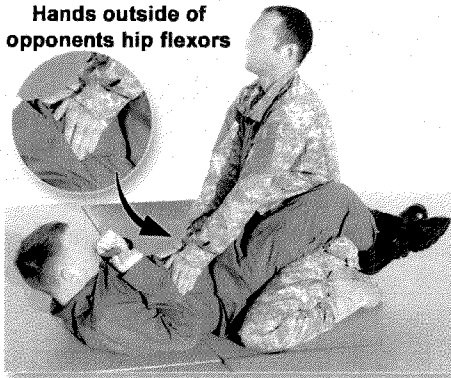
6) Secure good posture in the guard, control your opponent's hips.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

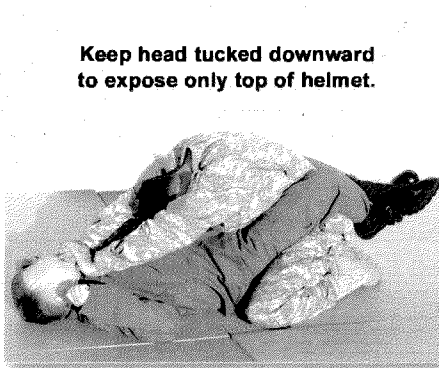
PASSING THE GUARD

When locked inside of his opponent's guard, a fighter cannot finish the fight as quickly or efficiently as he can from a more dominant body position. Additionally, his opponent can attack him with strikes, submissions, and sweeps. Often, a fighter will attempt to strike or submit the opponent from within the guard, further setting up these attacks.

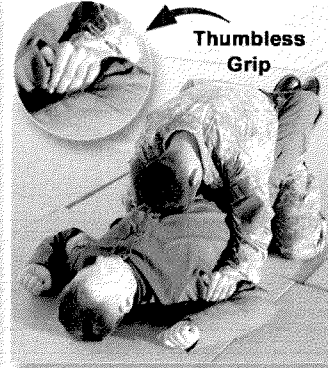
Hands outside of opponents hip flexors



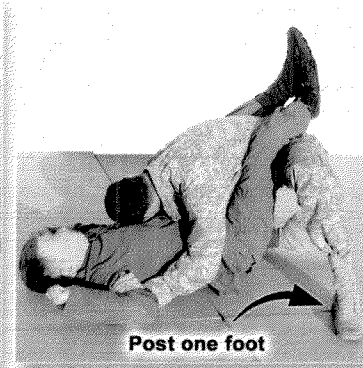
Keep head tucked downward to expose only top of helmet.



Thumbless Grip



Post one foot



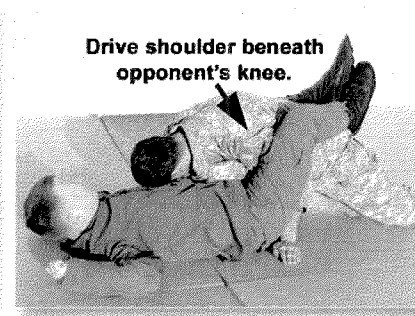
- 1) Assume a good posture by establishing a wide base with your knees, keeping your toes in line with or inside of your ankles. Place your buttocks on your heels. Keep a straight waist to avoid having your posture broken. Keep your elbows tight and reach your hands down to control your opponent's hips. Place your hands outside of your opponent's hip flexors, fingers point out.
- 2) Turn your fingers inward, and drive your hands to your opponent's chin, placing your face in his sternum. This position exposes only the top and back of your head to strikes.
- 3) Move your arms out to control your opponent's biceps. Roll your hands back, cup them with a thumbless grip.
- 4) Choose a side to pass your opponents guard. Post that same foot out in order to create space for your hand to slide between you and your opponent.

Note. Never use a thumb grip, as your opponent can attack with a wrist lock.

Note. Your opponent will often attempt to drag both of your arms to one side of your body to force you to submit or get behind you.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

PASSING THE GUARD (continued)



5) Release your same-side grip. Drive your hand (with a knife edge) through the opening. Turn your head and eyes in the opposite direction to prevent blows to the face from the arm you no longer have secured.

6) Place your hand on the ground.

7) Place your knee on the ground. Scoot the same-side leg back, and drive your shoulder beneath your opponent's knee.

8) Bring both knees together at your opponent's tailbone.

Note. Maintain a good straight posture with your waist to prevent your opponent from choking you with his legs.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

PASSING THE GUARD (continued)

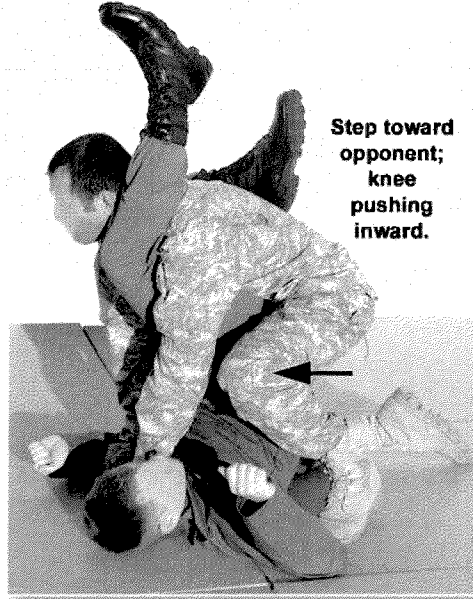
Pull opponent.



- 1) Maintain good posture by keeping your head above the knee. Walk or pull your knees under your opponent's hips.

Note. Maintain a good straight posture with your waist to prevent your opponent from choking you with his legs.

Step toward opponent; knee pushing inward.



- 2) With the same-side leg you have trapped step toward your opponent's same-side armpit, pushing with your knee inward to control your opponent's hip. Reach your hand that's securing your opponent's leg across and secure your opponent's collar, thumb on the inside, fingers on the outside.

Note. Drive your hips into your opponent, and maintain this pressure throughout the remainder of this move to prevent your opponent from escaping.

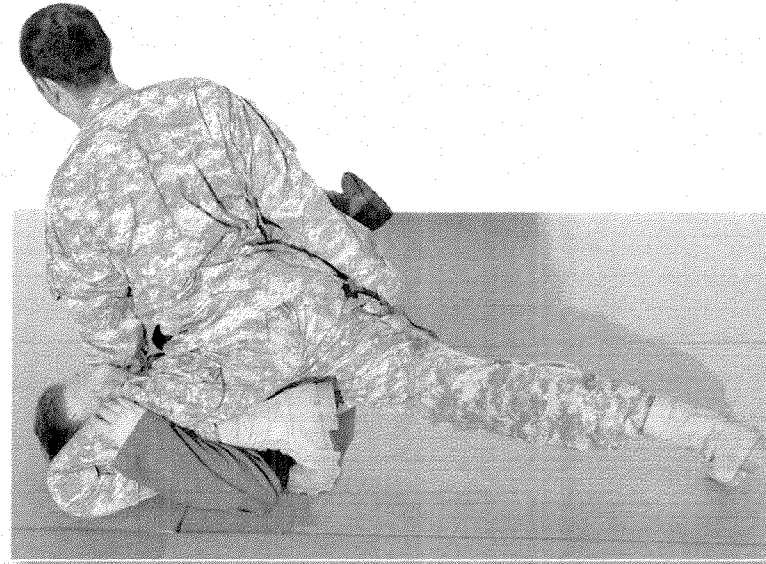
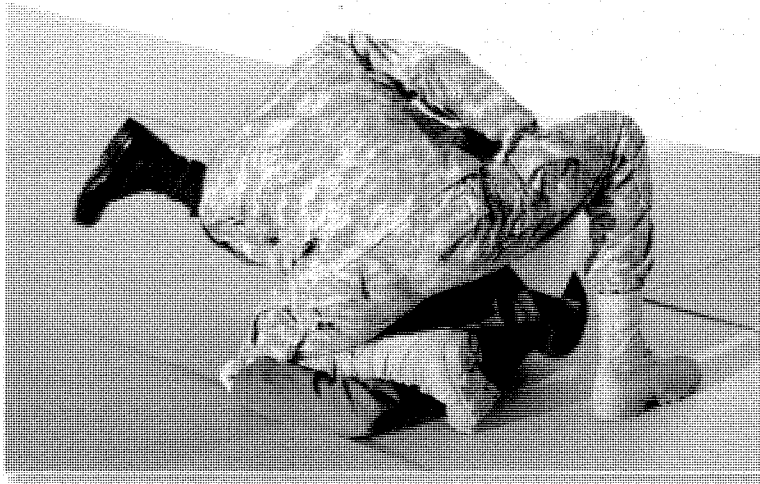
Drive knee to ground; push opponent upward.



- 3) The opposite arm releases the bicep. With fingers extended and joined reach through the opponent's legs and grasp the belt line or waist, lift his legs over your head. Drive your knee to the ground, toward your opponent's ear to prevent the overhead sweep. Position yourself perpendicular to your opponent. Post your trail foot. Drive your opponent's hips upward and keep them in place by resting his hips on your trail knee.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

PASSING THE GUARD (continued)



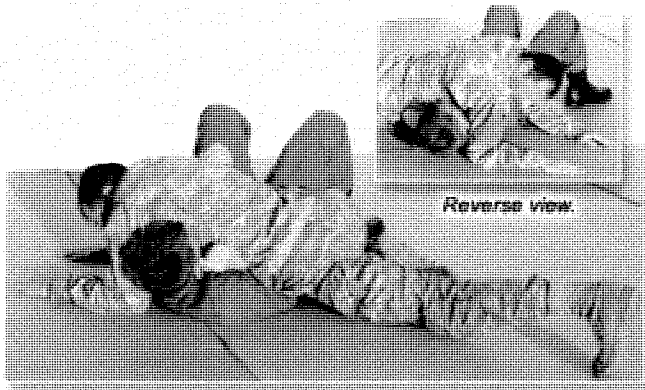
- 1) Continue to drive your opponent's hips forward allowing his knees to recoil around your head.
- 2) Assume good side control.

Note. Maintain tight body contact when transitioning from the guard to side control to limit your opponent's ability to compose guard.

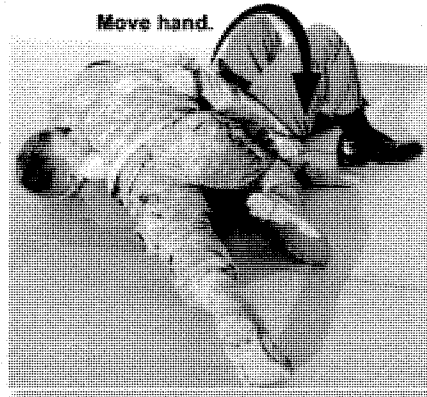
GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ACHIEVE THE MOUNT FROM SIDE CONTROL

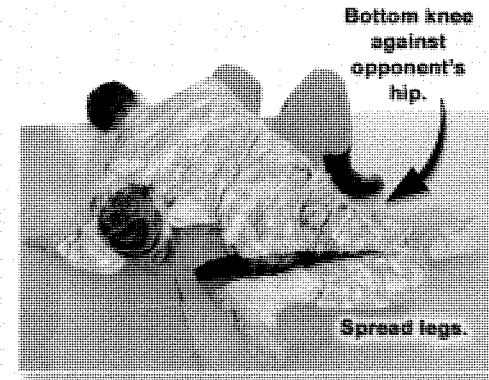
Fighters often move from the side control to the mount or rear mount, where they can land more effective strikes and submissions.



1) Achieve good side control.



2) Take the arm that is controlling the far-side hip and place that hand on the ground controlling the near-side hip replacing the knee. Be aware of your opponent's knees, assure that you look down or away from the knees to avoid strikes.

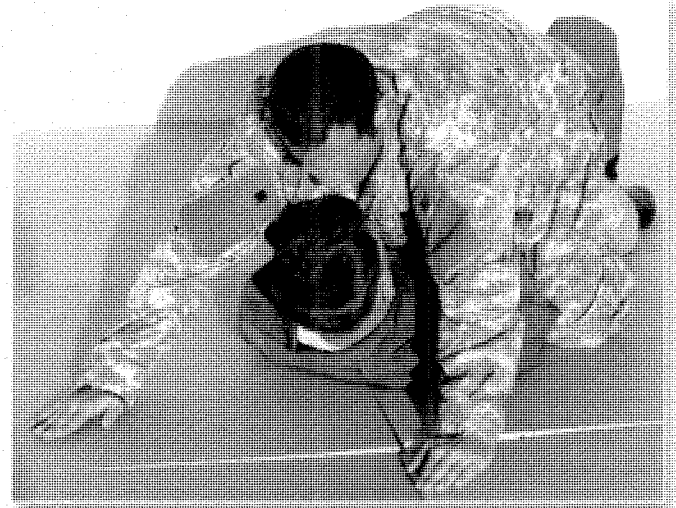


3) Sit through and place your bottom knee against the hip. Spread your legs to avoid being thrown backward. Use the hand that was securing your opponent's hip to control his legs.

Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES
ACHIEVE THE MOUNT FROM SIDE CONTROL (continued)



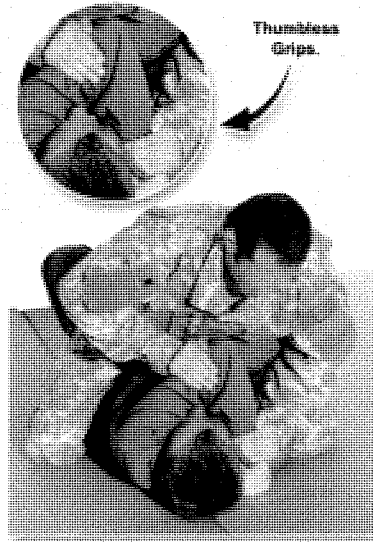
- 1) Swing your far-side leg over his body placing the knee and foot on the ground. Release his knees once both of your feet and knees are on the ground.
- 2) Use both your hands to help base out and secure the mount, sweeping them along the mat above his head. Assume good mount position.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ARM PUSH AND ROLL TO THE REAR MOUNT

The fighter uses the arm push and roll to the rear mount to turn his opponent from his back to his stomach, giving the fighter a better opportunity to finish the fight.

