

Army Regulation 600–9

Personnel—General

The Army Weight Control Program

Headquarters
Department of the Army
Washington, DC
27 November 2006

UNCLASSIFIED

SUMMARY of CHANGE

AR 600-9

The Army Weight Control Program

This rapid action revision, dated 27 November 2006--

- o Supersedes AR 600-9, dated 1 September 2006.
- o Reinstates AR 600-9, dated 10 June 1987, until 2 April 2007.
- o Publishes AR 600-9, dated 27 November 2006, with an effective date of 2 April 2007.

This rapid action revision, dated 1 September 2006--

- o Incorporates Department of Defense Instruction 1308.3 (throughout publication).
- o Updates terminology (throughout publication).
- o Includes statistical data reporting requirement (para 2-14f).
- o Adds height and weight adjustment table for females (table 3-1)
- o Adds 1-year requirement for new accessions to meet body fat standards (para 3-2b).
- o Provides guidance to report percentage body fat in whole numbers (app B).
- o Includes revised circumference measurement sites for females (para B-5).
- o Includes revised circumference measurement sites for females (para B-5).
- o Includes revised methods and instructions for calculating body fat (para B-6, figs B-1 through B-4).
- o Adds new percent body fat estimation tables for males and females (figs B-5 and B-6).
- o Includes revised illustrations for male and female tape measurements (figs B-7 and B-8).

This revision, dated 10 June 1987--

- o Incorporates Change 1, dated 13 February 1987.
- o Incorporates Change 2, dated 10 June 1987.

Headquarters
Department of the Army
Washington, DC
27 November 2006

*Army Regulation 600–9

Effective 2 April 2007


Personnel—General

The Army Weight Control Program

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:


JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

proponent may modify chapters and policies contained in the regulation.

Proponent and exception authority.

The proponent of this regulation is the Deputy Chief of Staff, G–1. The Deputy Chief of Staff, G–1 has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The Deputy Chief of Staff, G–1 may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through higher headquarters to the policy proponent. Refer to AR 25–30 for specific guidance.

Army management control process.

This regulation contains management control provisions but does not identify key

management controls that must be evaluated.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from the DCS, G–1 (DAPE–HRI), 300 Army Pentagon, Washington, DC 20310.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the DCS, G–1 (DAPE–HRI), 300 Army Pentagon, Washington, DC 20310.

Distribution. This publication is available in electronic media only and is intended for command levels A, B, C, D, and E for the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

History. This publication is a rapid action revision. The portions affected by this rapid action revision are listed in the summary of change.

Summary. This regulation implements guidance in Department of Defense Instruction 1308.3, which establishes a weight control program and guidance for body fat standards in the services.

Applicability. This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. During mobilization, the

Contents (Listed by paragraph and page number)

Chapter 1

Introduction, page 1

Purpose • 1–1, *page 1*

References • 1–2, *page 1*

Explanation of abbreviations and terms • 1–3, *page 1*

Responsibilities • 1–4, *page 1*

Objectives • 1–5, *page 1*

Chapter 2

Responsibilities, page 1

General • 2–1, *page 1*

Deputy Chief of Staff, G–1 • 2–2, *page 1*

The Surgeon General • 2–3, *page 1*

*This regulation supersedes AR 600–9, dated 1 September 2006.

Contents—Continued

Deputy Chief of Staff, G-4 • 2-4, *page 1*
 Chief, National Guard Bureau • 2-5, *page 2*
 Chief, Army Reserve • 2-6, *page 2*
 Commanders of major Army commands • 2-7, *page 2*
 Commanding General, U.S. Army Training and Doctrine Command • 2-8, *page 2*
 School commandants • 2-9, *page 2*
 Commanding General, U.S. Army Forces Command • 2-10, *page 2*
 Commanders of major medical commands • 2-11, *page 2*
 Commanding General, U.S. Army Reserve Components Personnel Center • 2-12, *page 2*
 Individuals • 2-13, *page 2*
 Commanders and supervisors • 2-14, *page 2*
 Health care personnel • 2-15, *page 3*
 Designated unit fitness trainer or training noncommissioned officers • 2-16, *page 3*

Chapter 3

Proper Weight Control, *page 3*

Policy • 3-1, *page 3*
 Procedures • 3-2, *page 6*
 Reenlistment criteria • 3-3, *page 11*

Appendixes

- A. References, *page 13*
- B. Standard Methods for Determining Body Fat Using Body Circumferences, Height, and Weight, *page 15*
- C. Nutrition Guide to the Weight Control Program, *page 39*

Table List

Table 3-1: Weight for height table (screening table weight), *page 4*
 Table 3-2: Maximum allowable percent body fat standards, *page 4*
 Table C-1: Nutrition, *page 40*
 Table C-2: Diet structures, *page 41*
 Table C-3: Nutrient-calories guide, *page 42*
 Table C-4: Vitamins—minerals—water, *page 42*
 Table C-5: High-calorie, low-nutrient foods, *page 42*
 Table C-6: Equal measurements, *page 43*
 Table C-7: Alcohol calories, *page 44*
 Table C-8: Sample calorie chart, *page 44*
 Table C-9: Weight control—a personal choice, *page 45*
 Table C-10: Comparison of regular and TRIMM meals, *page 45*
 Table C-11: Sample 1200-calorie menu, *page 46*
 Table C-12: Sample 1500-calorie menu, *page 46*

Figure List

Figure 3-1: Sample correspondence for weight control program, *page 7*
 Figure 3-1: Sample correspondence for weight control program—Continued, *page 8*
 Figure 3-2: Flow process guide for screening and weight control actions (applies to all personnel: officers, warrant officers, and enlisted), *page 10*
 Figure B-1: Sample DA Form 5500, *page 17*
 Figure B-2: Instructions for completing DA Form 5500, *page 18*
 Figure B-3: Sample DA Form 5501, *page 19*
 Figure B-4: Instructions for completing DA Form 5501, *page 20*
 Figure B-5: Percent fat estimates for males, *page 21*
 Figure B-5: Percent fat estimates for males—Continued, *page 22*
 Figure B-5: Percent fat estimates for males—Continued, *page 23*

Contents—Continued

| |
|---|
| Figure B-5: Percent fat estimates for males—Continued, <i>page 24</i> |
| Figure B-5: Percent fat estimates for males—Continued, <i>page 25</i> |
| Figure B-5: Percent fat estimates for males—Continued, <i>page 26</i> |
| Figure B-5: Percent fat estimates for males—Continued, <i>page 27</i> |
| Figure B-5: Percent fat estimates for males—Continued, <i>page 28</i> |
| Figure B-6: Percent fat estimates for females, <i>page 29</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 30</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 31</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 32</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 33</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 34</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 35</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 36</i> |
| Figure B-6: Percent fat estimates for females—Continued, <i>page 36</i> |
| Figure B-7: Male tape measurement illustration, <i>page 37</i> |
| Figure B-8: Female tape measurement illustration, <i>page 38</i> |
| Figure C-1: Weight maintenance formula, <i>page 41</i> |
| Figure C-2: Weight loss formula, <i>page 41</i> |

Glossary

Chapter 1 Introduction

1–1. Purpose

This regulation establishes policies and procedures for the implementation of the Army Weight Control Program (AWCP).

1–2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1–4. Responsibilities

Responsibilities are listed in chapter 2.

1–5. Objectives

- a.* The primary objective of the AWCP is to insure that all personnel—
 - (1) Are able to meet the physical demands of their duties under combat conditions.
 - (2) Present a trim military appearance at all times.
- b.* Excessive body fat—
 - (1) Connotes a lack of personal discipline.
 - (2) Detracts from military appearance.
 - (3) May indicate a poor state of health, physical fitness, or stamina.
- c.* Objectives of the AWCP are to—
 - (1) Assist in establishing and maintaining—
 - (*a*) Discipline.
 - (*b*) Operational readiness.
 - (*c*) Optimal physical fitness.
 - (*d*) Health.
 - (*e*) Effectiveness of Army personnel through proper weight control.
 - (2) Establish appropriate body fat standards.
 - (3) Provide procedures for which personnel are counseled to assist in meeting the standards prescribed in this regulation.
 - (4) Foster high standards of professional military appearance expected of all personnel.

Chapter 2 Responsibilities

2–1. General

The Army traditionally has fostered a military appearance that is neat and trim. Further, an essential function of day-to-day effectiveness and combat readiness of the Army is that all personnel are healthy and physically fit. Self-discipline to maintain proper weight distribution and high standards of appearance is essential to every individual in the Army.

2–2. Deputy Chief of Staff, G–1

The Deputy Chief of Staff, G–1 is responsible for the AWCP.

2–3. The Surgeon General

The Surgeon General will—

- a.* Establish medical examination and counseling policies in support of the AWCP.
- b.* Evaluate the medical aspects of the program.
- c.* Establish and review procedures for determination of body fat content.
- d.* Provide guidance on improving the nutritional status of Soldiers.

2–4. Deputy Chief of Staff, G–4

The Deputy Chief of Staff, G–4 will—

- a.* Establish food service guidance in support of the AWCP.

- b.* Publish guidance and information pertaining to the caloric content of items served on master menus.

2-5. Chief, National Guard Bureau

The Chief, National Guard Bureau (CNGB) will—

- a.* Implement and monitor the AWCP in the Army National Guard (ARNG) (including units).
- b.* Take appropriate action under guidance prescribed in this regulation.

2-6. Chief, Army Reserve

The Chief, Army Reserve will—

- a.* Monitor the AWCP in the U.S. Army Reserve (USAR).
- b.* Take appropriate action under guidance prescribed in this regulation.

2-7. Commanders of major Army commands

Commanders of major commands will insure that Soldiers within their commands are evaluated under the body fat standards prescribed in this regulation.

2-8. Commanding General, U.S. Army Training and Doctrine Command

The Commanding General (CG), U.S. Army Training and Doctrine Command (TRADOC) will inform personnel at initial entry in the Active Army about basic nutrition and sound food consumption practices.

2-9. School commandants

TRADOC school commandants and commandants/commanders of U.S. Army Reserve Forces schools, the Army Reserve Readiness Training Center, and/or ARNG-conducted schools (regional noncommissioned officer (NCO) academies, State military academies, or ARNG Professional Education Center courses) will take the actions in paragraph 3-1*d* upon determining that a student arrived for a professional military school overweight.

2-10. Commanding General, U.S. Army Forces Command

The CG, U.S. Army Forces Command will implement and maintain the AWCP in USAR troop program units (TPUs).

2-11. Commanders of major medical commands

- a.* The CG, U.S. Army Health Services Command will—
 - (1) Institute weight reduction and counseling programs in Army medical facilities in support of the AWCP.
 - (2) Provide appropriate literature and training aids for use by Soldiers, supervisors, and commanders in selection of a proper diet.
- b.* Commanders of other major medical commands (overseas) will institute weight reduction and counseling programs in Army medical facilities in support of the AWCP overseas.

2-12. Commanding General, U.S. Army Reserve Components Personnel Center

The CG, U.S. Army Reserve Components Personnel Center will—

- a.* Monitor the AWCP in the Individual Ready Reserve (IRR).
- b.* Take appropriate action under guidance prescribed in this regulation.
- c.* Insure that members applying for tours of AD, active duty for training (ADT), active duty support (ADS), and Army Guard/Reserve (AGR) meet the body fat standards prescribed in this regulation. (Soldiers who do not meet these standards will not be permitted to enter on AD, ADT, or ADS or in AGR status.)