Note. Conduct this technique when you have achieved the mount and are attempting to strike, but your opponent is using a horizontal block to avoid your strikes.



- 1) Target the arm close to the top of your opponent's head.
- 2) Place one hand on the back of your opponent's elbow and one hand on his wrist, both with thumbless grips.
- 3) Push the arm across your opponent's body in the direction of his hand. Pin the arm with your body.

TRAINING INSTRUCTIONS

CAUTION

When performing this technique, the bottom fighter must form a fist with the hand of his trapped arm. Further, he must be mindful of where the hand and wrist of the trapped arm are located to prevent injury.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ARM PUSH AND ROLL TO THE REAR MOUNT (continued)



4) Release the grip of the hand on the elbow, and drive it under your opponent's neck to secure his wrist with both hands in thumbless grips.

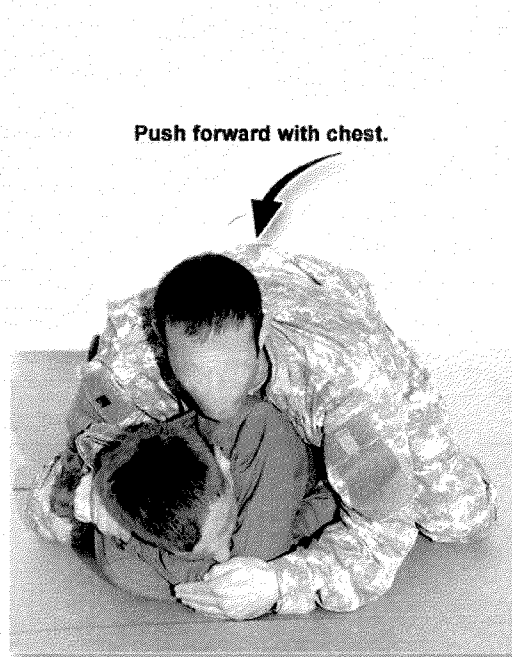
5) Move the hand that was on the opponent's wrist to his elbow.

6) Push and pull with your hands on the elbow and wrist ensuring to open and close the legs at the knees to make room for your opponent to roll.

Note. Maintain body and chest pressure to prevent your opponent from escaping.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ARM PUSH AND ROLL TO THE REAR MOUNT (continued)

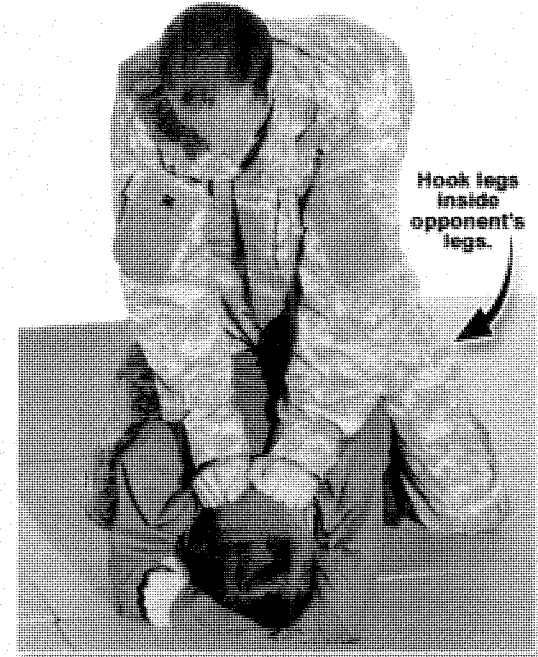


- 1) Use your body strength to push your opponent with your chest (using ratchet motions) until his elbow stops him from going any further.

Note. Ensure that the student places hand over hand without lacing his fingers.



- 2) Drop your weight below your opponent's shoulder blades and fold his arms underneath him while pushing him forward.

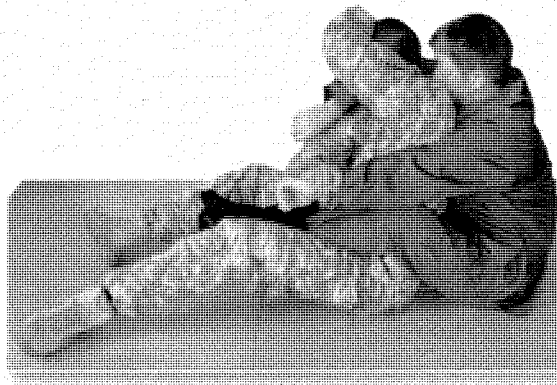


- 3) From this position, the opponent normally tries to rise using his knees. When he attempts this, sit up and hook both legs inside of your opponent's legs push to straighten your arms with your hands in the back of your opponent's collar.

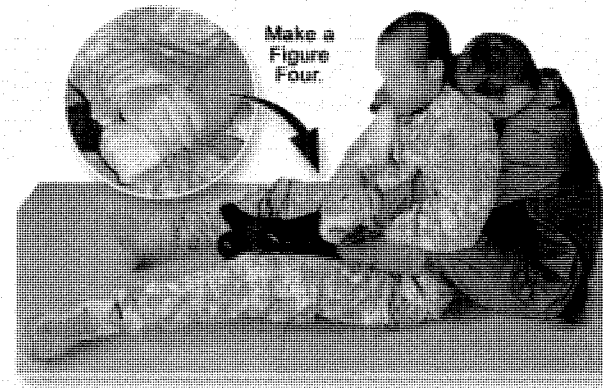
GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ESCAPE THE REAR MOUNT

When his opponent has assumed the rear mount, the fighter must defend attacks while escaping the position in a timely manner.



Alternate View

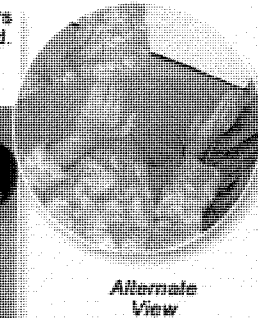
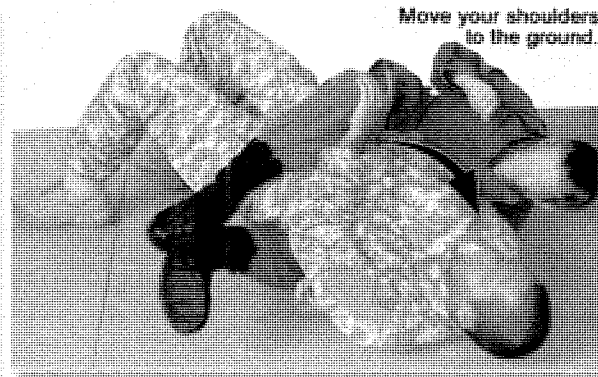


Make a Figure Four.

- 1) Place one hand over your head, with your palm facing out, your bicep very tight to the side of your head, and your hand covering your ear. Place the other hand near your armpit with your palm facing out.
- 2) Once your opponent reaches in, the hand under your armpit secures his wrist and pulls it through.
- 3) Wrap your other arm around, making a figure four.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ESCAPE THE REAR MOUNT (continued)



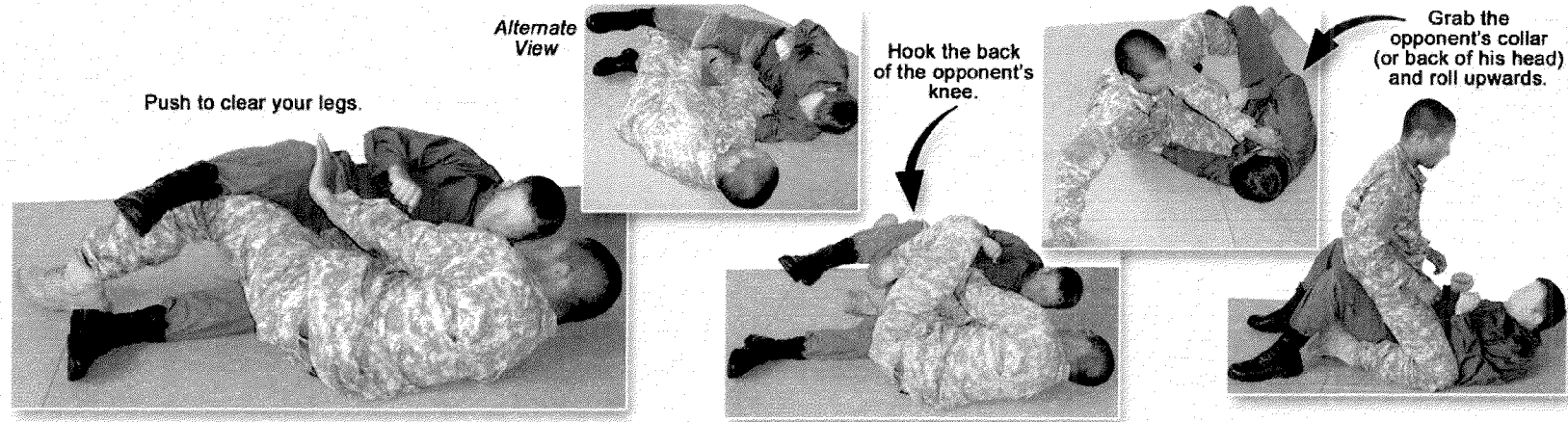
- 1) Place your back on the ground on your underhook side.

Note. Do not put your back on your overhook side.

- 2) Once your body weight is on your opponent's arm, let go and move your shoulders to the ground, using the ground to scrape your opponent off of your back.
- 3) Push your hips through your opponent's legs, one hand on his hip and the other on his knee to prevent him from achieving the mount.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ESCAPE THE REAR MOUNT (continued)



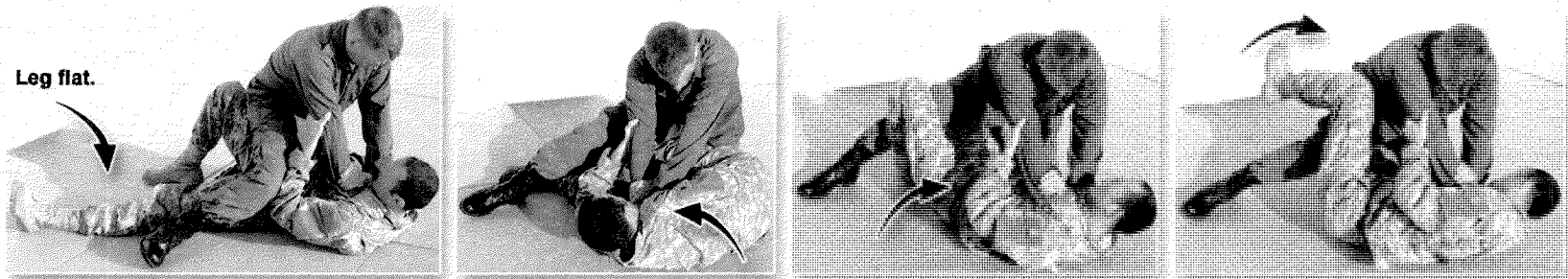
- 1) Continue until your hips clear his legs.
- 2) Move your hips to clear your legs. Move your inside leg through and to the ground, knee toward your opponent's armpit and foot hooking his groin area. Move your opposite leg through the middle, and hook the back of his knee with your foot.
- 3) Reach your top hand into your opponent's far-side collar (or grab the back of his head, if he does not have a collar), with your bottom hand posted on the ground. Roll into the middle, mount and achieve a good posture.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

ESCAPE THE MOUNT, SHRIMP TO THE GUARD

While the fighter is attempting to escape the mount, trap, and roll, his opponent may move his leg away, making the fighter unable to capture it. This movement, however, creates an opening under the same leg. The term "shrimp" refers to the action of moving the hips away, which is crucial to the success of this technique.

Note. Conduct this technique when you are on your back with your opponent mounted on your chest.

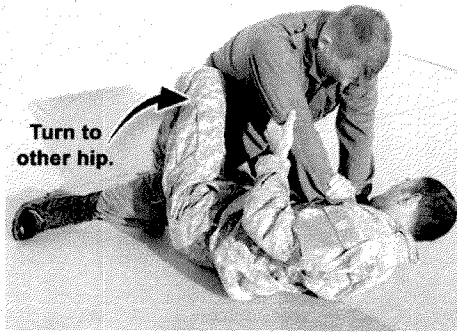


- 1) Place your leg flat on the ground.
- 2) Turn on your side, and face the opening created by your opponent. Using the space the opponent created by posting his leg, prop the opponent's leg up with your elbow. With a shrimping motion shoot your hips out from underneath your opponent
- 3) Turn facing the opponent's posted leg, with that side leg flat. Bring the same side knee up to prevent your opponent from advancing.
- 4) Continue to rotate yourself onto your opposite hip while circling your leg out from under your opponent.

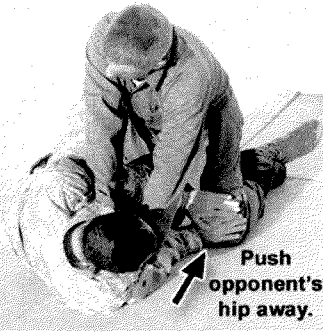
Note. Turn on your hip to create more space.

GROUND GRAPPLING—BASIC BODY POSITIONING MOVES

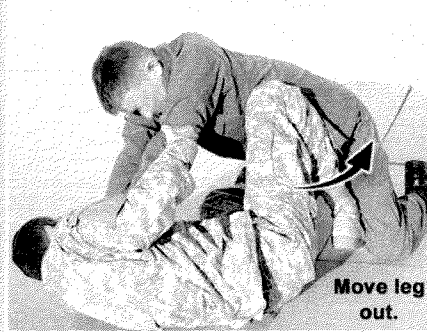
ESCAPE THE MOUNT, SHRIMP TO THE GUARD (continued)



1) Turn to your other hip, and hook your opponent's leg to prevent him from reestablishing the mount.