2-13. Individuals

Each Soldier (commissioned officer, warrant officer, and enlisted) is responsible for meeting the standards prescribed in this regulation. To assist Soldiers in meeting these responsibilities, screening tables will continue to be prescribed for use as is currently being done. A 5 percent zone below the screening table weight ceiling is suggested as a help to Soldiers in targeting their personal weight at a level that will minimize the probability of exceeding the screening table weight ceiling as a matter of habit. Soldiers will be coached to select their personal weight goals within or below the 5 percent zone and to strive to maintain that weight through adjustment of life style and fitness routines. A Soldier who consistently exceeds the personal weight goal will be encouraged to seek the assistance of designated unit fitness trainer or training NCO for advice in proper exercise and fitness and health care personnel for a proper dietary program. In other words, exceeding a properly selected goal will “trigger” the Soldier to use the substantial help available to alter the fitness and dietary behavior before confronting the finality of the screening table and initiation of official action if the body fat standards are exceeded.

2-14. Commanders and supervisors

Commanders and supervisors (Active Army and Reserve Component (RC)) will—

- a. Implement the AWCP, to include evaluation of the weight and military appearance of all Soldiers under their jurisdiction, to include measuring body fat as prescribed in this regulation.
- b. Insure the continued evaluation of all Soldiers under their command or supervision against the body fat standards prescribed in this regulation.
- c. Maintain data as listed in 2–14f on Soldiers in their command or under their supervision who—
 - (1) Enter a weight control program each year.
 - (2) Subsequently either meet the body fat standards prescribed in this regulation or were separated from the service for reasons related to overweight conditions.
- d. Encourage Soldiers to establish a personal weight goal as described above.
- e. Ensure that personnel responsible for issuing TDY and PCS orders include the following in the text of all orders: “You are responsible for reporting to your next duty station/school in satisfactory physical condition, able to pass the Army Physical Fitness Test (APFT) and meet weight standards.”
- f. Establish an interim process to collect and maintain the data listed below for submission in an annual report (reporting period is 1 January to 31 December). The Defense Integrated Military Human Resources System will ultimately house these data and provide the required reports for submission to the Office of the Under Secretary of Defense (Personnel and Readiness), once fielded. There is no intent for the commanders and supervisors to build other systems to meet this need for the short period. The report will contain statistical data on body fat standards by gender, age, and rank/grade, as follows:
 - (1) Number of personnel tested for physical fitness and body fat.
 - (2) Number of personnel who failed the physical fitness test.
 - (3) Number of personnel in physical fitness remedial training.
 - (4) Number of personnel who failed the body fat standards.
 - (5) Number of personnel placed on the AWCP.
 - (6) Number of personnel who successfully completed physical fitness remedial training.
 - (7) Number of personnel who successfully completed the AWCP.

2–15. Health care personnel

Health care personnel will—

- a. Assist commanders and supervisors by providing weight reduction counseling to individuals who are overweight.
- b. Identify those individuals who have a pathological condition requiring medical treatment.
- c. Evaluate overweight Soldiers—
 - (1) When a Soldier has a medical limitation, Department of the Army (DA) Form 3349 (Physical Profile) and AR 40–501 prescribe assignment limitations for Soldiers with profiles; for example, no mandatory strenuous physical activity).
 - (2) When a Soldier is pregnant.
 - (3) When an evaluation is requested by a unit commander (this is an option for unit commanders and is not mandatory).
 - (4) When separation is being considered for failure to make satisfactory progress in a weight control program.
 - (5) Six months prior to expiration term of service (ETS).

2–16. Designated unit fitness trainer or training noncommissioned officers

A designated unit fitness trainer or training NCOs will—

- a. Prescribe proper exercise and fitness techniques to assist Soldiers in determining, achieving and maintaining an appropriate personal weight goal.
- b. Assist commanders in developing proactive programs that clearly establish physical fitness as a unit value.

Chapter 3

Proper Weight Control

3–1. Policy

- a. Commanders and supervisors will monitor all members of their command (officers, warrant officers, and enlisted personnel) to ensure that they maintain proper weight, body composition, and personal appearance. At minimum, personnel will be weighed when they take the APFT or at least every 6 months. Soldiers may be weighed immediately before or after they take the APFT. Personnel exceeding the screening table weight (table 3–1) or identified by the commander or supervisor for a special evaluation will have a determination made of percent body fat. Identification and counseling of overweight personnel are required.

Table 3–1
Weight for height table (screening table weight)

| Height (in inches) | Minimum weight (in pounds)* | Male weight in pounds, by age | | | | Female weight in pounds, by age | | | |
|--------------------|-----------------------------|-------------------------------|-------|-------|-----|---------------------------------|-------|-------|-----|
| | | 17–20 | 21–27 | 28–39 | 40+ | 17–20 | 21–27 | 28–39 | 40+ |
| 58 | 91 | — | — | — | — | 119 | 121 | 122 | 124 |
| 59 | 94 | — | — | — | — | 124 | 125 | 126 | 128 |
| 60 | 97 | 132 | 136 | 139 | 141 | 128 | 129 | 131 | 133 |
| 61 | 100 | 136 | 140 | 144 | 146 | 132 | 134 | 135 | 137 |
| 62 | 104 | 141 | 144 | 148 | 150 | 136 | 138 | 140 | 142 |
| 63 | 107 | 145 | 149 | 153 | 155 | 141 | 143 | 144 | 146 |
| 64 | 110 | 150 | 154 | 158 | 160 | 145 | 147 | 149 | 151 |
| 65 | 114 | 155 | 159 | 163 | 165 | 150 | 152 | 154 | 156 |
| 66 | 117 | 160 | 163 | 168 | 170 | 155 | 156 | 158 | 161 |
| 67 | 121 | 165 | 169 | 174 | 176 | 159 | 161 | 163 | 166 |
| 68 | 125 | 170 | 174 | 179 | 181 | 164 | 166 | 168 | 171 |
| 69 | 128 | 175 | 179 | 184 | 186 | 169 | 171 | 173 | 176 |
| 70 | 132 | 180 | 185 | 189 | 192 | 174 | 176 | 178 | 181 |
| 71 | 136 | 185 | 189 | 194 | 197 | 179 | 181 | 183 | 186 |
| 72 | 140 | 190 | 195 | 200 | 203 | 184 | 186 | 188 | 191 |
| 73 | 144 | 195 | 200 | 205 | 208 | 189 | 191 | 194 | 197 |
| 74 | 148 | 201 | 206 | 211 | 214 | 194 | 197 | 199 | 202 |
| 75 | 152 | 206 | 212 | 217 | 220 | 200 | 202 | 204 | 208 |
| 76 | 156 | 212 | 217 | 223 | 226 | 205 | 207 | 210 | 213 |
| 77 | 160 | 218 | 223 | 229 | 232 | 210 | 213 | 215 | 219 |
| 78 | 164 | 223 | 229 | 235 | 238 | 216 | 218 | 221 | 225 |
| 79 | 168 | 229 | 235 | 241 | 244 | 221 | 224 | 227 | 230 |
| 80 | 173 | 234 | 240 | 247 | 250 | 227 | 230 | 233 | 236 |

Notes:

* Male and female Soldiers who fall below the minimum weights shown in table 3–1 will be referred for immediate medical evaluation.

¹ Height will be measured in stocking feet (without shoes), standing on a flat surface with the chin parallel to the floor. The body will be straight but not rigid, similar to the position of attention. The measurement will be rounded to the nearest inch with the following guidelines: If the height fraction is less than 1/2 inch, round down to the nearest whole number in inches; if the height fraction is 1/2 inch or greater, round up to the next highest whole number in inches.

² Weight will be measured and recorded to the nearest pound within the following guidelines: If the weight fraction is less than 1/2 pound, round down to the nearest pound; if the weight fraction is 1/2 pound or greater, round up to the next highest pound.

³ All measurements will be in a standard PT uniform (gym shorts and T-shirt, without shoes).

⁴ If the circumstances preclude weighing Soldiers during the APFT, they will be weighed within 30 days of the APFT.

⁵ Add 6 pounds per inch for males over 80 inches and 5 pounds for females for each inch over 80 inches.

b. Commanders and supervisors will provide educational and other motivational programs to encourage personnel to attain and maintain proper weight (body fat) standards. Such programs will include—

(1) Nutrition education sessions conducted by qualified health care personnel. These sessions are required for all Soldiers enrolled in a weight control program.

(2) Exercise programs, even though minimum APFT standards are achieved.

c. Maximum allowable percent body fat standards are shown in table 3–2. However, all personnel are encouraged to achieve the more stringent Department of Defense goal, which is 18 percent body fat for males and 26 percent body fat for females.

Table 3–2
Maximum allowable percent body fat standards

Age Group: 17–20
Male (% body fat): 20%
Female (% body fat): 30%

Age Group: 21–27
Male (% body fat): 22%
Female (% body fat): 32%

Age Group: 28–39
Male (% body fat): 24%
Female (% body fat): 34%

Table 3-2
Maximum allowable percent body fat standards—Continued

Age Group: 40 & Older

Male (% body fat): 26%

Female (% body fat): 36%

- d. Personnel who are overweight, including Soldiers who become pregnant while on the weight control program—
 - (1) Are nonpromotable (to the extent such nonpromotion is permitted by law).
 - (2) Will not be assigned to command, command sergeant major or first sergeant positions.
 - (3) Are not authorized to attend professional military schools. All Soldiers scheduled for attendance at professional military schools will be screened prior to departing their home station/losing command. Heights and weights will be recorded on their TDY orders (DD Form 1610 (Request and Authorization for TDY Travel of DOD Personnel), block 16) or on their PCS packets. Soldiers exceeding the screening table weight in table 3-1 will not be allowed to depart their command until the commander has determined they meet body fat composition standards.
 - (4) Arriving at any DA board select school or those who PCS to a professional military school who do not meet body composition standards will be processed for disenrollment and, if applicable, removal from the DA board select list, as follows:
 - (a) The Soldier will be notified in writing of the proposed action, the basis for the proposed action, and the consequences of denied enrollment and removal from the selection list.
 - (b) The Soldier will be provided an opportunity to submit matters in rebuttal in a reasonable period of time (not to exceed 5 working days) from receipt of notification.
 - (c) The approval authority is the Soldier's general court-martial convening authority, who will take prompt action consistent with the best interests of the Army after review of all matters submitted. The approval authority must approve enrollment denial and removal from the DA board select list if he finds that, in light of all the facts and circumstances, the Soldier's failure to meet body fat standards was the result of a lack of self-discipline expected of a Soldier of similar rank and experience.
 - (5) Arriving at professional military schools (other than DA board select or PCS schools) who do not meet body fat composition standards will be denied enrollment without further process and reassigned in accordance with paragraph 3-1d(6).
- e. When enrollment has been denied in accordance with paragraph 3-1d(4) or (5), the following policy applies:
 - (1) For Active Army Soldiers denied enrollment when on—
 - (a) TDY and return. Soldiers will be immediately returned to home station.
 - (b) TDY en route. Soldiers will be attached to the installation pending clarification of assignment instructions for follow on assignment. The school commandant will notify the Human Resources Command (HRC) of the Soldier's ineligibility for schooling and request clarification of assignment instructions.
 - (c) PCS. Policy in paragraph 3-1d(4) will be followed. If enrollment is denied, Soldiers will be reported immediately as available for assignment and attached to the installation pending assignment instructions from HRC-Alexandria.
 - (2) For the Active Army National Guard Soldier denied enrollment when on—
 - (a) TDY and return. All ARNGUS Soldiers in a Title 32 status will return to home station. For M-Day and Title 32 AGR Soldiers, the school commandant will forward the memorandum to the Adjutant General of the State concerned. The school commandant will forward the memorandum to CNGB, ATTN: NGB-ARZ.
 - (b) TDY en route. Title 32 AGR Soldiers will be returned immediately to home station. The memorandum from the school commandant will be forwarded to the Adjutant General of the State concerned. ARNG Title 10 Soldiers will be sent to their next permanent duty station. The memorandum will be forwarded to CNGB, ATTN: NGB-ARZ.
 - (c) PCS. Policy in paragraph 3-1d(4) will be followed. Title 32 Soldiers will be returned immediately to home station. ARNG Title 10 personnel will be attached to the office of the senior ARNG advisor at the installation pending receipt of permanent assignment instructions from NGB-ARP-CT.
 - (3) U.S. Army Reserve Soldiers denied enrollment when on—
 - (a) TDY and return. All Soldiers will return to home station. For USAR Title 10 AGR, the memorandum is forwarded to the Commander, HRC-St. Louis. For non-AGR Soldiers, the memorandum is forwarded to the first general officer in the Soldier's chain of command.
 - (b) TDY en route. USAR Title 10 AGR Soldiers will be sent to their permanent duty station. The memorandum will be forwarded to Commander, HRC-St. Louis. The school commandant will immediately notify the gaining installation.
 - (c) PCS. Policy in paragraph 3-1d(4) is followed. The school commandant will immediately report the Soldier to the Commander, HRC-St. Louis as available for assignment. Pending clarification of further instructions, attach the Soldier to the office of the senior USAR advisor at the installation.