2) Use both hands to push your opponent's hip away.



3) Move your other knee from between your opponent's legs, and put your weight on your posted foot.

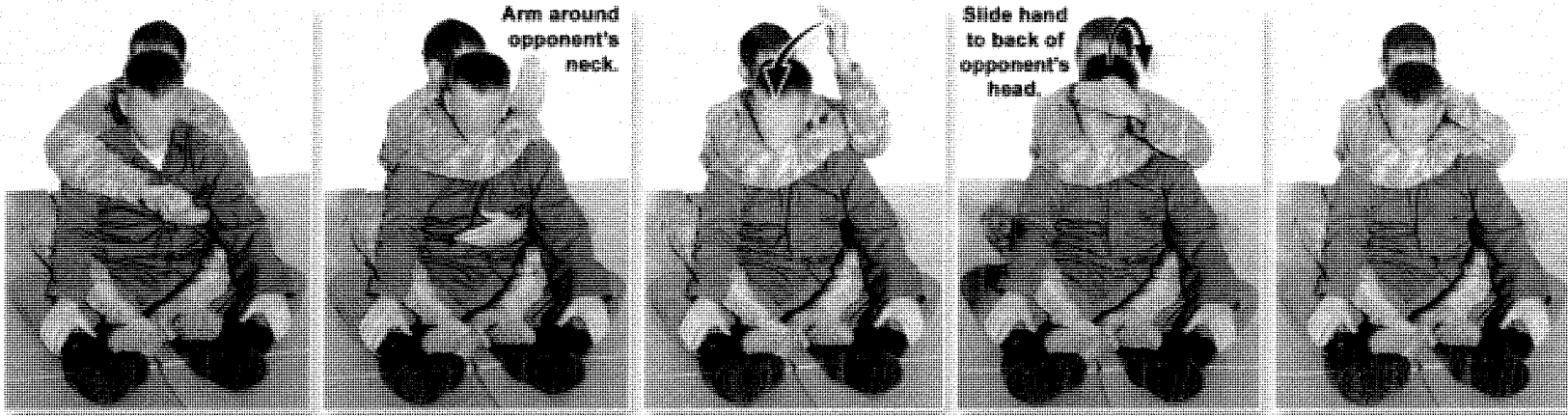


4) Turn your body, and face the opposite direction. Loop your legs around your opponent, and lock your feet to reestablish your guard.

GROUND GRAPPLING—BASIC FINISHING MOVES

REAR NAKED CHOKE

The rear naked choke slows the flow of blood in the carotid arteries, which can eventually cause your opponent to be rendered unconscious for a short period of time.



- 1) Achieve a rear mount, and hook both legs in place.
- 2) Leaving the underhook in place, sneak the hand of your overhook arm around your opponent's neck. Put your bicep against the side of your opponent's neck. Roll your forearm to the other side of your opponent's neck, with both the bicep and the forearm resting against the carotid arteries. Position your elbow against the trachea. Externally, your opponent's chin will line up with your elbow.
- 3) Remove your underhook while maintaining control with your overhook, grasp your underhook's bicep with your overhook hand.
- 4) Move your underhook to the back of the opponent's head to the knowledge bump, as if combing his hair back.
- 5) Pinch your shoulder blades together, and expand your chest to finish the choke.

Note. Tuck your head to avoid getting hit.

Chapter 3

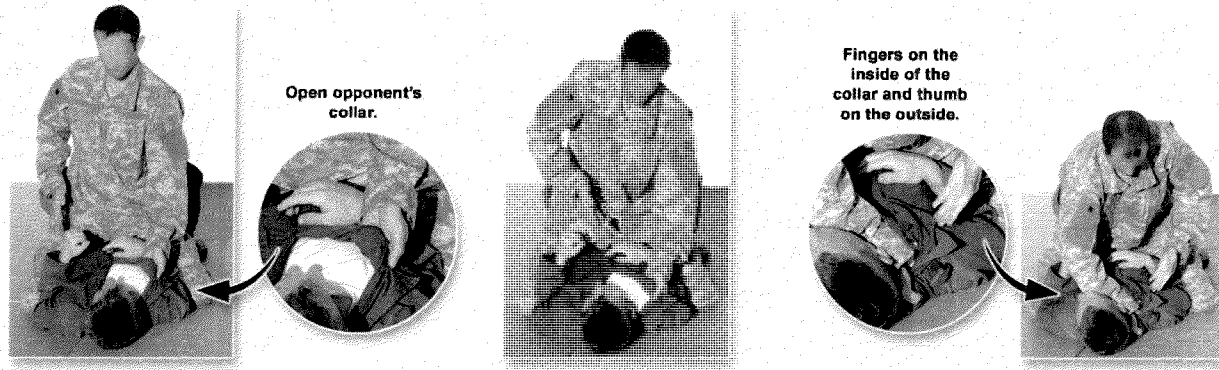
Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC FINISHING MOVES

CROSS-COLLAR CHOKE FROM THE MOUNT AND GUARD

The cross-collar choke is a blood choke that can only be employed when your opponent is wearing a durable shirt. This choke should be performed from either the mount or guard.

MOUNT



- 1) With your non-dominant hand, open your opponent's same-side collar.

Note. When in the guard, change your angle to position yourself for this choke.

- 2) Reach across your body, and insert your dominant hand into the collar you just opened.
- 3) Relax the dominant hand, and reach all the way behind your opponent's neck, grasping his collar with your fingers on the inside and your thumb on the outside.

GUARD



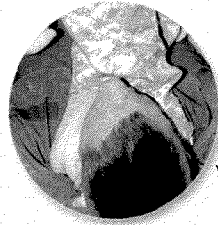
GROUND GRAPPLING—BASIC FINISHING MOVES

CROSS-COLLAR CHOKE FROM THE MOUNT AND GUARD (continued)

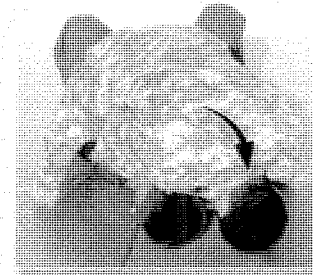
MOUNT



Slide under your first arm across your opponent's neck.



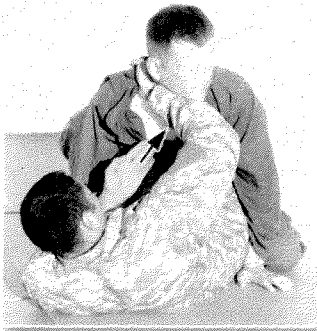
Head forward over your top arm.



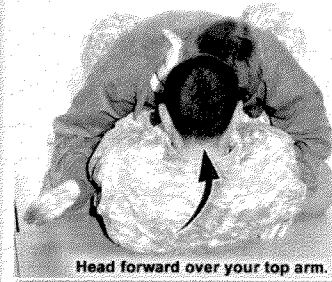
- 1) Release the grip of your non-dominant hand, and move your dominant-side forearm across your opponent's neck under the chin, force his chin upward. Slide your non-dominant hand under your dominant forearm into your opponent's collar.
- 2) Using the same grip (fingers on the inside, thumb on the outside), reach all the way back until your hand meets the other hand.
- 3) Turn your wrists so that your palms face you and pull your opponent into you. Expand your chest, pinch your shoulders together, and bring your elbows to your hips to finish the choke.

Note. When conducting this technique from the mount, post your head forward on the ground, over your top arm.

GUARD



Slide under your first arm across your opponent's neck.



Head forward over your top arm.

GROUND GRAPPLING—BASIC FINISHING MOVES

BENT ARM BAR FROM THE MOUNT AND SIDE CONTROL

The bent arm bar is a joint lock that attacks the shoulder girdle. This technique can be employed from either the mount or side control.

- Notes.** 1. As with any submission technique, apply this shoulder lock using slow, steady pressure, and release as soon as your training partner taps.
2. Conduct this technique when your opponent uses a vertical block technique.

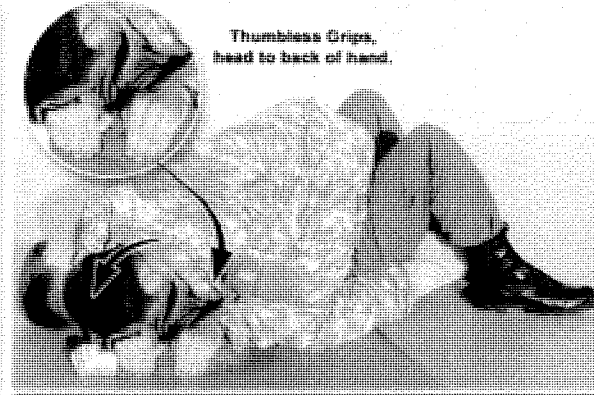
MOUNT



Drive opponent's wrist and elbow to the ground.



Thumbless Grips, head to back of hand.

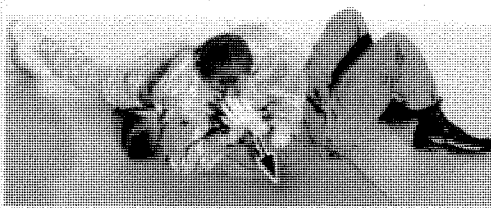


- 1) With thumbless grips, drive your opponent's wrist and elbow to the ground, moving your elbow to the notch created by your opponent's neck and shoulder (elbow notch).

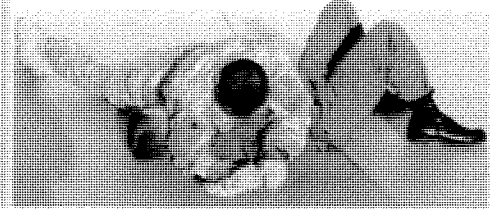
SIDE CONTROL



Drive opponent's wrist and elbow to the ground.



Thumbless Grips, head to back of hand.

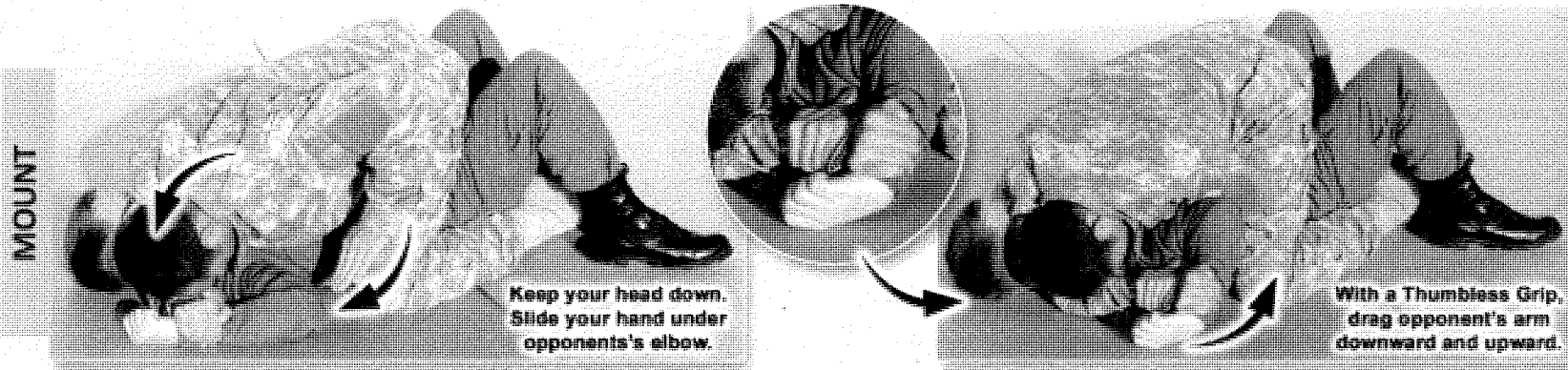


Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC FINISHING MOVES

BENT ARM BAR FROM THE MOUNT AND SIDE CONTROL (continued)



1) Keeping your head on the back of your hand to protect your face from strikes, place your other hand under his elbow.

2) Grab your own wrist with a thumbless grip. Drag the back of your opponent's hand toward his waistline. Lift his elbow, and dislocate his shoulder.

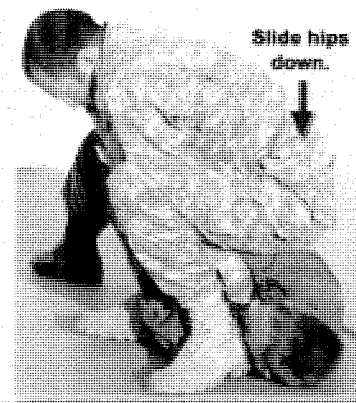
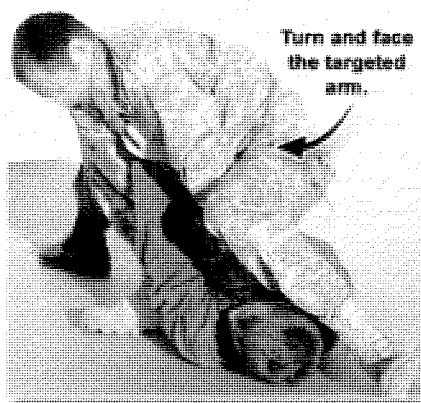
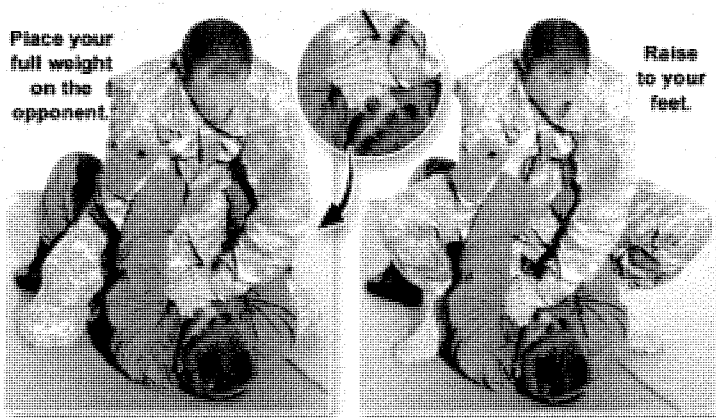


GROUND GRAPPLING—BASIC FINISHING MOVES

STRAIGHT ARM BAR FROM THE MOUNT

Fighting from your back can be very dangerous. When your opponent attempts to strike and apply chokes from within your guard, use the straight arm bar from the guard, a joint lock designed to damage the elbow

Note. As with any submission technique, apply this elbow joint lock using slow, steady pressure, and release as soon as your training partner taps.



- 1) Decide which arm you wish to attack. Isolate that arm by placing your opposite-side hand in the middle of your opponent's chest, between his arms. Targeting the unaffected arm, press down to prevent your opponent from getting off the flat of his back. Loop your same-side arm around the targeted arm and place that hand in the middle of your opponent's chest, applying greater pressure.
- 2) Placing all of your weight on your opponent's chest, raise to your feet in a very low squat.

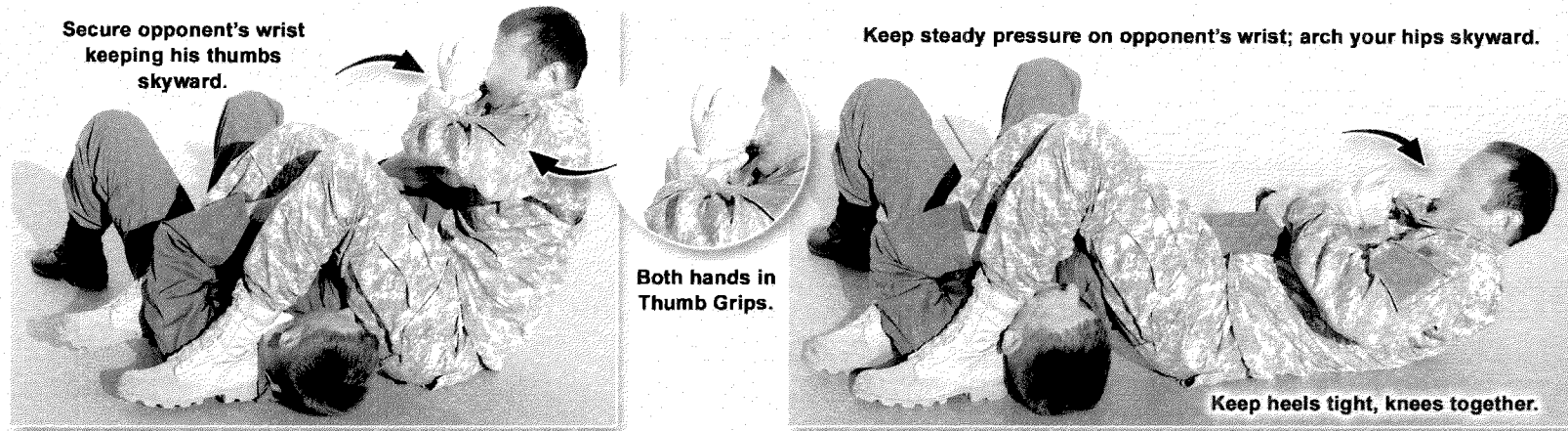
Note. Be conscious not to raise your hips. This will allow your opponent to escape.
- 3) Turn your body 90 degrees to face the targeted arm.

Note. While turning, keep in a slight forward posture, stay in a very low squat, and continue to apply pressure on your opponent's chest to prevent escape.
- 4) Bring the foot nearest to your opponent's head around his face, and plant it in the crook of his neck on the opposite side of the targeted arm. Slide your hips down the targeted arm, keeping your buttocks tight to your opponent's shoulder.

Note. Remember to isolate the elbow joint by trapping only the biceps/triceps region between your legs.

GROUND GRAPPLING—BASIC FINISHING MOVES

STRAIGHT ARM BAR FROM THE MOUNT (continued)



5) Secure your opponent's wrist with both of your hands with thumb grips. Keep his thumb pointed skyward to achieve the correct angle. Put your heels tight to your buttocks, and place your knees together tightly with the upper arm trapped between your knees, not resting on your groin.

6) Apply slow, steady pressure by trapping your opponent's wrist on your chest, and arching your hips skyward.

GROUND GRAPPLING—BASIC FINISHING MOVES

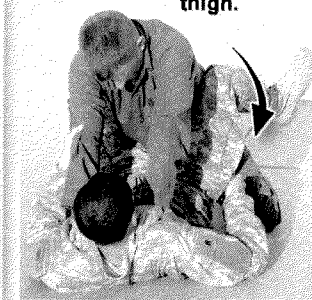
STRAIGHT ARM BAR FROM THE GUARD

The straight arm bar is a joint lock designed to damage the elbow. While this exercise outlines a straight arm bar performed from the mount, this technique can be performed from any dominant position.

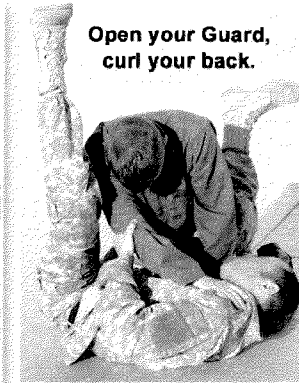
Secure opponent's arm.



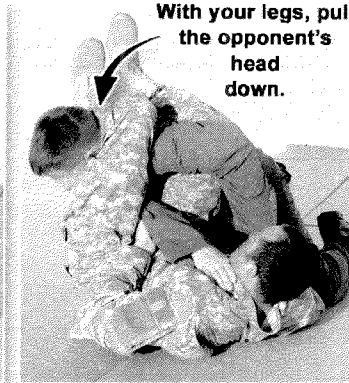
Slide hand under opponent's thigh.



Open your Guard, curl your back.



With your legs, pull the opponent's head down.



Grasp opponent's wrist.



Push hips upward.

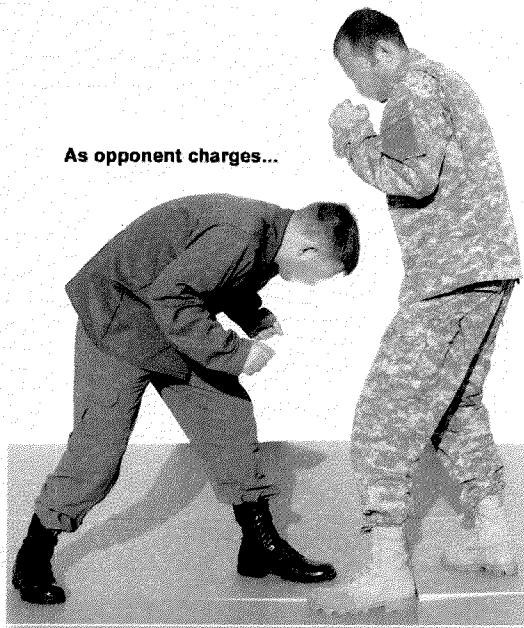
- 1) When your opponent presents a straight arm, secure his arm at or above the elbow. Hold your opponent's elbow for the remainder of the move.
- 2) Insert your other hand under your opponent's thigh on the side opposite the targeted arm. The hand should be palm up.
- 3) Open your guard, and bring your legs up, while curling your back to limit the friction.
- 4) Contort your body by pulling with the hand that is on the back of your opponent's thigh. Bring your head to his knee. Place your leg over his head. With your leg, grab your opponent, and pull him down by pulling your heels to your buttocks and pinching your knees together.
- 5) Move the hand that was behind your opponent's thigh to grasp the wrist that you secured at the elbow with a thumb grip. Curl your calf downward and push up with your hips to break your opponent's arm.

GROUND GRAPPLING—BASIC FINISHING MOVES

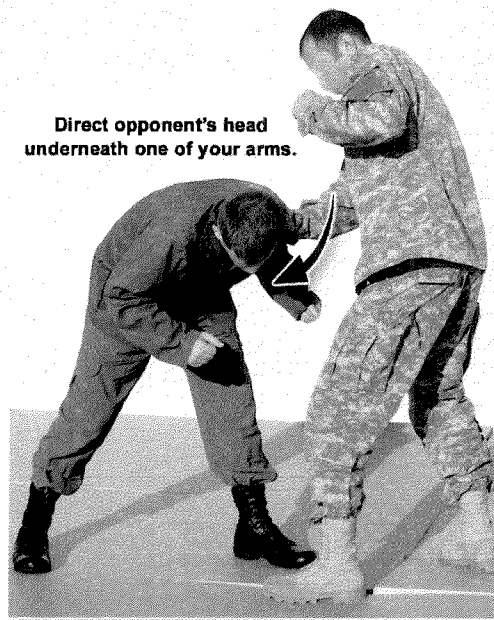
GUILLOTINE CHOKE

Often an opponent will attempt to charge the fighter and will present his neck during the tackle. The guillotine choke allows the fighter to present a defense to the takedown.

Note. As with any submission technique, apply this elbow joint lock using slow, steady pressure, and release as soon as your training partner taps.



As opponent charges...



Direct opponent's head underneath one of your arms.

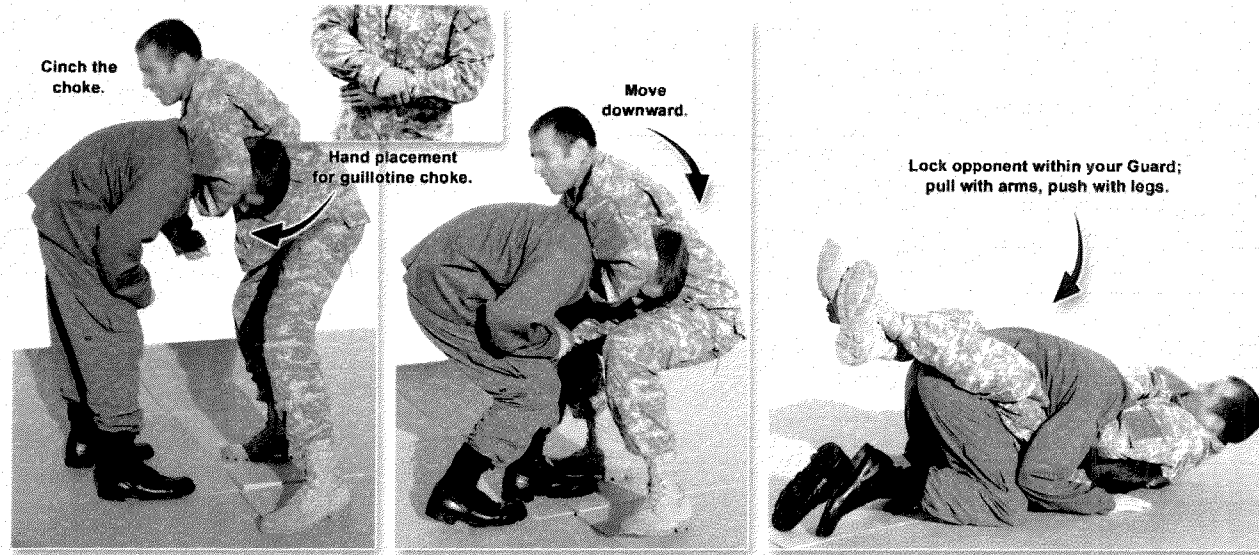


Wrap your arm around opponent's head.

- 1) As your opponent charges your legs, direct his head underneath one of your arms, and take a step back.
- 2) Wrap your arm around your opponent's head and under his neck.

GROUND GRAPPLING—BASIC FINISHING MOVES

GUILLOTINE CHOKE (continued)



- 5) With your other hand, grasp the first hand where a watch would be ensuring that you have not reached around your opponent's arm. Cinch the choke by bringing your arm further around your opponent's head, improving your grip.

Note. Your palm should be facing your own chest.

- 6) Sit down.

- 7) Place your opponent within your guard, and simultaneously pulling with your arms, pushing with your legs, and doing a side crunch to the side of the head in order to finish the choke.

Note. You must lock both legs around your opponent to prevent him from securing a top position. Even with a choke in place, if the opponent can clear your legs and get on top, he will be able to defeat the submission and you will be in a non-dominant position.

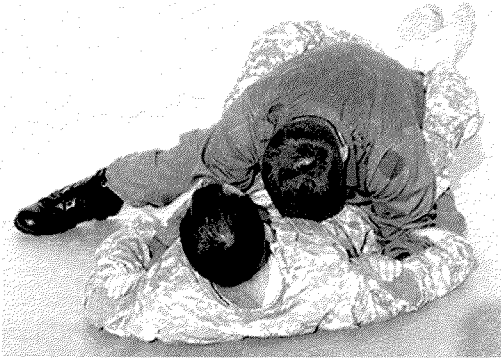
GROUND GRAPPLING—BASIC SWEEPS

SCISSORS SWEEP

A fighter can use the scissors sweep to reverse positions with his opponent and gain a dominant position.

Note. Conduct this technique when your opponent attempts to pass your guard as you control his arms at the elbows.

As opponent posts leg....



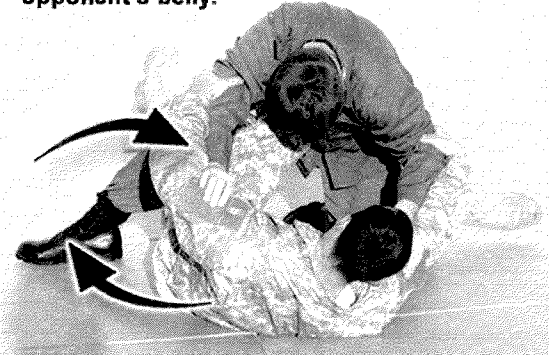
- 1) When your opponent posts one of his legs to create space, relax your guard, and keep your knees tight.

Relax your Guard.