f. If the school for which enrollment has been denied is the result of local selection, the installation commander may determine the Soldier's eligibility for subsequent attendance at the school.

g. If the school for which enrollment has been denied is the result of normal career assignment, the Soldier is eligible for subsequent attendance at the school providing the Soldier meets the standards defined in paragraph 3-1*c*.

h. Soldiers reporting to a school as a result of a reenlistment option and found not to meet body fat composition standards will be released in accordance with the needs of the Army (for Active Army Soldiers) or returned to home station as indicated above (for ARNG/USAR Soldiers). No grounds will exist for the Soldier to claim an unfulfilled reenlistment contract.

i. A memorandum will be sent to the first general officer in the sending/losing chain of command that addressees the Soldier's failure to maintain standards and the possible failure of the unit commander to identify and enroll the Soldier in the AWCP. In addition, for Soldiers in a TDY enroute or PCS status, the school commandant will notify the gaining installation commander that the Soldier reported to the school not meeting body composition standards. The receiving unit commander will screen the Soldier upon arrival and enroll the Soldier in the AWCP if the body composition standard is not met.

j. All enrollment denials and approved removal actions must be reported electronically to the Commander, HRC-Alexandria, 2461 Eisenhower, Alexandria VA 22331-0400. The following information will be forwarded:

- (1) Name.
- (2) Social Security number.
- (3) Date of denial and/or removal.
- (4) Brief synopsis of reasons for removal.

3-2. Procedures

a. Body fat composition will be determined for personnel—

- (1) Whose body weight exceeds the screening table weight in table 3-1.
- (2) When the unit commander or supervisor determines that the individual's appearance suggests that body fat is excessive.

b. Routine weigh-ins will be accomplished at the unit level. Percent body fat measurements will be accomplished by company or similar level commanders (or their designee) in accordance with standard methods prescribed in appendix B of this regulation. Soldiers will be measured by individuals of the same gender. If this cannot be accomplished, a female Soldier will be present when males measure females. IRR members on AT, ADT, and special active duty for training will have a weigh-in and body fat evaluation (if required) by the unit to which attached. Active Army and Reserve Component Soldiers exceeding body fat standards in table 3-1 (determined to be overfat), will be provided exercise guidance, dietary information or weight reduction counseling by health care personnel, and assistance in behavioral modification, as appropriate, to help them attain the requirements of the Army. Soldiers not meeting body fat standards after 1 year from date of entry into the Active Army will be entered in the AWCP and flagged under the provisions of AR 600-8-2 by the unit commander. Enrollment in a weight control program starts on the day that the Soldier is informed by the unit commander that he/she has been entered in a weight control program. The weight reduction counseling may be accomplished prior to or shortly after entry into a program.

c. The sample correspondence shown in figure 3-1 will be completed and retained by the unit commander or supervisor to document properly recommendations and actions taken in each case.

(Letterhead)

Office Symbol

Date

SUBJECT: Weight Control Program

(Individual Soldier)

1. You have been determined to exceed the body fat standard and a goal of 3 to 8 pounds of weight loss per month is considered to be satisfactory progress. Failure to make satisfactory progress or achieve the body fat standard could result in separation from the service.
2. You have been flagged under the provisions of AR 600–8–2 and entered in a weight control program.

Signature of Unit Commander

Office Symbol 1st End

Date

FROM: Individual Soldier

TO: Commanding Officer

I understand my responsibilities to achieve the body fat standards and to have my weight recorded periodically or during unit training assemblies as applicable.

Soldier's Signature

Office Symbol 2nd End

SUBJECT: Weight Control Program

FROM: Unit Commander

TO: MEDDAC

1. _____ exceeds the weight for height tables by _____ pounds and exceeds the body fat standard by _____ percent.
2. It is requested that a medical evaluation be conducted in view of the following (check applicable block):
 - () Soldier's profile. () Pregnancy. () Unit Commander's special request. () Initiation of separation action (failure to make satisfactory progress in a weight control program).
 - () Within 6 months of ETS.

Signature of Unit Commander

Office Symbol 3rd End

SUBJECT: Weight Control Program

FROM: Health Care Personnel

TO: Commanding Officer

1. This is to provide information concerning the evaluation of (Soldier's name and social security number) in accordance with AR 600–9.
2. Based on my examination and evaluation, the Soldier listed above is—
 - () Medically cleared to participate in a weight control and exercise program.
 - () Not medically cleared to participate in a weight control and exercise program.
3. If not medically cleared, the following applies: (Check one)
 - () The Soldier is pregnant.

Figure 3–1. Sample correspondence for weight control program

() The Soldier has an underlying medical condition requiring treatment. The estimated time before Soldier can participate in the Army Weight Control Program (AWCP) is ____ months.

() The Soldier has a recent injury that has prevented physical activity. The estimated time before the Soldier can participate in the AWCP and exercise program is ____ months.

() The Soldier has a permanent medical condition that requires referral to a medical evaluation board/physical evaluation board.

4. If medically cleared the Soldier will be enrolled in/continued in the AWCP and administratively handled in accordance with AR 600–9.

Signature of Physician

Office Symbol, 4th End

FROM: Unit Commander

TO: MEDDAC (Health Care Personnel)

1. ____ exceeds the screening table weight by ____ and body fat standard by ____ percent.
2. Nutrition education and weight reduction counseling are requested in accordance with AR 600–9, paragraph 3–1b(1).

Signature of Unit Commander

Office Symbol, 5th End

SUBJECT: Weight Control Program

FROM: Health Care Personnel

TO: Commanding Officer

1. ____ has been provided nutrition and weight reduction counseling in accordance with AR 600–9.
2. Followup counseling will be provided at unit level using information in AR 600–9, appendix C, and the assistance of a designated unit fitness trainer or training NCO, if available.

Signature of Health Care Personnel

Office Symbol, 6th End

FROM: Unit Commander

TO: Military Personnel Officer

1. The Soldier has been determined to be in compliance with the provisions of AR 600-9 and is therefore removed from the weight control program effective this date.
2. The individual's current weight is ____ pounds. Screening table weight ceiling is ____ pounds for present age category. Body fat composition is ____ percent, which is within the AR 600–9 standards.
3. This correspondence will be retained in the individual's MPRJ for 36 months from this date.

Signature of Unit Commander

Figure 3–1. Sample correspondence for weight control program—Continued

d. Health care personnel will perform a medical evaluation when a Soldier has a medical limitation, is pregnant, or when requested by the unit commander. A medical evaluation is also required for Soldiers being considered for separation because of a failure to make satisfactory progress in the AWCP, or within 6 months of ETS. Aircraft crewmembers who exceed the body fat standards will be referred to a flight surgeon for possible impact on flight status. The medical professional will—

(1) Conduct a thorough medical evaluation to rule out any underlying medical condition (for example, a metabolic disorder) that may be a cause for significant weight gain. If an underlying medical condition cannot be controlled with medication or other medical treatment, the medical professional will refer the Soldier to a medical evaluation board (MEB).

(2) Prepare any profile associated with the underlying diagnosis in accordance with AR 40-501, chapter 7. Temporary or permanent profiles will not be granted to exempt Soldiers from the requirement to meet body fat standards; therefore, such profiles will be deemed invalid.

(3) Complete a memorandum to the Soldier's unit commander.

(4) The sample correspondence shown in figure 3-1 will be completed and retained by the unit commander or supervisor to properly document recommendations and actions taken in each case. The use of certain medications to treat an underlying medical disorder or the inability to perform all aerobic events may contribute to weight gain but are not considered sufficient justification for noncompliance with this regulation. If an individual's weight condition, as diagnosed by medical authorities, results from an underlying or associated disease process, health care personnel will take one of the following actions:

(a) Prescribe treatment to alleviate the condition and return the Soldier to the unit. A physician must note the approximate amount of time treatment is needed before the Soldier can be continued in the AWCP. For instance, a Soldier who is medicated for an underactive thyroid gland may need 3 months before the medication enables the Soldier to begin to lose weight at the same rate as an individual with a normal functioning thyroid gland. This is not a permanent exemption from this regulation. Soldiers will not be permanently exempt because of chronic medical conditions.

(b) Hospitalize Active Army personnel for necessary treatment.

(c) Refer Reserve Component personnel to their personal physicians (at an individual's expense) for further evaluation or treatment.

(d) Provide personalized nutritional and exercise counseling based on medical diagnosis.

(e) Determine whether an individual's condition is medically disqualifying for continued service. If the Soldier does not meet medical retention standards of AR 40-501, chapter 3, the Soldier will be referred to an MEB/physical evaluation board (PEB).

e. If the underlying medical condition does not require referral to an MEB/PEB and a Soldier is classified as overweight, these facts will be documented and the Soldier will be entered into the AWCP except as described in paragraph 3-2b. Commanders will initiate suspension of favorable personnel actions under AR 600-8-2.

(1) The required weight loss goal of 3 to 8 pounds per month is considered a safely attainable goal to enable Soldiers to lose excess body fat and meet the body fat standards described in paragraph 3-1c. Weigh-ins will be made by unit personnel monthly (or during unit assemblies for ARNG and USAR personnel) to measure progress. A body fat evaluation may also be done by unit personnel to assist in measuring progress.

(2) As an exception to paragraph 3-2g, an individual who has not made satisfactory progress after any two consecutive monthly weigh-ins may be referred by the commander or supervisor to health care personnel for evaluation or reevaluation. If health care personnel are unable to determine a medical reason for lack of weight loss—and if the individual is not in compliance with the body fat standards at paragraph 3-1c and still exceeds the screening table weight (table 3-1)—the commander or supervisor will inform the individual that—

(a) Progress is unsatisfactory.

(b) He or she is subject to separation as specified in paragraph 3-2j.

f. Commanders and supervisors will remove individuals administratively from a weight control program as soon as the body fat standard is achieved. The screening table weight will not be used to remove Soldiers from a weight control program. The removal action will be documented as shown in figure 3-1; removal of suspension of favorable personnel actions will be accomplished at that time.

g. After a period of dieting and/or exercise for 6 months and except as described in paragraph 3-2b, Soldiers who have not made satisfactory progress and who still exceed the screening table and body fat standards will be processed as follows:

(1) If health care personnel determine that the condition is due to an underlying or associated disease process, action described in paragraph 3-2d will be taken.