- 2) Hang your calf on your opponent's posted leg, and post your opposite shoulder to swing your hips toward his posted leg.

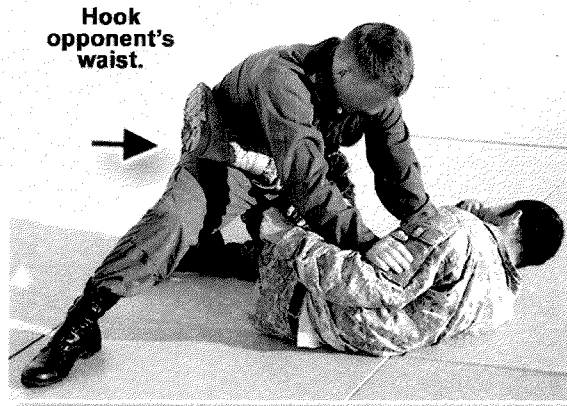
Slide knee inward across opponent's belly.



- 3) Drive your leg across your opponent's waist like a belt. Use your foot to hook his waist tightly, with your knee lower than the ankle. Position your other leg flat on the ground to trap your opponent's non-posted leg.

GROUND GRAPPLING—BASIC SWEEPS

SCISSORS SWEEP (continued)



- 4) Reach across your body and secure your opponent's collar on the opposite side of his posted leg, maintaining control of the arm on the side you intend to sweep. Extend your body to take your opponent off his base, while pulling him forward by his collar.

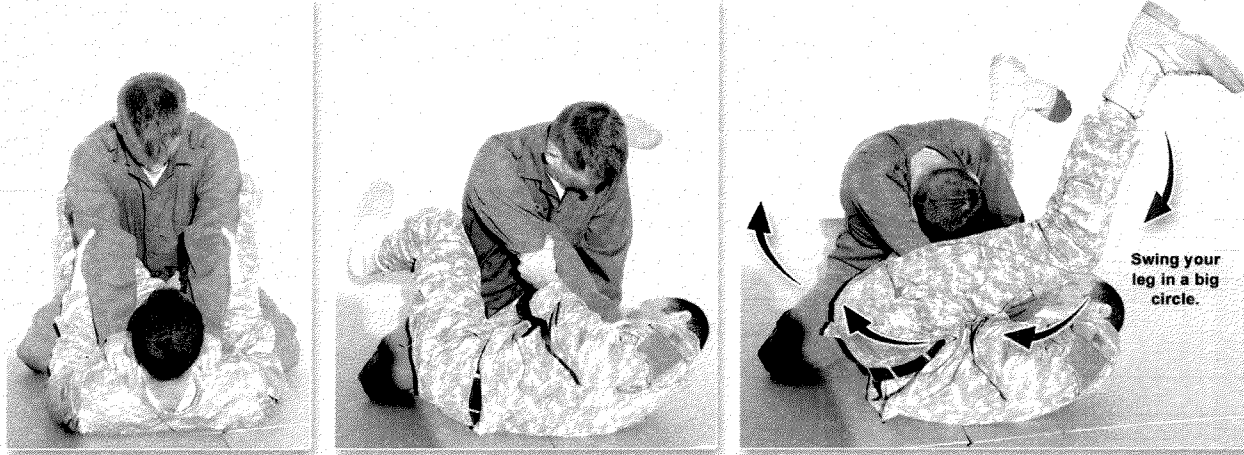
- 5) Make a scissoring motion with your legs to sweep your opponent over.
- 6) Achieve the mount.

Note. If your opponent attempts to prevent the sweep by posting his sweep-side arm, sweep the posted arm in the direction of the fingers.

GROUND GRAPPLING—BASIC SWEEPS

SWEEP FROM THE ATTEMPTED STRAIGHT ARM BAR

When a fighter attempts to apply the straight arm bar from his guard, his opponent will often tuck his head to avoid the arm bar. Should this occur, do not abandon the position, simply change the attack to the sweep from the attempted straight arm bar.



- 1) With the hand that is behind your opponent's thigh, pull his knee as close to your head as possible in order to position your body perpendicular to your opponent.
- 2) Swing the leg that was supposed to hook from your opponent's head in a big circle, originating from your head following a path to your opponent's far-side leg.

Note. Do not release control of the previously targeted arm.

TRAINING INSTRUCTIONS

WARNING

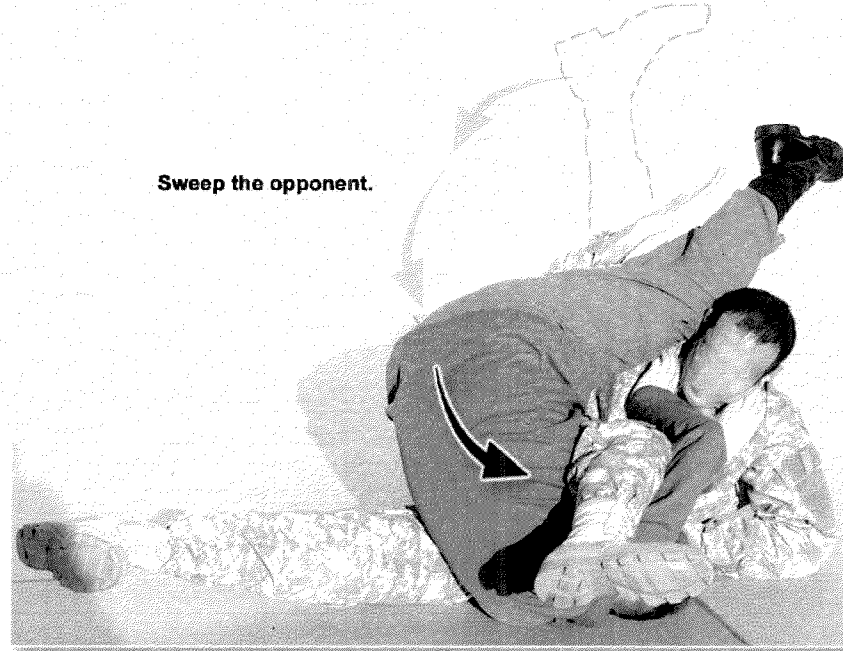
When performing this technique, the fighter being swept must keep his toes in line with or inside of his ankles to prevent injury.

Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC SWEEPS

SWEEP FROM THE ATTEMPTED STRAIGHT ARM BAR (continued)



- 1) With the leg that is hooked under your opponent's armpit, push toward his head so that you will roll right up into the mount. Use the momentum from the leg that is swinging in a circle to sweep your opponent.

Note. Ensure that you tuck your leg to prevent it from being trapped beneath your opponent's body.

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

POST

Post is a technique used to control the range of an enemy safely to gain the advantage of the altercation. When using this technique, a Soldier has three options: create space, maintain space, or clinch.

To perform this technique—



- 1) Place your palm on your enemy's chest, with your fingers extended. Slightly bend your elbow, and position your weapon securely away from your enemy.
- 2) Tuck your chin. With your posted arm, slightly raise your shoulder to cover your cheek bone.
- 3) Blade your hips slightly from your enemy so that you are able to maintain distance between your primary weapon and the enemy, which will facilitate positive control of your weapon.
- 4) Spread your feet slightly wider than shoulder-width apart. Take a step back with your dominant foot, and align the heel of your lead foot and the toe of your trail foot. Point your lead foot at the enemy and your trail foot away from the enemy at a 45-degree angle.
- 5) Perform Option 1, 2, or 3.

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

FRAME

The frame is the second method for the Soldier to further control a noncompliant enemy. If the Post has collapsed or the enemy engages from a closer proximity, the enemy can be deemed as being noncompliant. To perform this technique—



- 1) Position the blade of your forearm across your enemy's chest, with your elbow forming an angle slightly larger than 90 degrees. Place the palm of your hand in your enemy's neck area/uppermost portion of the shoulder, and secure your enemy using the thumbless grip.
- 1) *Variant:* Place your same-side hand around your enemy's head so that you are cupping the back of his head at the "knowledge knot" with your palm. Extend and join your fingers. Face your enemy in a half inside control.
- 2) Tuck your chin into your shoulder.
- 3) Place your firing arm at your side, securing your primary weapon.
- 4) Brace yourself by positioning your hips in an athletic stance, and protect your secondary weapon by turning your hips slightly.

Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

HOOK AND HEAD CONTROL

The hook with head control is the third method a Soldier can use to further control a noncompliant enemy. If the Frame has collapsed or the enemy engages from a closer proximity, the Soldier may move to the hook. To perform this technique—



- 1) Place your nonfiring arm underneath your enemy's same-side arm, while securing his same-side shoulder with a thumbless grip and rolling your elbow slightly downward.
- 2) Tuck your head into your enemy's chin, and apply pressure by pushing it away.
- 3) Move your legs to the side and perpendicular to your enemy's near-side leg.

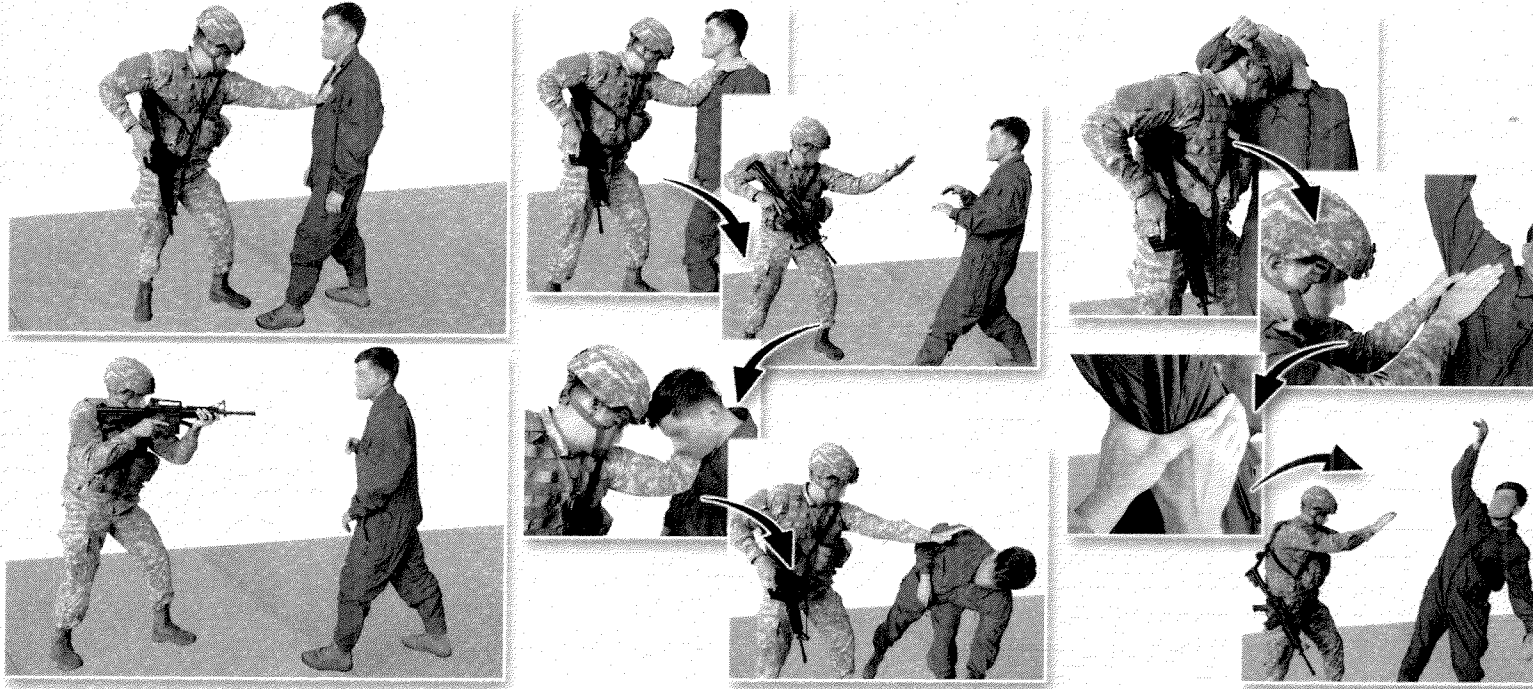
Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

OPTION 1: CREATE SPACE ENGAGE WITH PRIMARY WEAPON

Create space is utilized in order to keep possible combatants at projectile range using any of the range controlling techniques.



Create Space Post

To create space, generate force with your trail foot, and use your posted arm to push your enemy away. If your enemy is bigger and stronger than you, push yourself backward to engage with your primary weapon.

Create Space Frame

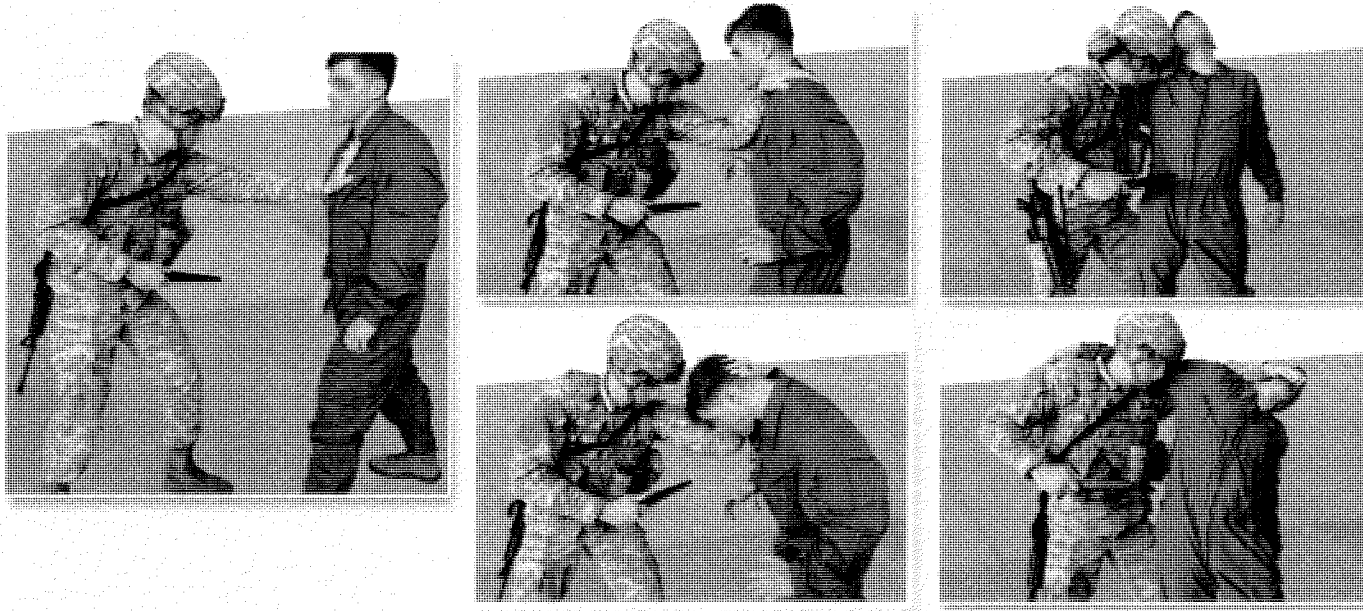
To create space, generate force with your trail foot, and use your framed arm to push your enemy away. If your enemy is bigger and stronger than you, push yourself backward to engage with your primary weapon.