(2) The unit commander will initiate a mandatory bar to reenlistment or administrative separation proceeding for

Soldiers who do not make satisfactory progress in the AWCP after a 6-month period and for whom no medical reasons exist to cause the overweight condition. The appropriate regulatory guidance is located in paragraph 3-2j.

h. Personnel will be continued in a weight control program (as provided in paragraphs 3-2e through g) after the initial 6-month period, except as described in paragraph 3-2b, if they—

- (1) Still exceed the body fat standard.
- (2) Have made satisfactory progress toward their weight loss (as indicated in the glossary), or are at or below the screening table weight (table 3-1).
- (3) For RC personnel only, if the individual has not obtained an evaluation from his/her personal physician under the provisions of paragraph 3-2d and cannot demonstrate that the overweight condition results from an underlying or associated disease process, the individual may be separated under appropriate regulations without further medical evaluation by health care personnel.

i. To assist commanders and supervisors, a flow chart outlining procedural guidance is shown at figure 3-2.

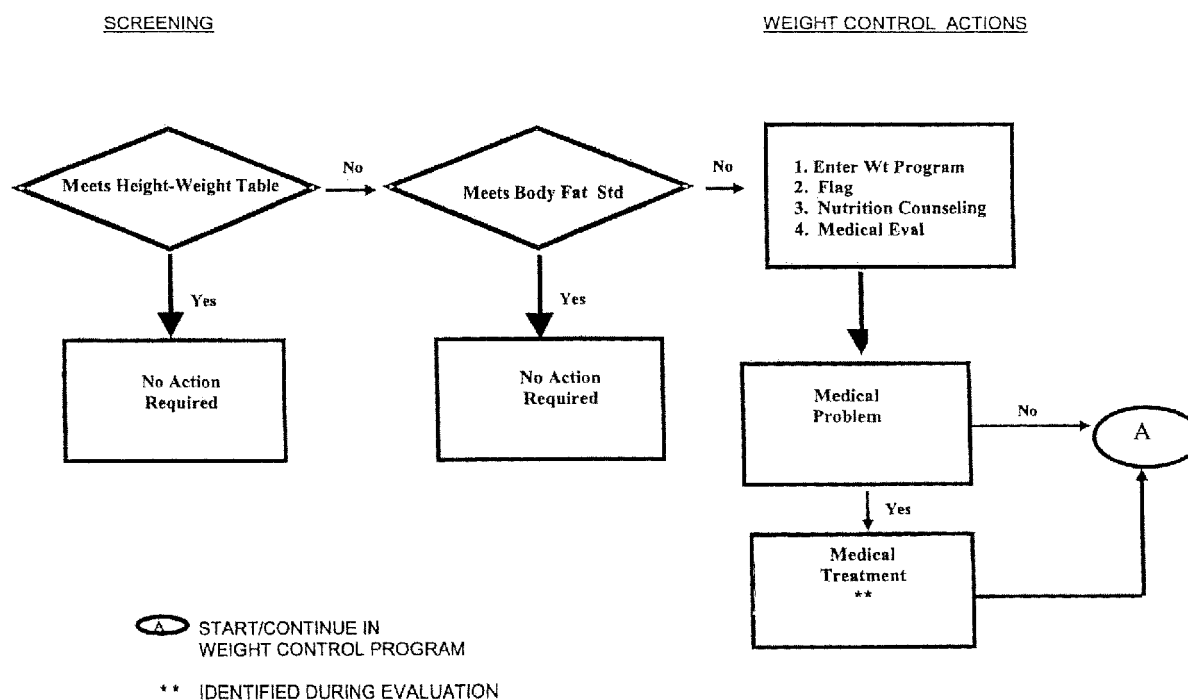


Figure 3-2. Flow process guide for screening and weight control actions (applies to all personnel: officers, warrant officers, and enlisted)

j. The commander or supervisor will inform the Soldier in writing that a bar to reenlistment or separation proceedings are being initiated under the following regulations: AR 135-175; AR 135-178; AR 600-8-24, chapters 4 and 5; AR 601-280; AR 635-200, chapters 5 through 15, and 18; NGR 600-5; NGR 600-101; NGR 600-200, chapter 7; or NGR 635-100. These actions will be taken unless a medical reason is found to preclude the loss of weight or there are other good causes to justify additional time in the AWCP.

(1) The individual will immediately respond to the separation consideration letter in writing. The commander or supervisor will consider the response and initiate separation action if no adequate explanation is provided, unless the individual submits an application for retirement, if eligible. USAR personnel who fall under the purview of this paragraph will be released from AD or discharged, as appropriate.

(2) If separation action is not initiated or does not result in separation, the individual will be entered or continued in a weight control program, as specified in paragraph 3-2e.

k. If, within 36 months following removal from a weight control program, it is determined (under paragraph 3-2a) that an individual exceeds the screening table weight (table 3-1) and the body fat standard prescribed in paragraph 3-1c, the following will apply:

- (1) If the unit commander determines that the individual exceeds the body fat standard—
- (a) Within 12 months following removal from the AWCP and no underlying or associated disease process is found as the cause of the condition, the unit commander will initiate separation proceedings per paragraphs 3–2g and j.
 - (b) After the 12th month, but within 36 months from the date of the previous removal from the program, and if no underlying or associated disease process is found as the cause of the condition, the individual will be allowed 90 days to meet the standards. Personnel who meet the body fat standard after that period will be removed from the program. All others will be subject to separation from the service under paragraph 3–2j.
 - (c) Personnel who meet this regulation's standards and become pregnant will be exempt from the standards for the duration of the pregnancy plus the period of convalescent leave after termination of pregnancy. They will be entered in a weight control program, if required, after completion of 135 days of convalescent leave and with approval of a medical doctor that they are fit for participation in a weight control program. This procedure also applies to individuals in a medical holding unit who have been hospitalized for long periods. Soldiers entered/reentered in a weight control program after pregnancy, prolonged treatment, or hospitalization will be considered to be in a new weight control program. Paragraph 3–2k of this regulation will not apply at that time.
- (2) If the individual is determined to exceed the body fat standard and the condition is due to an underlying or associated disease process, action described in paragraph 3–2d will be taken.
- l. Inherent in the responsibility of selection boards is the obligation to select only those individuals who are considered to be physically fit to perform the duties required of them at all times. Compliance with the AWCP as prescribed in this regulation will be considered in the selection process for promotion, professional military or civilian schooling, or assignment to command positions. Procedures for commanders and supervisors to provide current information for use by selection boards indicating whether individuals meet the prescribed standards will be included in DA regulations or issued by separate correspondence.
 - m. Records will be maintained in the Military Personnel Records Jacket for personnel in weight control programs. On transfer from one unit to another, the losing commander or supervisor will forward a statement to the gaining unit with information indicating the status of the individual's participation in a weight control program. When the transfer is a permanent change of station, the unit commander's statement will be filed as a transfer document in the Military Personnel Records Jacket, under AR 600–8–104.
 - n. Upon removal from the weight control program, unit records on participation in a weight control program will be maintained in the Military Personnel Records Jacket for a period of 36 months from date of removal. If the Soldier is transferred to another unit prior to completion of 36 months, action will be taken in accordance with paragraph 3–2m.

3–3. Reenlistment criteria

- a. Personnel who exceed the screening table weight at table 3–1 and the body fat standard for their current age group in paragraph 3–1c will not be allowed to reenlist or extend their enlistment.
- b. Exceptions to policy for Active Army personnel (including RC personnel on AD) are prescribed in this subparagraph. For Soldiers who are otherwise physically fit and have performed their duties in a satisfactory manner, the commander exercising General Court-martial Convening Authority or the first general officer in the Soldier's normal chain of command (whichever is in the most direct line to the Soldier) may approve the following exceptions to policy:
 - (1) Extension of enlistment may be authorized for personnel who meet one of the following criteria:
 - (a) Individuals who have a temporary medical condition that precludes loss of weight. In such cases, the type of ongoing treatment will be documented; the extension will be for the minimum time necessary to correct the condition and achieve the required weight loss.
 - (b) Pregnant Soldiers (except those Soldiers who have medical conditions as listed in paragraph 3–2d) who are otherwise fully qualified for reenlistment, including those with approved waivers, but who exceed acceptable standards prescribed in this regulation, will be extended for the minimum period that will allow birth of the child, plus 6 months. A clearance from the doctor that the Soldier is medically fit to participate in a weight control program is required. Authority, which will be cited on DA Form 1695 (Oath of Extension of Enlistment), is AR 601–280, paragraph 3–3. On completion of the period of extension, the Soldier will be reevaluated under paragraph 3–2.
 - (2) Exceptions to policy allowing reenlistment/extension of enlistment are authorized only in cases where—
 - (a) Medically documented conditions (para 3–2d) preclude attainment of required standards.
 - (b) Disability separation is not appropriate.
- c. All requests for extension of enlistment for ARNG and USAR (TPU and IRR) personnel not on AD will be processed under NGR 600–200 or AR 140–111, chapter 3, as appropriate.
- d. Requests for exceptions to policy will be forwarded through the chain of command, with the commander's personal recommendation and appropriate comment at each level. As a minimum, requests will include—
 - (1) The physician's evaluation.
 - (2) A record of progress in the weight control program.
 - (3) Current height and weight.
 - (4) Body fat content.

(5) Years of active Federal service.

(6) Other pertinent information.

e. Soldiers who have completed a minimum of 18 years of active Federal service may, if otherwise eligible, be extended for the minimum time required to complete 20 years active Federal service. Retirement must be accomplished not later than the last day of the month in which the Soldier attains retirement eligibility. Application for retirement will be submitted at the time extension is authorized. Approval/disapproval authority is outlined in AR 601–280.

f. USAR Soldiers who have completed a minimum of 18 years of qualifying service for retired pay at age 60 may be extended for the minimum time required to complete 20 years qualifying service. Approval/disapproval authority is outlined in AR 140–111. Transfer to the IRR, Retired Reserve, or discharge will be accomplished at the end of the retirement year in which the Soldier attains the 20 qualifying years.

g. ARNG Soldiers who have completed a minimum of 18 years qualifying service for retired pay at age 60 may be extended for the minimum time required to complete 20 years qualifying service by the State Adjutant General; disapproval authority is the CNGB. Transfer to the IRR, Retired Reserve, or discharge will be accomplished at the end of the retired year in which the Soldier attains the 20 qualifying years.

Appendix A References

Section I Required Publications

AR 135–175

Separation of Officers. (Cited in para 3–2*j*.)

AR 135–178

Enlisted Administrative Separations. (Cited in para 3–2*j*.)

AR 140–111

U.S. Army Reserve Reenlistment Program. (Cited in para 3–3*c*.)

AR 600–8–2

Suspension of Favorable Personnel Actions (FLAGS). (Cited in para 3–2*b*, *e*.)

AR 601–280

Army Retention Program. (Cited in paras 3–2*j*, 3–3*b*(1)(b).)

AR 600–8–24

Officer Transfers and Discharges. (Cited in para 3–2*j*.)

AR 635–200

Active Duty Enlisted Administrative Separations. (Cited in para 3–2*j*.)

AR 600–8–104

Military Personnel Information Management/Records. (Cited in para 3–2*m*.)

NGR (AR) 600–5

The Active Guard/Reserve (AGR) Program, Title 32, Full-Time National Guard Duty (FTNGD). (Cited in para 3–2*j*.)

NGR 600–101

Warrant Officers—Federal Recognition and Related Personnel Activities. (Cited in para 3–2*j*.)

NGR 600–200

Enlisted Personnel Management. (Cited in para 3–2*j*.)

NGR 635–100

Termination of Appointment and Withdrawal of Federal Recognition. (Cited in para 3–2*j*.)

DODI 1308.3

DOD Physical Fitness and Body Fat Programs Procedures. (Cited in Summary of Change and Summary.) (Available from www.dtic.mil/whs/directives.)

Section II Related Publications

A related publication is a source of additional information. The user does not have to read a related publication to understand this publication.

AR 40–25

Nutrition Standards and Education

AR 40–501

Standards of Medical Fitness.

Section III

Prescribed Forms

The following forms are available on the Army Publishing Directorate Web site (www.apd.army.mil) unless otherwise stated.

DA Form 5500

Body Fat Content Worksheet (Male). (Cited in paras B-1*b*, B-2, B-6*a*, figs B-3, B-4.)

DA Form 5501

Body Fat Content Worksheet (Female). (Cited in paras B-1*b*, B-2, B-6*a*, figs B-3, B-4.)

DA Form 5511

Personal Weight Loss Progress. (Cited in para C-15*h*.)

Section IV

Referenced Forms

DA Form 1695

Oath of Extension Enlistment

DA Form 3349

Physical Profile

DD Form 1610

Request and Authorization for TDY Travel of DOD Personnel. (Available from www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm.)

Appendix B

Standard Methods for Determining Body Fat Using Body Circumferences, Height, and Weight

B-1. Introduction

a. The procedures for the measurements of height, weight, and specific body circumferences for the estimation of body fat are described in this appendix.

b. Although circumferences may be looked upon by untrained personnel as easy measures, they can give erroneous results if proper precautions are not followed. The individual taking the measurements must have a thorough understanding of the appropriate body landmarks and measurement techniques. Unit commanders will require that designated personnel have hands-on training and read the instructions regarding technique and location and practice before official determinations are made. Two members of the unit will be utilized in the taking of measurements, one to place the tape measure and determine measurements, the other to assure proper placement and tension of the tape, as well as to record the measurement on the worksheet (DA Form 5500 (Body Fat Content Worksheet (Male) and DA Form 5501 (Body Fat Content Worksheet (Female))). The individual taking the measurements will be of the same sex as the Soldier being measured; the individual who assists the measurer and does the recording may be of either sex. The two will work with the Soldier between them so the tape is clearly visible from all sides. Take all circumference measurements three times and record them to the nearest $\frac{1}{2}$ inch. If any one of the three closest measurements differs by more than 1 inch from the other two, take an additional measurement and compute a mathematical average of the three measurements with the least difference to the nearest $\frac{1}{2}$ inch and record this value.

c. When measuring circumferences, compression of the soft tissue is a problem that requires constant attention. The tape will be applied so that it makes contact with the skin and conforms to the body surface being measured. It will not compress the underlying soft tissues. Note, however, that in the hip circumference more firm pressure is needed to compress gym shorts. All measurements are made in the horizontal plane (parallel to the floor), unless indicated otherwise.

d. The tape measure will be made of a nonstretchable material, preferably fiberglass; cloth or steel tapes are unacceptable. Cloth measuring tapes will stretch with usage and most steel tapes do not conform to body surfaces. The tape measure will be calibrated—that is, compared with a yardstick or a metal ruler to ensure validity. This is done by aligning the fiberglass tape measure with the quarter inch markings on the ruler. The markings will match those on the ruler; if not, do not use that tape measure. The tape will be $\frac{1}{4}$ - to $\frac{1}{2}$ -inch wide (not exceeding $\frac{1}{2}$ inch) and a minimum of 5 to 6 feet in length. A retractable fiberglass tape is the best type for measuring all areas. Tapes currently available through the Army Supply System (Federal Stock Number 8315-00-782-3520) may exceed the $\frac{1}{2}$ -inch width limits and could slightly impact on circumferential measurements. Efforts are being made to replace the supply system tape with a narrower retractable tape. In the interim, the current Army supply system or any other fiberglass tape not to exceed $\frac{3}{8}$ inch may be used if retractable tapes cannot be purchased by unit budget funds available and approved by installation commanders.

B-2. Height and weight measurements

a. The height will be measured with the Soldier in stocking feet (without shoes) and standard PT uniform (gym shorts and T-shirt), standing on a flat surface with the head held horizontal, looking directly forward with the line of vision horizontal, and the chin parallel to the floor. The body will be straight but not rigid, similar to the position of attention. Unlike the screening table weight this measurement will be recorded to the nearest $\frac{1}{2}$ inch in order to gather a more accurate description of the Soldier's physical characteristics.

b. The weight will be measured with the Soldier in a standard PT uniform (gym shorts and T-shirt). Shoes will not be worn. The measurement will be made on scales available in units and recorded to the nearest pound with the following guidelines:

- (1) If the weight fraction of the Soldier is less than $\frac{1}{2}$ pound, round down to the nearest pound.
- (2) If the weight fraction of the Soldier is $\frac{1}{2}$ pound or greater, round up to the next whole pound.

B-3. Description of circumference sites and their anatomical landmarks and technique

a. All circumference measurements will be taken three times and recorded to the nearest $\frac{1}{2}$ -inch (or 0.50). Each sequential measurement will be within $\frac{1}{2}$ inch of the next or previous measurement. If the measurements are within $\frac{1}{2}$ inch of each other, derive a mathematical average to the nearest $\frac{1}{2}$ of an inch. If the measurements differ by $\frac{1}{2}$ inch or more continue measurements until you obtain three measures within $\frac{1}{2}$ inch of each other. Then average the three closest measures.

b. Each set of measurements will be completed sequentially to discourage assumption of repeated measurement readings. For males, complete 1 set of abdomen and neck measurements, NOT three abdomen circumferences followed by three neck circumferences. Continue the process by measuring the abdomen and neck in series until you have three sets of measurements. For females, complete one set of neck, waist (abdomen), and hip measurements, NOT 3 neck followed by three waist (abdomen), and so on. Continue the process by measuring neck, waist (abdomen), and hip series until you have 3 sets of measurements.

c. Sample worksheets and instructions for computing body fat are at figures B-1 and B-2 (males) and figures B-3 and B-4 (females). Percent fat estimates are show in figures B-5 (males) and B-6 (females).

d. Illustrations of each tape measurement are at figures B-7 (males) and figure B-8 (females). A training videotape is also available at Visual Information Libraries and/or Training Audiovisual Support Centers.

| BODY FAT CONTENT WORKSHEET (Male) | | | | |
|--|-------|----------------------------------|-------------|----------------------------------|
| For use of this form, see AR 600-9; the proponent agency is DCS, G-1. | | | | |
| NAME (Last, First, Middle Initial) DOE, JOHN | | SSN 198-00-0000 | RANK SGT | |
| HEIGHT (to nearest 0.50 inch) 72.00 | | WEIGHT (to nearest pound) 200 | AGE 21 | |
| STEP | FIRST | SECOND | THIRD | AVERAGE (to nearest 0.50 in.) |
| 1. Measure abdomen at the level of the navel (belly button.) Round down to the nearest 0.50 inch. (Repeat 3 times.) | 36.00 | 36.50 | 36.50 | 36.00 |
| 2. Measure neck just below level of larynx (Adam's apple.) Round up to the nearest 0.50 inch. (Repeat 3 times.) | 16.50 | 16.00 | 16.50 | 16.50 |
| 3. Enter the average abdominal circumference. | | | | 36.00 |
| 4. Enter the average neck circumference. | | | | 16.50 |
| 5. Enter circumference value (step 3 - step 4). | | | | 19.50 |
| 6. Find the height in Table 3-1 (Height Factor). Enter height in inches. | | | | 72.00 |
| 7. Find the Soldier's circumference value (step 5) and height (step 6) in figure B-5 (Percent Fat Estimation for Men). Enter the percent body fat value that intercepts with the circumference value and height. This is Soldier's Percent Body Fat. | | | | 18.00 |
| REMARKS | | | | |

CHECK ONE

☒ Individual is in compliance with Army Standards; _____ is not in compliance with the standards.
 _____ Recommended monthly weight loss is 3-8 lbs.

| | | | | | |
|-------------------------|------|--------------------|--|------|--------------------|
| PREPARED BY (Signature) | RANK | DATE (YYYYMMDD) | APPROVED BY SUPERVISOR (Printed Name and Signature) | RANK | DATE (YYYYMMDD) |
|-------------------------|------|--------------------|--|------|--------------------|

DA FORM 5500, AUG 2006

Previous Editions are Obsolete.

APD v1.00

Figure B-1. Sample DA Form 5500

NAME. Print the Soldier's last name, first name, and middle initial in the NAME block. Also include Social Security number and rank.

HEIGHT. Measure the Soldier's height as described in this appendix to the nearest 1/2 inch and record the measurement in the HEIGHT block.

WEIGHT. Measure the Soldier's weight as described in this appendix to the nearest pound and record in the WEIGHT block.

Note: Follow the rules for rounding of height and weight measurement as described earlier in this appendix.

AGE. Print age in years in the AGE block.

STEP 1. Abdominal measurement. Measure the Soldier's abdominal circumference to the nearest 1/2 inch and round down to the nearest 1/2 inch and record in the block labeled FIRST.

STEP 2. Neck Measurement. Measure the Soldier's neck circumference to the nearest 1/2 inch and round up to the nearest 1/2 inch and record in the block labeled FIRST.

Note: REPEAT STEPS 1 and 2 in series until you have completed three sets of abdomen and neck circumference measurements.

STEP 3. Average abdominal measurement. Find the mathematical average of the FIRST, SECOND, and THIRD abdominal circumference by adding them together and dividing by three. Place this number to the nearest 1/2 inch in the block marked AVERAGE for STEPS 1 and 3.

STEP 4. Average neck measurement. Find the mathematical average of your FIRST, SECOND, and THIRD neck circumference by adding them together and dividing by three. Place this number to the nearest 1/2 inch in the block marked AVERAGE for STEPS 2 and 4.

STEP 5. Circumference value =abdomen circumference (STEP 3) minus neck circumference (STEP 4). Subtract STEP 4 from STEP 3 and enter results in STEP 5.

STEP 6. Height factor. Find the height in table 3-1. Enter the height in inches.

Note: Follow the rules for rounding of height and weight measurements as described earlier in this appendix.

STEP 7. Percent body fat. Determine the percent body fat by finding the Soldier's circumference value (value listed in STEP 5) and height in inches (value listed in STEP 6) in figure B-5. The percent body fat is the value that intercepts with circumference value and height in inches as listed in figure B-5. This is the Soldier's PERCENT BODY FAT.

Note: Go to figure B-5 to locate the circumference value (abdomen - neck difference) in the left-hand column.

Figure B-2. Instructions for completing DA Form 5500

| M | TAB | TAB | TAB | TAB |
|--|-------|----------------------------------|---|----------------------------------|
| BODY FAT CONTENT WORKSHEET (Female) For use of this form, see AR 600-9; the proponent agency is DCS, G-1. | | | | |
| NAME (Last, First, Middle Initial) DOE, JANE | | SSN 432-00-0000 | | RANK SGT |
| HEIGHT (to nearest 0.50 inch) 63.00 | | WEIGHT (to nearest pound) 150 | | AGE 21 |
| NOTE: ¼" = .25 ½" = .50 ¾" = .75 | | | | |
| STEP | FIRST | SECOND | THIRD | AVERAGE (to nearest 0.50 in.) |
| 1. Measure neck just below level of larynx (Adam's apple) up to nearest 0.50 inch. Repeat three times, then average. | 13.00 | 13.50 | 13.50 | 13.50 |
| 2. Measure waist (abdomen) at the point of minimal abdominal circumference. Round down to nearest 0.50 inch. Repeat three times, then average. | 26.00 | 26.50 | 26.00 | 26.00 |
| 3. Measure hips at point where the gluteus muscles (buttocks) protrude backward the most. Round down to nearest 0.50 inch. Repeat three times, then average. | 40.50 | 41.00 | 41.00 | 40.50 |
| 4. CALCULATIONS | 26.00 | REMARKS | | |
| A. Enter average waist circumference | | | | |
| B. Enter average hip circumference | 40.50 | | | |
| C. TOTAL (4A + 4B) | 66.50 | | | |
| D. Enter average neck circumference | 13.50 | | | |
| E. Enter circumference value (4C - 4D) | 53.00 | | | |
| F. Find the height in Table 3-1 (Height Factor). Enter height in inches. | 63.00 | | | |
| G. Find the Soldier's circumference value (line 4E) and height (line 4F) in Figure B-6 (Percent Fat Estimation for Women). Enter the body fat value that intercepts with the circumference value and height. This is the Soldier's Percent Body Fat. | 27.00 | | | |
| CHECK ONE <input checked="" type="checkbox"/> Individual is in compliance with Army standards; <input type="checkbox"/> is not in compliance with the standards. <input type="checkbox"/> Recommended monthly weight loss is 3-8 lbs. | | | | |
| PREPARED BY (Signature) | RANK | DATE (YYYYMMDD) | APPROVED BY SUPERVISOR (Printed Name and Signature) | RANK |
| | | | | DATE (YYYYMMDD) |

DA FORM 5501, AUG 2006

Previous Editions are Obsolete.