Create Space Hook and Head Control

To create space, use disruptive techniques in order to create space for your hands. Place both your hands into the armpits with thumb grips. Generate force with your trail foot, while pushing your enemy away. If your enemy is bigger and stronger than you, push yourself backward to engage with your primary weapon.

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

OPTION 2: MAINTAIN SPACE AND EMPLOY SECONDARY WEAPON



Maintain Space Post

Engage your forearm, upper arm, and shoulder muscle to uphold the range and employ secondary weapons (i.e., anything that can be used to control or subdue your enemy), or use objects in your environment, such as a wall or a vehicle, to hold your enemy in that position

Maintain Space Frame

Engage your forearm, upper arm, and shoulder muscle to uphold the range and employ secondary weapons (i.e., anything that can be used to control or subdue your enemy).

Maintain Space Hook and Head Control

Secure your enemy's shoulder, and roll your elbow forward, while placing your head in his jaw line to create pressure. Use objects in your environment, such as a vehicle or a building, to hold your enemy in that position. *For clinch positions refer to basic clinch positions.*

Chapter 3

Basic Ground Fighting Techniques

GROUND GRAPPLING—BASIC RANGE CONTROLLING TECHNIQUES

OPTION 3: ACHIEVE THE CLINCH

Achieve the clinch is utilized when you are unable to employ the two other range controlling techniques.



Achieve the Clinch Post

Close the distance, keeping your hands up and covering your face, and establish a dominant position (Double Underhooks [high or low], Modified Seatbelt, Rear Clinch, or Wall Clinch).

Achieve the Clinch Frame

Close the distance, keeping your hands up and covering your face, and establish a dominant position (Double Underhooks [high or low], Modified Seatbelt, Rear Clinch, or Wall Clinch).)

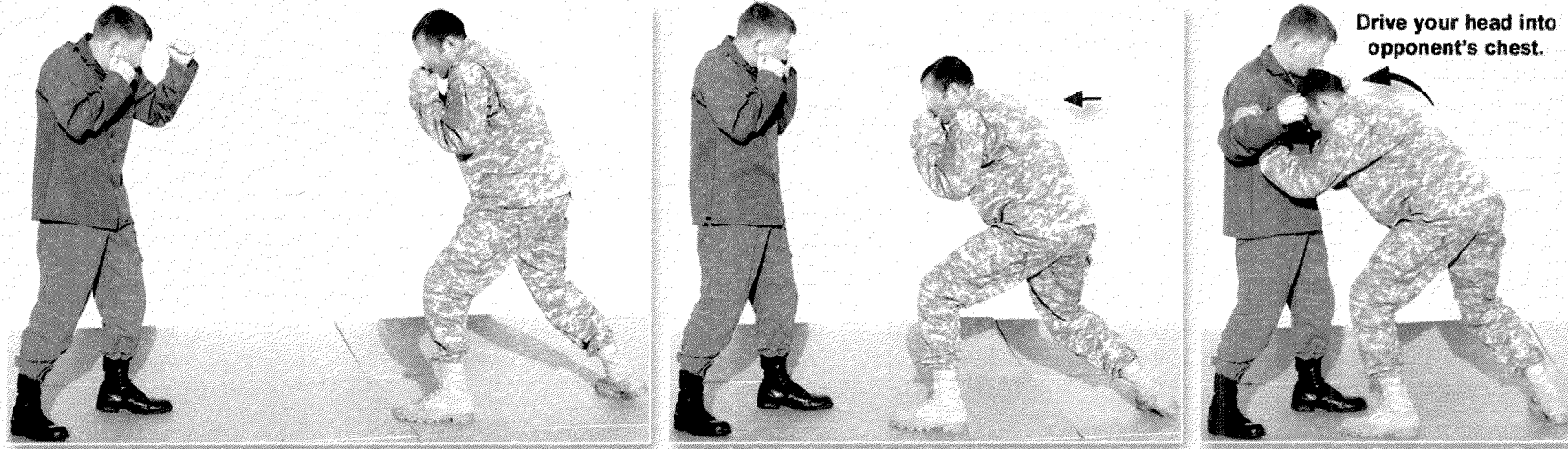
Achieve Hook and Head Control

To achieve a clinch from Hook and Head Control, step into your enemy to pummel for Double Underhooks or Modified Seatbelt Clinch. If you step too far, you can go for the Rear Clinch. Buildings or other objects in your environment can enable you to utilize the Wall Clinch. *For clinch positions refer to basic clinch positions*

CLINCHFIGHTING—ACHIEVE THE CLINCH

CLOSE THE DISTANCE

Fighters use close the distance when the opponent is within striking range.



- 1) Face your opponent, and assume the fighting stance just outside of kicking range.
- 2) Tuck your chin, and use your arms to cover your head while aggressively closing the distance.
- 3) Drive your head into your opponent's chest, and move your cupped hands to your opponent's biceps.

Chapter 3

Basic Ground Fighting Techniques

CLINCHFIGHTING—ACHIEVE THE CLINCH

MODIFIED SEATBELT CLINCH

Once the fighter closes the distance, he uses the modified seatbelt clinch to draw his opponent in.



1) After closing the distance with your opponent, raise one of his arms. Move yourself perpendicular to your opponent.

2) Reach around your opponent's waist to grab his opposite-side hip. With your other arm, pull his arm into your chest, controlling his arm at the triceps, drive your head into your opponents chin in order to control his posture.

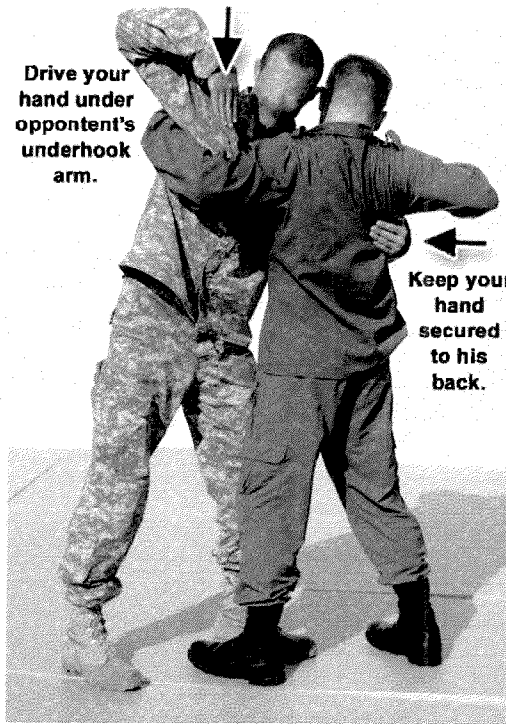
Chapter 3

Basic Ground Fighting Techniques

CLINCHFIGHTING—ACHIEVE THE CLINCH

DOUBLE UNDERHOOKS

The fighter uses double underhooks when both fighters have an overhook and an underhook grip on each other, with their heads on their overhook sides.



1) Drive your overhook hand (with a knife edge) under your opponent's underhook arm.

2) Clasp your hands in a wrestler's grip behind your opponent, while keeping head pressure on his chest.

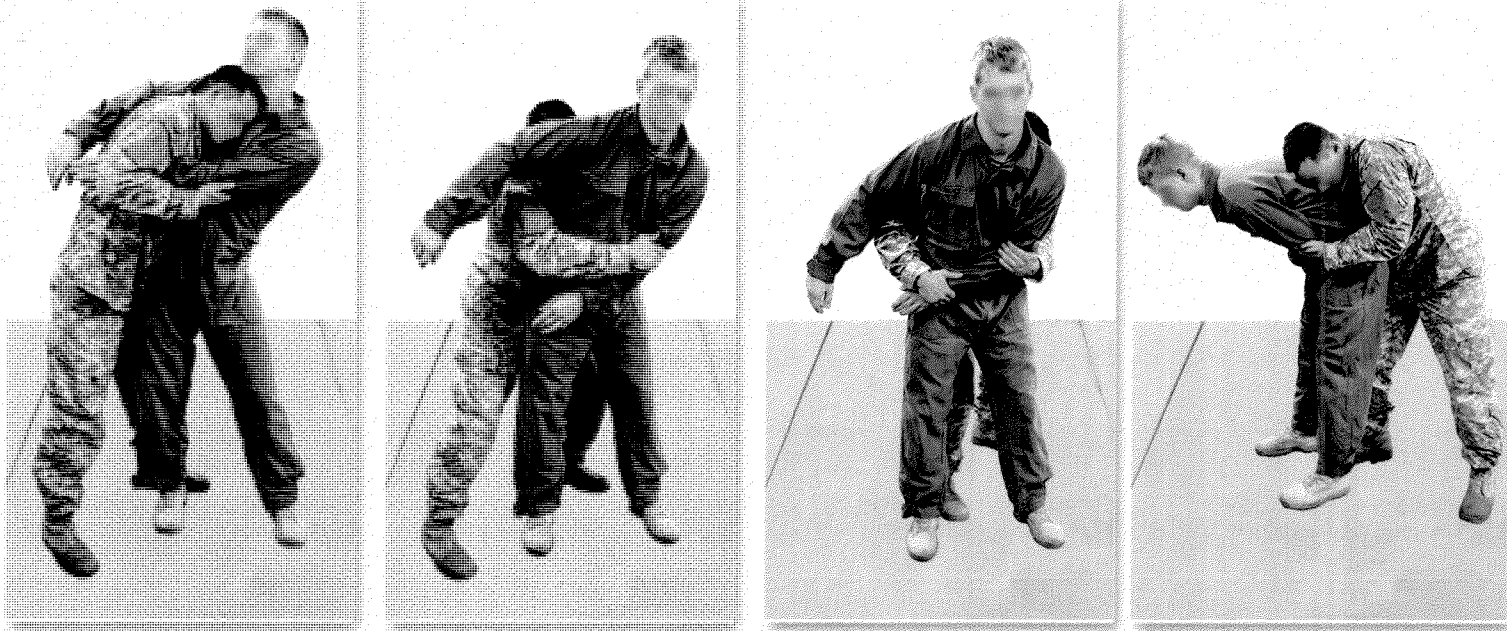
Chapter 3

Basic Ground Fighting Techniques

CLINCHFIGHTING—ACHIEVE THE CLINCH

REAR CLINCH

The fighter uses the rear clinch when he is able to get behind the enemy while maintaining control of the arm.



From failed modified seatbelt.

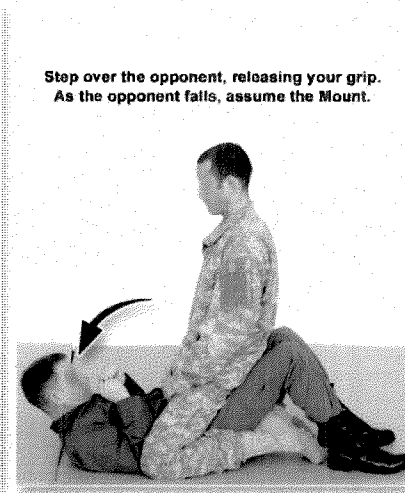
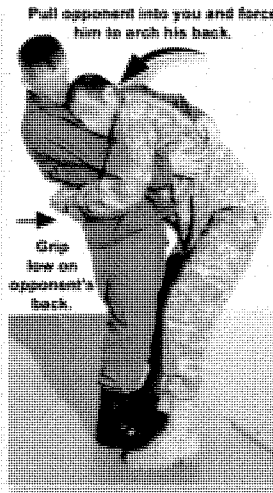
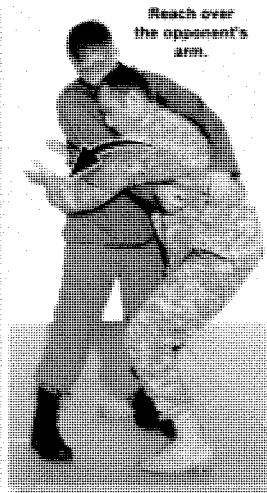
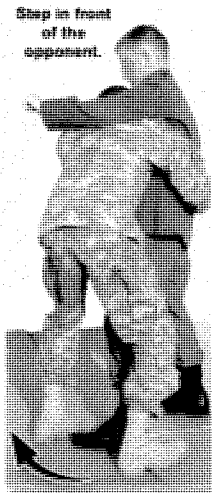
- 1) Circle behind your enemy while still maintaining control of the arm.
- 2) Slide your controlling arm down to the wrist while simultaneously wrapping the opposite side arm around and controlling at the biceps both with thumbless grips.
- 3) Step between your opponents waist with the same side leg that is controlling the wrist.
- 4) Break your opponent's posture down at the waist by pulling in at the arm and driving forward with your head and shoulder.

Note. Tuck your head into your opponent's back to avoid elbows to the head.

CLINCHFIGHTING—BASIC TAKEDOWNS

FRONT TAKEDOWN

The front takedown is a simple technique used to throw the opponent off-balance. It allows the fighter to transition from the modified seatbelt clinch to the mount.



- 1) From the modified seatbelt clinch, step slightly in front of your opponent so you can drive him off his leg. Ensure that you keep good head control to drive his upper body backward.
- 2) Release your grip on your opponent's elbow and reach over his arm, keeping it trapped under your overhook armpit. Secure a wrestler's grip low on your opponent's side at the hip near the small of his back.
- 3) Pull your opponent into you with your hands and push your upper body and head to make his back arch.
- 4) Step over your opponent and release your grip, ending in the mount.

WARNING
Release your hands to avoid landing on them.

TRAINING INSTRUCTIONS

WARNING
Opponents must not attempt to reach for the ground while being taken down, as this will lead to severe injuries.

CLINCHFIGHTING—BASIC TAKEDOWNS

REAR TAKEDOWN

After achieving the clinch, the fighter is often positioned with his head behind his opponent's arm. Once he reaches a secure position, he can attempt to take his opponent down.

Note. Conduct this technique when your head is positioned behind your opponent's arm after you have achieved the clinch.

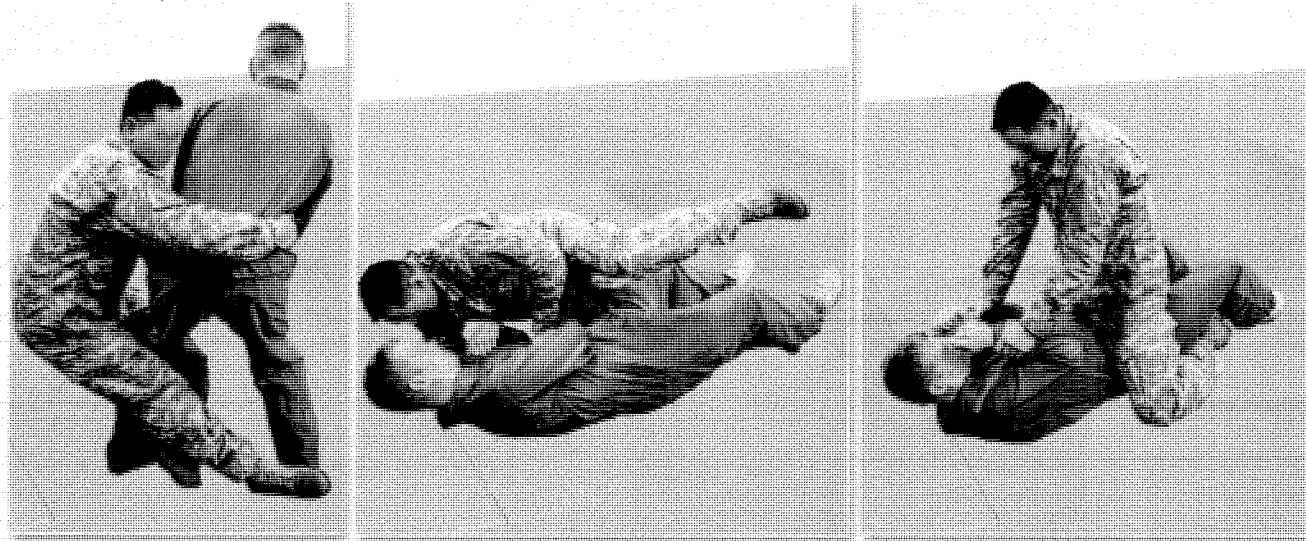


1) Step to the same side that is controlling the wrist so that you are behind your opponent at an angle. Place one foot on the outside of his foot so that your foot is perpendicular to your opponent's.

2) Place the instep of your other foot behind your opponent's far-side foot so that he cannot step backward.

CLINCHFIGHTING—BASIC TAKEDOWNS

REAR TAKEDOWN (continued)



- 1) Sit down as close to your other foot as possible, and hang your weight from your opponent's waist.
- 2) The opponent will fall backward over your extended leg. As he does, tuck your elbow to avoid falling on it, and release your grip.
- 3) Rotate into the mount.

TRAINING INSTRUCTIONS

WARNING
Opponents must not attempt to reach for the ground while being taken down, as this will lead to injuries.

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Chapter 4

Intermediate Ground Fighting Techniques

Comprehension of the complex intermediate ground-fighting techniques is dependent on a thorough grasp of basic ground-fighting techniques

INTERMEDIATE FIGHT STRATEGY

4-1. The intermediate fight strategy involves adjusting the basic fight strategy taught in chapter 3 to accommodate the unpredictable and varying nature of operations.

4-2. Through learning the basic combatives techniques taught in chapter 3, Soldiers are instilled with the basic fight strategy. This is the easiest way to impact Soldiers' fighting ability. However, Soldiers often find themselves in unpredictable situations that span the spectrum of operations. Therefore, Soldiers must be prepared to adjust their fight strategy to fit the situation, rather than making every situation fit the preferred strategy.

4-3. The basic techniques also serve as a blueprint to learning more advanced techniques. Each of the basic techniques represents various techniques that accomplish the same goal. For Soldiers to defeat an opponent by controlling the elements of the fight, they must increase their options by gaining proficiency in a larger group of techniques. This chapter provides Soldiers with these intermediate techniques.

INTERMEDIATE POSITIONING MOVES

4-4. Soldiers who have mastered the basic body positioning moves are ready to learn more advanced techniques and moves that exploit common enemy mistakes.

INTERMEDIATE MOUNT/SIDE CONTROL ESCAPES

4-5. While Soldiers often use the basic arm trap and roll to escape the mount, different scenarios present new options and opportunities.

4-6. Intermediate mount/side control techniques include—

- Opponent mounts, posts both arms.
- Arm around neck, post on one side.
- Larger opponent pins wrist.
- Push the propped knee.
- Pull the propped knee.
- Defend against attempt to mount backdoor.
- Escape the half-guard.

ATTACKS FROM SIDE CONTROL

4-7. When learning basic ground-fighting techniques, fighters are primarily limited to attacks designed to achieve the mount; as fighters become more experienced, they begin to learn new attacks that allow them to remain in side control. While in side control, the fighter is presented with new options; for example, forcing his opponent to submit.

4-8. Intermediate attacks from side control include reverse bent arm bar from side control.

DEFENSE AGAINST HEADLOCKS

4-9. While the headlock is a very poor technique for anything more than immobilizing an opponent, it is a common technique in actual fighting because this position gives a false sense of security in his ability to finish the fight from this position. Therefore, Soldiers must know how to escape.

4-10. Intermediate defenses against headlocks include—

- Escape headlock from the bottom, form the frame.
- Escape the headlock, follow the leg.
- Escape the headlock, lift and turn.
- Escape the headlock, block and lift.

Chapter 4

- Escape the headlock, arch over.

PASS THE GUARD

4-11. When a fighter is inside of his opponent's guard, the opponent can attack the fighter or reverse his position. Therefore, when passing the guard, a fighter may need several techniques to counter the moves.

- 4-12. Intermediate pass the guard techniques include—
- Pass the guard with the knee in the tailbone.
 - Pass the guard under one leg.
 - Pass the guard under both legs.
 - Pass the guard near-side leg through.
 - Pass the guard far-side leg through.

ATTACKS FROM THE MOUNT

4-13. After a fighter achieves the mount, he can subdue his opponent with punches or incapacitate his opponent. The most efficient way to incapacitate an opponent is to choke him into unconsciousness.

- 4-14. Intermediate attacks from the mount include—
- Paper cutter choke.
 - Nutcracker choke.
 - Leaning choke.
 - Sleeve choke.

ATTACKS FROM THE REAR MOUNT

4-15. Once a fighter achieves the Rear Mount, keeping it is the most important goal. The Rear Mount provides the fighter all of the advantages of dominant body position, and he can attempt submissions and strikes without fear of losing the dominant body position or of being attacked by his opponent.

- 4-16. Intermediate attacks from the rear mount include—
- Collar choke.
 - Single wing choke.
 - Straight arm bar from rear mount.

Intermediate Ground Fighting Techniques

ATTACKS FROM THE GUARD

4-17. Although the guard is not an ideal position, a fighter still has offensive options: sweeps, submissions, or even escapes so that the fighter can be in a position equal to that of his opponent. Attacks from the guard may also catch the opponent by surprise, since he feels secure in his top position.

- 4-18. Intermediate attacks from the guard include—
- Triangle choke.
 - Elevator sweep from the guard.
 - Elevator sweep from escape the mount, shrimp to the guard.
 - Reverse bent arm bar from the guard.
 - Hip heist sweep.
 - Guillotine choke from the guard.

KNEE MOUNTS

4-19. The knee mount is another important dominant body position. A fighter can use the knee mount to transition between side control and the mount. During this transition, the fighter can use multiple submissions or place himself in an ideal position to end the fight with strikes.

- 4-20. Intermediate knee mounts include—
- Knee mount from side control.
 - Achieve the knee mount with control of the far-side arm.
 - Straight arm bar from the knee mount.
 - Leaning choke from knee mount.
 - Reverse bent arm bar from the knee mount.

LEG ATTACKS

4-21. Although very effective, leg attacks require a fighter to relinquish his dominant body position. While they are not the preferred method of attack, Soldiers must be familiar with them or become easy prey.

- 4-22. Intermediate leg attacks include—
- Straight ankle lock.
 - Straight knee bar.

CLINCH FIGHTING

4-23. If the fighter encounters an opponent that he cannot subdue with strikes or has trouble taking his opponent down, he can use the clinch—the middle range

Chapter 4

of the fight—to keep from losing the fight. In the clinch, the fighter can use close-quarters strikes, , such as elbows, knees, and head butt, to finish the fight or to set up takedowns

TAKEDOWNS

4-24. The fighter uses takedowns when he encounters an opponent that he cannot subdue in the strike or clinch ranges. Takedowns allow the fighter to take the fight to the ground and finish there.

4-25. Intermediate takedowns include—

- Drop to single leg.
- Double leg.
- Dump.
- Tree top.

GRAPPLING WITH STRIKES

4-26. Leaders should not make the common mistake of practicing ground-fighting techniques exclusively; striking is an integral part of all types of fighting. Grappling with open- and closed- fist strikes forces the fighter to ensure that he has positive control of his opponent’s hands, which, in turn, can prevent the fighter's opponent from striking him in the face or using a weapon, such as a knife. It also allows a dominant fighter to set up submission holds or gain a more dominant body position.

CAUTION

When grappling with strikes, ensure that a good safety brief is given emphasizing good sportsmanship and safety.

PASS THE GUARD

4-27. In a real world fight, fighters can use strikes to cause the opponent to relax his guard or become distracted with protecting himself, creating an opening for the fighter to pass the guard.

4-28. Intermediate pass the guard with strikes techniques include—

- Pass the guard with strikes.
- Striking from side control.

Intermediate Ground Fighting Techniques

- Defending against strikes in the guard.
 - Close.
 - Middle.
 - Far.

REGAINING THE INITIATIVE

4-29. When in a fight, the fighter should seize the initiative immediately to dominate the fight. When a fighter is unable to seize the initiative, he should tackle the equally important task of regaining it. These techniques allow the fighter to escape positions that are less than ideal and gain dominant body position.

DEFENSE AGAINST CHOKES

4-30. In many instances, simply striking an opponent will cause him to loosen a choke; however, if properly applied, some chokes do not provide a suitable opportunity to strike and must be countered directly.

4-31. Intermediate defense against chokes includes defense against the standing guillotine.

KNEE STRIKES

4-32. For various reasons (i.e., the fighter may be defending against the position, the fighter may have his arm in an odd position, etc.), the opponent may be unable to finish a standing guillotine. When this happens, the opponent uses knee strikes in an attempt to finish the fight. The fighter must defend the knee strikes, escape the position, and gain a dominant body position.

DEFENSE AGAINST THE STANDING HEADLOCK

4-33. Just as on the ground, an untrained opponent may try to finish the fight with a headlock, a nearly impossible feat since he has neither dominant body position nor the leverage to do so. These techniques allow the fighter to escape the headlock and gain dominant body position.

4-34. Intermediate defenses against the standing headlock include—

- Defense against the standing headlock, step in front.
- Defense against the standing headlock, step behind.

INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

OPPONENT MOUNTS, POSTS BOTH ARMS

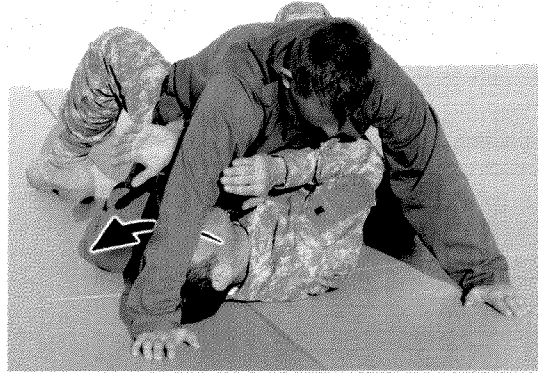
When an opponent achieves the mount, he doesn't always grab the fighter's neck, as was taught in the basic technique. Often, the opponent will spread his arms. If this occurs, the fighter should perform this technique.

**Block opponent's knees
with your elbows.**



1) Assume a good position, with your elbows blocking your opponent's knees, as in the basic technique.

**Drive your head in and outside of the
opponent's targeted arm.**



2) Point your head outside of the targeted arm. Grab your opponent's arm with both hands.

**Grab opponent's arm pull to
your chest, using a
Thumbless Grip.**



3) Using a thumbless grip, pull the targeted arm into your chest. Trap your opponent's same-side leg.