APD v1.00

Figure B-3. Sample DA Form 5501

NAME. Print the Soldier's last name, first name, and middle initial in the NAME block. Also include rank and Social Security number.

HEIGHT. Measure the Soldier's height as described in this appendix, to the nearest ½ inch and record the measurement in the HEIGHT block.

WEIGHT. Measure the Soldier's weight as described in this appendix to the nearest pound and record in the WEIGHT block.

Note: Follow the rounding rules for rounding height and weight measurements as described earlier in this appendix.

AGE. Print age in years in the AGE block.

STEP 1. Neck Measurement. Measure the Soldier's neck circumference at a point just below the larynx (Adam's apple and perpendicular to the long axis of the neck. The Soldier should look straight ahead during the measurement, with shoulders down (not hunched). Round the neck measurement up to the nearest ½ inch and record in the block labeled FIRST.

STEP 2. Waist (abdomen) measurement. Measure the Soldier's 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 (breast bone). When you cannot easily see this site, take several measurements at probable sites and use the smallest value. Be sure the tape is level and parallel to the floor. The Soldier's arms must be at the sides. Take measurements at the end of Soldier's normal relaxed exhalation. Round the natural waist measurement down to the nearest ½ inch and record in the block labeled FIRST.

STEP 3. Hip measurement. Measure the Soldier's hip circumference while facing the Soldier's right side by placing the tape around the hips so that it passes over the greatest protrusion of the gluteal muscles (buttocks) as viewed from the side. Make sure the tape is level and parallel to the floor. Apply sufficient tension on the tape to minimize the effect of clothing. Round hip measurement down to the nearest ½ inch and record in the block labeled FIRST.

Note: REPEAT STEPS 1, 2, and 3 in series until you have completed three sets of neck, waist (abdominal), and hip circumference measurements. Find the mathematical average of the FIRST, SECOND, and THIRD circumferences in Steps 1, 2, and 3 by adding them together and dividing by three for each step. Place this number to the nearest ½ inch in the block marked AVERAGE for each step.

STEP 4. Calculations.

Line A. Waist (abdomen) circumference. Enter value from STEP 2 in line 4A.

Line B. Hip circumference. Enter value from STEP 3 in line 4B.

Line C. Total ($4A + B = 4C$). Add waist circumference (Line 4A) and hip circumference (Line 4B). Enter result in line 4C.

Line D. Neck circumference. Enter value from STEP 1 in line 4D.

Line E. Circumference value ($4C - 4D = 4E$). Subtract value in Line C from value in Line D. Enter result in line 4E.

Line F. Height factor. Find the height in table 3-1. Enter the height in inches in line 4F.

Note: Follow the rules for rounding of height and weight measurements as described earlier in this appendix.

Line G: Percent body fat. Determine the percent body fat by finding the Soldier's circumference value (value listed in line 4E) and height in inches (line 4F) located in figure B-6. The percent body fat is the value that intercepts with circumference value and height in inches as listed in figure B-6. This is the Soldier's PERCENT BODY FAT.

Note: Go to figure B-6 to locate the circumference value in the left-hand column.

Figure B-4. Instructions for completing DA Form 5501

| 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 |

Figure B-5. Percent fat estimates for 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 |
| 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 | | | | | | | | | | |
| 34.0 | | | | | | | | | | |
| 34.5 | | | | | | | | | | |
| 35.0 | | | | | | | | | | |

Figure B-5. Percent fat estimates for males—Continued

| 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 |

Figure B-5. Percent fat estimates for males—Continued

| Circumference Value* | Height (in) | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 65.0 | 65.5 | 66.0 | 66.5 | 67.0 | 67.5 | 68.0 | 68.5 | 69.0 | 69.5 |
| 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 | | | | | | | | | | |
| 34.0 | | | | | | | | | | |
| 34.5 | | | | | | | | | | |
| 35.0 | | | | | | | | | | |

Figure B-5. Percent fat estimates for males—Continued

| 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 |

Figure B-5. Percent fat estimates for males—Continued

| Circumference Value* | Height (in) | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 70.0 | 70.5 | 71.0 | 71.5 | 72.0 | 72.5 | 73.0 | 73.5 | 74.0 | 74.5 |
| 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 |
| 33.5 | | | | | | | | | | 37 |
| 34.0 | | | | | | | | | | |
| 34.5 | | | | | | | | | | |
| 35.0 | | | | | | | | | | |

Figure B-5. Percent fat estimates for males—Continued

| 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 |

Figure B-5. Percent fat estimates for males—Continued

| Circumference Value* | Height (in) | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 75.0 | 75.5 | 76.0 | 76.5 | 77.0 | 77.5 | 78.0 | 78.5 | 79.0 | 79.5 |
| 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 |
| 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 |

Figure B-5. Percent fat estimates for males—Continued

| 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 |

Figure B-6. Percent fat estimates for 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 | | | | | | | | | | |

Figure B-6. Percent fat estimates for females—Continued

| 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 |

Figure B-6. Percent fat estimates for females—Continued

| 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 | | | | | | | | | | |

Figure B-6. Percent fat estimates for females—Continued

| 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 |

Figure B-6. Percent fat estimates for females—Continued

| 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 | | | | | | | | | | |

Figure B-6. Percent fat estimates for females—Continued

| 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 |

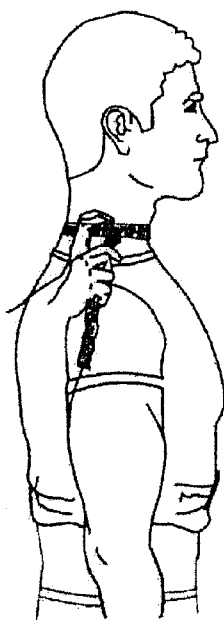
Figure B-6. Percent fat estimates for females—Continued

| 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 |

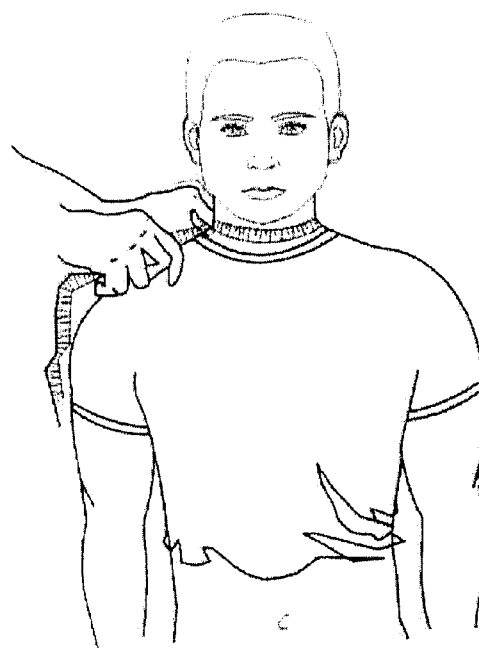
Figure B-6. Percent fat estimates for females—Continued

| Circumference Value* | Height (in) | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|
| | 73.0 | 73.5 | 74.0 | 74.5 | 75.0 | 75.5 | 76.0 | 76.5 | 77.0 | 77.5 |
| 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 | | | | | | | | | | |

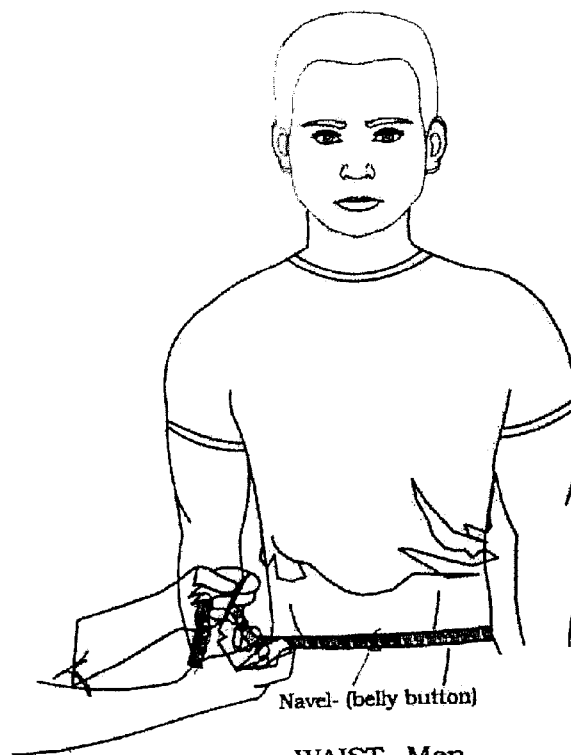
Figure B-6. Percent fat estimates for females—Continued



NECK- Men



NECK- Men

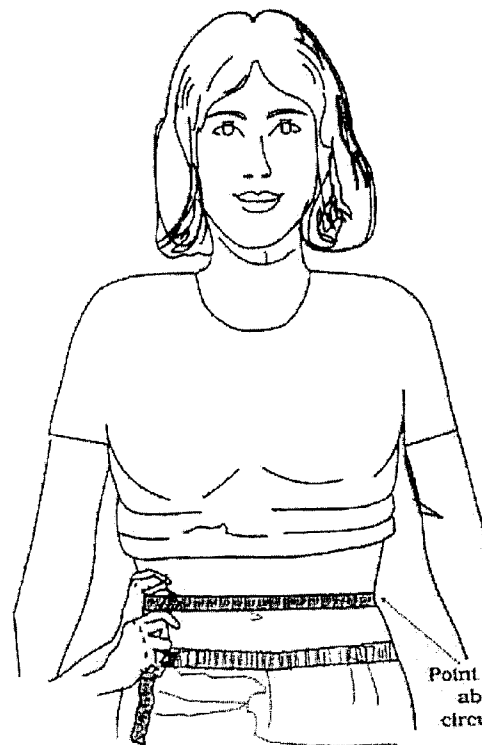


WAIST- Men

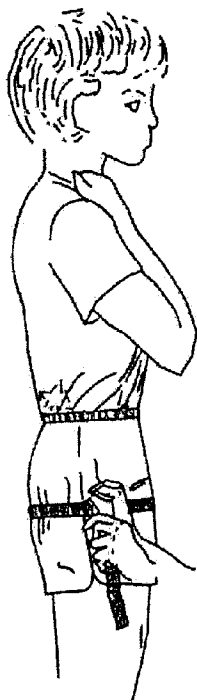
Figure B-7. Male tape measurement illustration