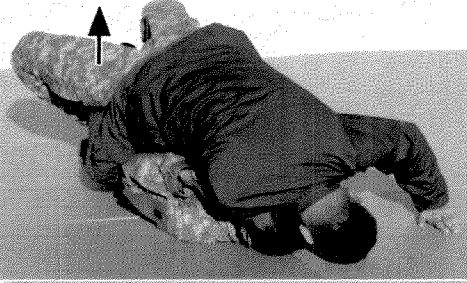
Chapter 4

Intermediate Ground Fighting Techniques

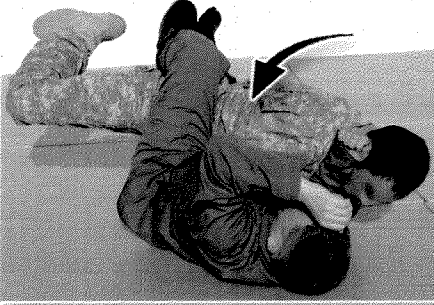
INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

OPPONENT MOUNTS, POSTS BOTH ARMS (continued)

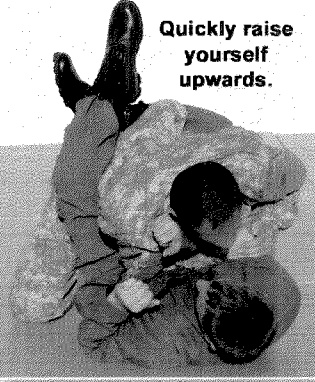
Trap the opponent's same-side leg and lift your hips.




Roll In the direction of the opponent's trapped arm.



Quickly raise yourself upwards.





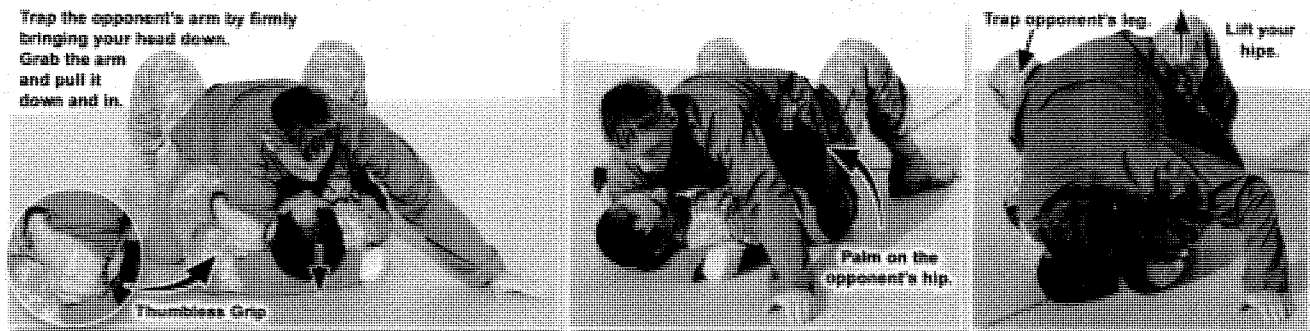
1) Lift your hips. Roll your opponent in the direction of the arm that you have trapped.

2) Achieve good posture in the guard. Control your opponent's arms at the elbows.

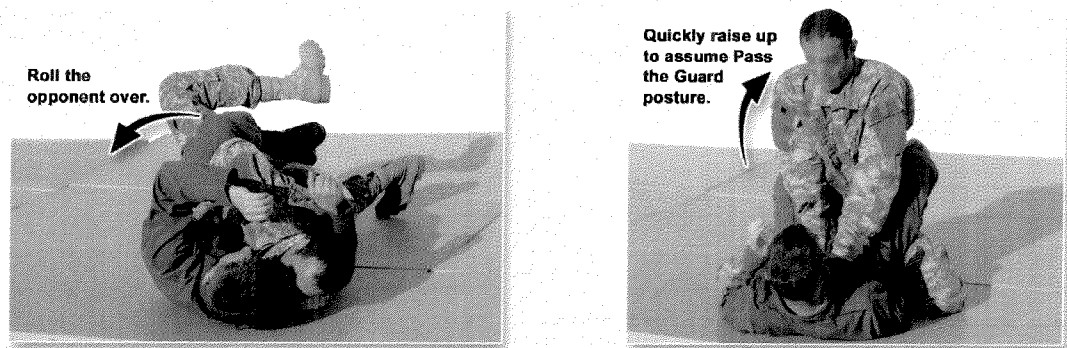
INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

ARMS AROUND NECK, POST ON ONE SIDE

When an opponent achieves the mount, he doesn't always grab the fighter's neck, as was taught in the basic technique. He can also wrap one arm around the fighter's head. If this occurs, the fighter should perform this technique.



- 1) Trap the opponent's arm by bringing your head to the ground. With your same-side hand, cup the bicep of his trapped arm with a thumbless grip, and pull it in, elbow down and tucked in.
- 2) Post the palm of your other hand on your opponent's hipbone.
- 3) Trap your opponent's leg on the same side as the trapped arm. Lift your hips.

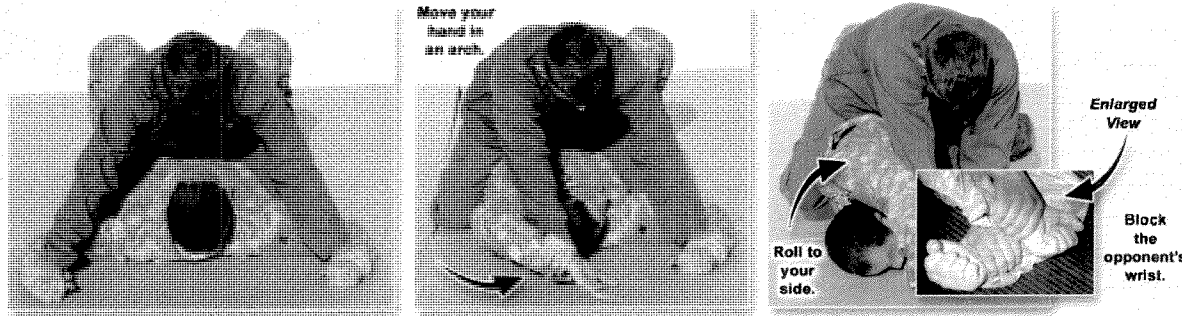


- 4) Roll your opponent over.
- 5) Achieve good posture in the guard. Control your opponent's arms at the elbows.

INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

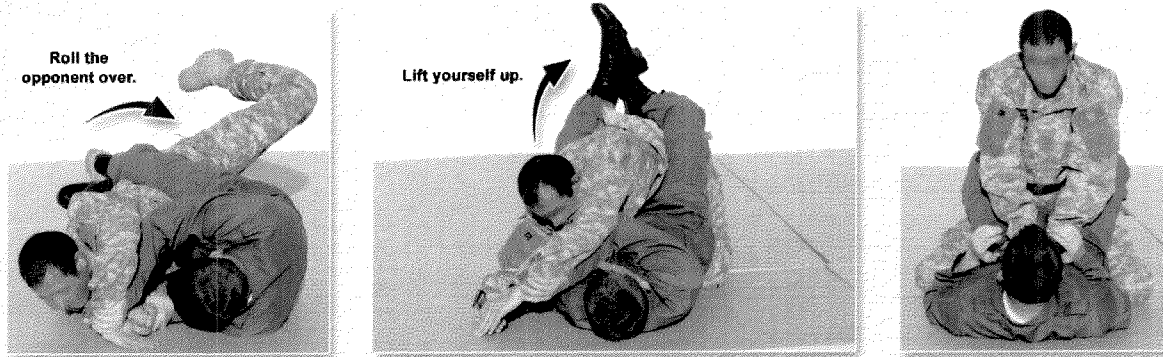
LARGER OPPONENT PINS WRISTS

Larger opponents will often pin both of the smaller fighter's wrists to the ground. The smaller fighter cannot defeat this position by lifting his arms, instead, he should perform this technique.



1) Move one hand to the other in an arch, keeping your hand on the ground. Block your opponent's opposite-side wrist.

2) Roll to your side, trapping your opponent's leg and blocking his wrist.



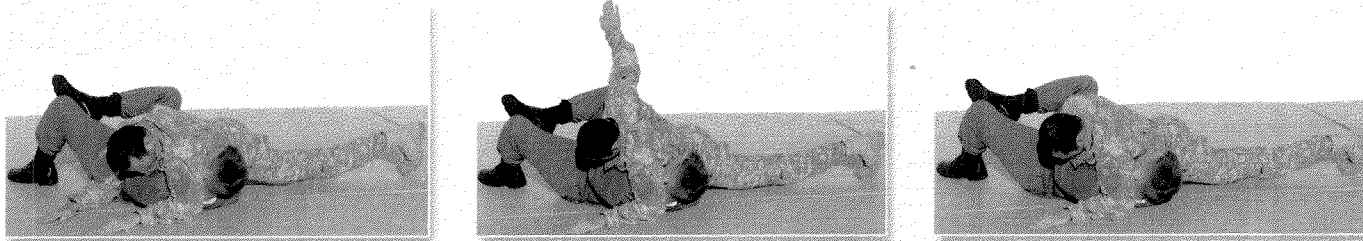
3) Roll your opponent. Lift up and over.

4) Achieve good posture in the guard.

INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

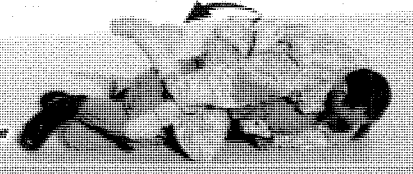
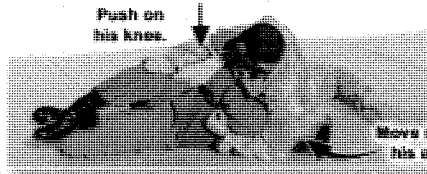
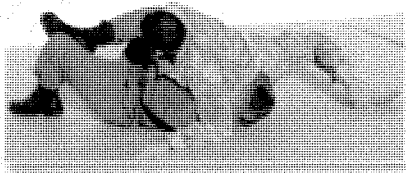
PUSH THE PROPPED KNEE

When a fighter attempts to achieve the mount, his opponent may prop up his near-side knee. If this happens, the fighter should perform push the propped knee.



1) Achieve side control.

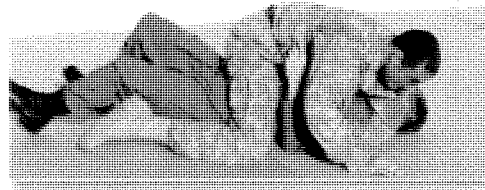
2) Post your hand by your opponent's near-side hip.



3) Switch your base by sitting your legs through.

4) Move your arm underneath your opponent's far-side shoulder, and pull up. Push on his knee, moving his top leg on top of his bottom leg.

5) Drive your knee across your opponent's waist. Hook your foot on his leg.



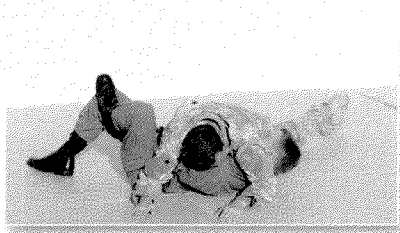
6) Release your opponent's leg and shoulder.

7) As your opponent's spine uncoils, achieve good posture in the mount.

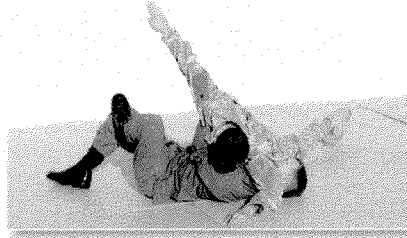
INTERMEDIATE BODY POSITIONING MOVES—INTERMEDIATE MOUNT ESCAPES

PULL THE PROPPED KNEE

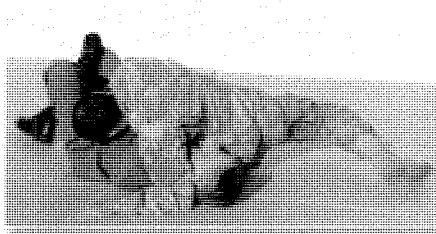
When a fighter attempts to achieve the mount, his opponent may prop up his far-side knee. If this happens, the fighter should perform the pull the propped knee.



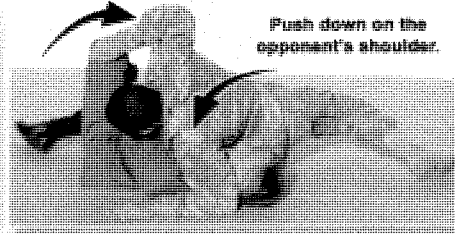
1) Achieve side control.



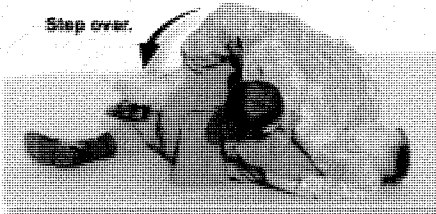
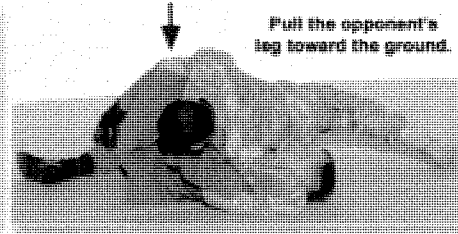
2) Post your hand that's closest to the opponent's legs by your opponent's near-side hip.



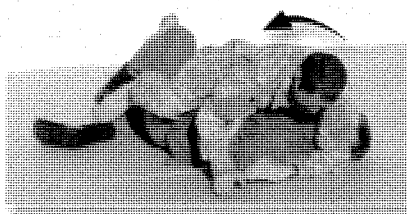
3) Switch your base by sitting your legs through.



4) Push on your opponent's far-side shoulder with your chest. Pull his leg toward the ground.



5) Step over. Hook your foot inside of your opponent's knee.



6) As your opponent's spine uncoils, achieve good posture in the mount.