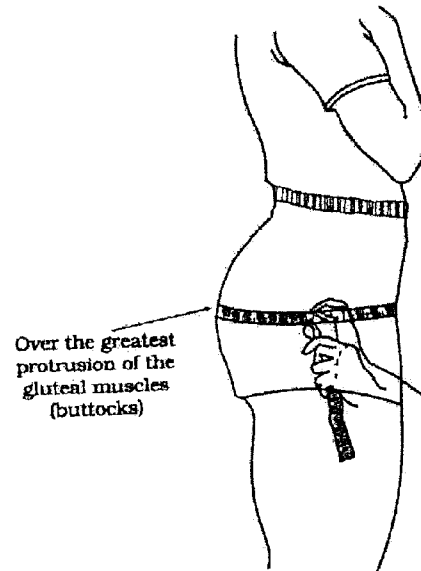
NECK-Women



WAIST- Women



HIP-(women)
side measurement



HIP-(women)
side measurement

Figure B-8. Female tape measurement illustration

B-4. Circumference sites and landmarks for males

a. Abdomen. Measure abdominal circumference against the skin at the navel (belly button), level and parallel to the floor. Arms are at the sides. Record the measurement at the end of Soldier's normal, relaxed exhalation. Round abdominal measurement down to the nearest $\frac{1}{2}$ inch and record (for example, round $34\frac{3}{4}$ to $34\frac{1}{2}$).

b. Neck. Measure the neck circumference at a point just below the larynx (Adam's apple) and perpendicular to the long axis of the neck. Do not place the tape measure over the Adam's apple. Soldier will look straight ahead during measurement, with shoulders down (not hunched). The tape will be as close to horizontal as anatomically feasible (the tape line in the front of the neck will be at the same height as the tape line in the back of the neck). Care will be taken so as not to involve the shoulder/neck muscles (trapezius) in the measurement. Round neck measurement up to the nearest $\frac{1}{2}$ inch and record (for example, round $16\frac{1}{4}$ inches to $16\frac{1}{2}$ inches).

B-5. Circumference sites and landmarks for females

a. Neck. This procedure is the same as for males.

b. Waist. Measure the natural waist circumference, against the skin, at the point of minimal abdominal circumference. The waist circumference is taken at the narrowest point of the abdomen, usually about halfway between the navel and the end of the sternum (breast bone). When this site is not easily observed, take several measurements at probable sites and record the smallest value. The Soldier's arms must be at the sides. Take measurements at the end of Soldier's normal relaxed exhalation. Tape measurements of the waist will be made directly against the skin. Round the natural waist measurement down to the nearest $\frac{1}{2}$ inch and record (for example, round $28\frac{5}{8}$ inches to $28\frac{1}{2}$ inches).

c. Hip. The Soldier taking the measurement will view the person being measured from the side. Place the tape around the hips so that it passes over the greatest protrusion of the gluteal muscles (buttocks) keeping the tape in a horizontal plane (parallel to the floor). Check front to back and side to side to be sure the tape is level to the floor on all sides before the measurements are recorded. Because the Soldier will be wearing gym shorts, the tape can be drawn snugly to minimize the influence of the shorts on the size of the measurement. Round the hip measurement down to the nearest $\frac{1}{2}$ inch and record (for example, round $44\frac{3}{8}$ inches to 44 inches).

B-6. Preparation of the body fat content worksheets

It is extremely important that you read all of these instructions before attempting to complete the body fat content worksheets. Have a copy of the worksheet when reading these instructions.

a. Figures B-1 through B-8 will provide information needed to prepare the percentage fat worksheets for males (DA Form 5500) and females (DA Form 5501). The worksheets are written in a stepwise fashion. The measurements and computation processes are different for males and females.

b. A worksheet must be completed for Soldiers who exceed the screening table weight (table 3-1) or when a unit commander or supervisor determines that the individual's appearance suggests that body fat is excessive (para 3-1a). The purpose of this form is to help determine the Soldier's percent body fat using the circumference technique described in this regulation.

c. Before starting, have a thorough understanding of the measurements to be made as outlined in this appendix. A scale for measuring body weight, a height measuring device, and a measuring tape (see specifications in para B-1d) for the circumference measurements are also required.

Appendix C

Nutrition Guide to the Weight Control Program

C-1. General

This appendix explains the basic principles of weight loss while maintaining normal nutrition. It does not replace the requirement for Active Army and RC units with Soldiers exceeding the body fat standards to be provided weight reduction counseling by qualified health care personnel. This guide will be used as a supplement to weight reduction counseling and as a guide for commanders in developing an effective weight control program.

C-2. Weight control—it's time to make the fitness connection

In many cases fitness begins with weight reduction. Aerobic fitness is related to an individual's body fat. The higher the fat, the less likely the individual is to be aerobically fit and the harder it is to maintain higher levels of physical stamina and endurance. A fit Army is a lean Army. Military readiness demands weight control—the spin-off is less likelihood of developing heart disease, high blood pressure, and diabetes. Proper nutrition and regular exercise are necessary to help lose weight and improve a state of fitness.

- a. Invest in yourself.
 - (1) Make a decision to lose weight and shape up.
 - (2) Get motivated.
 - (3) Develop a strategy (diet, exercise routine, lifestyle changes, and so on).
 - (4) Carry out the strategy.
- b. Enjoy the payoffs:.
 - (1) A healthy appearance.
 - (2) An improved self-image.
 - (3) A sense of accomplishment.
 - (4) A feeling of pride.

C-3. Making nutrition work

Improving your nutrition will increase your mileage in many ways. You can even lose weight while improving performance. Your nutrition program will include the right number of calories to cause a steady loss of body fat with no loss of energy. Stay away from food fads—they are usually boring, unhealthy, and too strict and will lead only to temporary weight loss. Compare the benefits of a sound nutrition with the consequences of crash diets, as shown in table C-1.

Table C-1
Nutrition

Sound Nutrition: Provides all required nutrients

Crash Diets: Most often lack some nutrients

Sound Nutrition: Gradual loss of body fat (1 to 2 pounds per week)

Crash Diets: Rapid loss of body water and muscle mass—not body fat

Sound Nutrition: Reinforces a good mental outlook

Crash Diets: Symptoms of grumpiness, headaches, anxiety and fatigue

Sound Nutrition: Improves health

Crash Diets: Can cause depression, dehydration, potential serious illness and a slowdown in your body's metabolism (the rate your body burns calories)

Sound Nutrition: Gives a sense of accomplishment

Crash Diets: End in eventual weight loss and failure

Sound Nutrition: Develops permanent good eating habits

Crash Diets: Encourage unhealthy eating habits of temporary duration

C-4. Basic strategy checklist—a plan for making the right connection

a. *Good attitude.* Having a good mental attitude is necessary to succeed in any program. To lose weight, a good mental attitude helps self-discipline—an important ingredient.

b. *Sensible nutrition.* A diet of adequate essential nutrients is necessary to prevent mental and physical fatigue. Crash diets don't work in a permanent weight control program.

c. *Regular exercise.* Exercise promotes physical fitness. It improves flexibility, strength, endurance and weight loss by speeding up the body's metabolism. It has also been proven to help suppress the appetite.

d. *Diet and exercise master plan.* Create your own daily food intake and exercise plan. Keep a record. Make adjustments. You are in control.

e. *Rest.* Adequate rest improves attitude, posture, and appearance. Lack of rest and sleep can weaken resistance and will power.

f. *A set goal.* See a long range objective, then get going by setting easier-to-reach short-term goals. After the first few goals are met, the objective will be in plain view.

C-5. Balance check

If you need to lose weight, it's time to check your energy balance to see what's tilting the scale. When your energy input (calories) is greater than your energy output (activity), you store the extra calories as body fat. To stay in balance:

- a. Increase exercise (frequency and intensity).
- b. Decrease calorie intake.
- c. Combine exercise with calorie reduction for best results.

C-6. Obesity risks

Excess body fat is harmful to your health. It increases your risk for developing high blood pressure, diabetes, heart disease, respiratory infections, gall bladder disease, low-back pain, and some forms of cancer. It has further drawbacks in physical appearance and interferes with physical performance.

C-7. Tailoring a nutrition program

a. The best nutrition program is one that allows you to lose body fat while you eat regular wholesome foods in controlled portion sizes. Does your diet include essential nutrients? An easy way to check is shown in table C-2.

b. Activity factors (see fig C-1) for weight maintenance include—

(1) Weight maintenance.

(2) Activity factors:

(a) Sedentary. Twelve to 14 calories per pound are required if you are not involved in exercise on the job or off duty.

(b) Active. Fifteen calories per pound are required when your job involves physical work and/or you are engaged in a regular exercise program.

(c) Highly active. Sixteen to 18 calories are required per pound when very physically demanding work and/or high level of physical training is done routinely. (Most people do not fit in this category).

(3) Weight loss (see fig C-2).

(a) To lose 1 pound of fat per week, subtract 500 calories per day from your calorie maintenance level.

(b) To lose 2 pounds of fat per week, subtract 1,000 calories per day.

Table C-2
Diet structures

| Food group | Recommended servings per day | Your diet |
|--|---------------------------------|-----------|
| Milk (8 ozs) | 2 | |
| Meat (3 ozs) | 2 | |
| Bread or Cereal (1 slice or ½ cup) | 4 | |
| Vegetables ½ cup) | 2 | |
| Fruits (1 medium or 1/2 cup) | 2 | |
| Does your diet provide the right amount of calories? | | |

$$\text{Your ideal body weight} \times \text{Activity factor} = \text{Your calorie level for maintenance}$$

Figure C-1. Weight maintenance formula

$$\text{Calorie level for maintenance} \text{ less } \text{Calories to meet your weekly goal} = \text{Your daily calorie level for weight loss}$$

Figure C-2. Weight loss formula

C-8. What about calories

Calories don't deserve a bad name unless your intake is greater than your requirement. Calories are provided by certain nutrients in the foods and beverages consumed. The nutrients listed in table C-3 provide calories; nutrients that do not provide calories are listed in table C-4.

Table C-3
Nutrient-calories guide

Nutrient: Carbohydrate (provides an efficient fuel source for the body.)

Calories: 4 per gram

Nutrient: Protein (provides material to repair and build tissues.)

Calories: 4 per gram

Nutrient: Fat (provides essential fatty acids and concentrated energy source for the body.)

Calories: 9 per gram

Notes:

¹ Alcohol, while not a nutrient, does provide calories (7 per gram).

Table C-4
Vitamins-minerals-water

Nutrient: Vitamins (needed to utilize the food you eat)

Calories: 0

Nutrient: Minerals (needed for bones, teeth, and chemical functions)

Calories: 0

Nutrient: Water (necessary for life)

Calories: 0

C-9. Good nutrition—a personal choice

The amount of calories you consume depends on the type of food you choose, its preparation, and the amount you eat (PORTION SIZE). Some foods are very concentrated in calories (the portion size is small for the amount of calories it contains). Examples are fats, candy, fried foods, most deserts, and alcohol. These foods are also of low nutrient density—they provide few nutrients for the amount of calories provided (see table C-5 for comparison.)

Table C-5
High-calorie, low-nutrient foods

| Food | Calories |
|---|----------|
| 1 piece of pecan pie | 750 |
| 1 large apple | 80 |
| One-half <i>fried</i> chicken breast | 400 |
| One-half <i>baked</i> chicken breast | 180 |
| 1 potato, French <i>fried</i> | 275 |
| 1 <i>baked</i> potato | 100 |
| One-half cup <i>syrup pack</i> peaches | 100 |
| One-half cup <i>unsweetened</i> peaches | 50 |

C-10. Portion control

a. You'll need to learn to correctly estimate portion sizes in order to ensure adequate nutrition and to control intake. A guide to estimate portion sizes follows:

- (1) 2 ounces=1 slice meat 3 x 4 inches and ¼-inch thick (cooked).
- (2) 3 ounces=1 meat pattie or portion (1/5 of a pound); 3-inch diameter, ½-inch thick (cooked).
- (3) 3 ounces=one-half small chicken breast.
- (4) 1 ounce=1 small chicken drumstick.
- (5) 2 ounces=1 chicken thigh
- (6) 1 ounce=¼ cup chopped meat (tuna, spaghetti meatsauce, chili, ground meat)

b. Some equal measurements are shown in table C-6.

Table C-6
Equal measurements

| | |
|--------------|-----------------|
| 1 cup | = 8 ounces |
| 1 tablespoon | = 3 teaspoons |
| 1/4 cup | = 4 tablespoons |
| 1 ounce | = 40 grams |
| 1 liter | = 34 ounces |
| .7 liter | = 24 ounces |
| .5 liter | = 17 ounces |
| .2 liter | = 7 ounces |

c. There is no single food that is so high in calories that a small amount cannot be eaten occasionally. Many people, however, have a particular food obsession that must be recognized. For them trying to eat “just a cookie, piece of candy, or sparerib” is too tempting. The urge to eat “the whole thing” becomes too great. You have to make and follow your own rules according to your ability to control what you eat. Avoidance is one means of control. But if you plan your diet, and diet according to your plan, you can include a favorite high calorie food item as a special occasional treat.

C-11. “Good cookin’ for good lookin’”—a memo to the cook for cutting calories during food preparation

a. The milk and cheese group.

- (1) Use skim or lowfat milk in recipes when making puddings, sauces, soups, and baked products.
- (2) Substitute plain, unsweetened lowfat yogurt or blenderized lowfat cottage cheese in recipes that call for sour cream or mayonnaise.

b. The meat, poultry, fish, and dry beans group.

- (1) TRIM fat from meat. Cook meats on rack so that fat can drain off.
- (2) Roast, bake, broil, or simmer meat, poultry or fish without adding fat. Braise in covered pan on stove top or pan broil in a nonstick pan; and add spices to enhance flavors.
- (3) Remove skin from chicken or turkey.
- (4) Chill meat broth until fat turns light and solid on top. With a spoon or knife, skim or peel fat off and discard.

c. The vegetable and fruit group.

- (1) Steam, boil, broil, or bake vegetables. Some fruits may be broiled or heated with spices added for flavor.
- (2) Go easy on sauces, butter, and margarine. Season with herbs and spices. Crisp-cooked vegetables usually don’t require as much seasoning as overcooked vegetables.
- (3) Try lemon juice or vinegar on salads. Cut way back on regular salad dressings. (One-fourth cup creamy dressing is approximately 340 calories!)
- (4) Read nutrition information labels on food packages.

d. The bread and cereal group.

- (1) Use less fat and sugar than called for in recipes. Substitute lower calorie ingredients.
- (2) Avoid recipes for baked products that require large amounts of fat and sugar.
- (3) Check ingredient labels for fat and sugar content. Check nutrition information label for total calories in each portion.
- (4) Use diet margarine or plain yogurt on baked potatoes instead of margarine, butter, or sour cream.
- (5) Have boiled, steamed, or baked rather than fried potatoes.

C-12. Dining tips

a. Avoid gravies, sauces, and deep-fried food. If the meat has been fried (southern style chicken, schnitzel), remove the coating and eat only the meat.

b. Remove all the visible fat from the meat.

c. Request diet salad dressing, vinegar, or lemon juice for your salad; most restaurants have them.

d. Starchy foods are not fattening when consumed in moderate quantities. However, avoid those prepared in cream sauces or deep-fried. For example, baked potatoes with a small amount of sour cream or margarine is a good choice. Also, noodles, rice, macaroni, or spaghetti are good potato substitutes.

e. Avoid rich desserts, ice cream, gelatin, pastry, candy, cookies, pies, cakes, sugar, honey, jam, jelly, regular soda, and other sweets. These are sources of concentrated calories that quickly cause your total intake to skyrocket in just a few bites. USE SPARINGLY, if you must.

f. If you MUST have a snack, have fresh fruits, a few crackers or pretzels, or delicious low-calorie raw vegetables.

g. Low-calorie beverages, black coffee, unsweetened sodas, and mineral water add no calories to your diet. Lowfat

milk is also a nutritious choice. Carry individually packaged sugar substitutes to sweeten beverages. Try a slice of lemon or lime in a glass of ice water.

h. Alcohol does have calories, as shown in table C–7.

Table C–7
Alcohol calories

| Food | Calories |
|-------------------------------|----------|
| American beer, 12 oz. | 160 |
| European beer, ½ liter | 250 |
| Cocktails, 4–6 oz. (½ cup) | 165 |
| Hard liquor, 1½ oz. jigger | 110 |
| Dry wine, .25 litre (8 oz.) | 200 |
| Sweet wine, .25 liter (8 oz.) | 300 |

C–13. Educate your appetite

a. Follow these tips to lose weight and body fat.

- (1) Eat S-L-O-W-L-Y
- (2) Consume less fat.
- (3) Take smaller portions
- (4) Consume less sugar.
- (5) Take smaller bites
- (6) Chew food thoroughly
- (7) Eat at least three regular meals per day.
- (8) Plan snacks.

b. Plan your food intake and abide by your plan. Keep a food diary and monitor your own intake.

c. Always check your intake for balanced nutrition and total calories.

d. Become aware of how many calories you're consuming- especially in snack foods. Table C–8 shows you why.

Table C–8
Sample calorie chart

| Food | Calories |
|--|----------|
| Chocolate milkshake (8 oz.) | 840 |
| Coke, soda, or sugared beverage, 12 ozs. | 160 |
| French fries, 20 pieces (2" x ½") | 275 |
| Fruit pie (1/6th of 9-inch pie) | 410 |
| Pecan pie (1/6th of 9-inch pie) | 750 |
| Cheesecake (1/6th of 9-inch pie) | 800 |
| Ice cream, 2 scoops | 200 |
| Potato or corn chips, 1 ounce package | 180 |
| Chocolate candy, 1 ounce | 150 |
| Grapefruit or orange juice, 1 cup | 100 |
| Big Mac | 557 |
| Quarter-pounder with cheese | 521 |
| AAFES jumbo cheeseburger | 654 |
| Cottage cheese, creamed, 1 cup | 223 |
| Beer (European), 1/2 liter | 250 |
| Creamy salad dressing, 1/4 cup | 340 |
| Salted nuts: | |
| Peanuts, 2 tbs | |
| Cashews, 25 nuts | 170 |
| Mixed, 25 nuts | 252 |
| | 188 |

C-14. Easy ways to save calories

One sure way to save calories without reducing PORTION SIZE is to choose foods that are:

- Lower in sugar. Each teaspoon supplies an additional 20 calories.
- Lower in fat. (Each teaspoon supplies an additional 45 calories).
- See tables C-9 and C-10 for easy ways to save calories. The Right Image of Me in the Military (TRIMM) sample meals are lower in fat and sugar—thus more “nutrient dense” and lower in calories. See table C-11 for the 1200-calorie daily menu and table C-12 for the 1500-calorie daily menu.

Table C-9
Weight control—a personal choice

| Instead of— | Calories | Substitute with— | Calories |
|--|----------|-----------------------------------|----------|
| 1 cup sweetened applesauce | 232 | Unsweetened applesauce | 100 |
| 3 oz. beef bologna | 237 | Lean ham | 103 |
| 1 oz. natural Swiss or cheddar cheese | 110 | Part-skim milk mozzarella | 90 |
| 1 cup cream-style cottage cheese | 223 | Low-fat (1%) cottage cheese | 125 |
| 1 oz. cream cheese | 106 | 1 oz. Neufchatel cheese | 70 |
| 1 cup vanilla ice cream | 257 | One-half cup vanilla ice cream | 129 |
| 1 cup whole milk | 170 | Skim milk | 80 |
| 3 oz. dry salami | 384 | Canned chicken | 153 |
| 1 cup sour cream | 454 | Low-fat yogurt | 123 |
| One-half cup frozen sweetened strawberries | 139 | Frozen unsweetened strawberries | 118 |
| One-half cup oil-pack tuna | 158 | Water-pack tuna | 126 |
| One-half cup syrup-pack canned fruit | 90 | Drained/rinsed canned fruit | 50 |
| 2 tablespoons mayonnaise | 120 | 2 tablespoons mustard | 24 |
| 4 tablespoons regular salad dressing | 300 | 4 tablespoons diet salad dressing | 80 |
| 1 piece fruit pie | 410 | 1 piece fresh fruit | 80 |

Notes:

REMEMBER: A calorie saved is a calorie burned...and 3,500 calories is equal to a pound of body fat.

Table C-10
Comparison of regular and TRIMM meals

| Regular | | TRIMM ¹ | |
|---|----------|--|----------|
| Food Item | Calories | Food Item | Calories |
| Cream of tomato soup (8 oz.) | 173 | Tomato bouillon (8 oz.) | 36 |
| Meat loaf (4 oz.) | 227 | Meat loaf (3 oz.) | 170 |
| Brown Gravy (3 oz.) | 130 | | |
| O'Brien potatoes | 236 | Parsley potatoes (1 med. 4½ oz.) NO BUTTER | 99 |
| Club spinach (w/eggs) ½ cup | 153 | Spinach (w/lemon) ½ cup | 29 |
| Tossed green salad (1 cup) | 10 | Tossed green salad (1 cup) | 10 |
| 1000 Island Dressing (2 tbsp. or 1 oz.) | 165 | Diet 1000-island dressing (2 tbsp. or 1 oz.) | 54 |
| Yellow cake, chocolate frosting (3 inch squares.) | 365 | Fresh fruit (1 piece) | 80 |
| Milk, whole (8 fl. oz.) | 159 | Milk, skim (8 fl. oz.) | 80 |
| Totals | 1618 | | 558 |

Notes:

¹ TRIMM: The Right Image of Me in the Military. The TRIMM sample meal is lower in fat and sugar, thus more “nutrient dense” and lower in calories.

Table C-11
Sample 1200-calorie menu

| Meal | Average calories |
|---|------------------|
| <i>Breakfast</i> | |
| 1 cup fruit or juice (unsweetened) | 100 |
| 1 ounce meat, cheese or egg (prepared without added fat) | 80 |
| 1 slice toast (white, whole wheat, rye, or $\frac{3}{4}$ cup dry cereal) | 70 |
| 1 cup skim milk | 80 |
| Total | 330 |
| <i>Lunch</i> | |
| 2-ounce serving lean meat (or 1 oz. meat and 1 oz. cheese) | 160 |
| 2 slices of bread or 1 bun or roll | 140 |
| 1 serving cooked vegetables (leaves and stems—25 calories per $\frac{1}{2}$ cup; starchy vegetables corn, lima beans—70 calories per one-third cup) | 25 |
| 1 serving tossed vegetable salad | 10 |
| Vinegar or lemon juice | — |
| 1 piece of <i>small</i> fresh fruit (or $\frac{1}{4}$ cup drained canned fruit) | 50 |
| Total | 385 |
| <i>Supper</i> | |
| 3-ounce serving lean meat (no gravy) | 225 |
| one-half cup starch (potato, rice, pasta, dry beans or starchy vegetables) | 80 |
| 1 serving cooked vegetables | 25 |
| 1 serving tossed vegetable salad | 10 |
| Vinegar or lemon juice | — |
| 1 piece of <i>small</i> fresh fruit (or $\frac{1}{4}$ cup drained canned fruit) | 50 |
| 1 cup skim milk | 80 |
| Total | 470 |
| Choose Zero Calorie Beverages: | |
| Coffee or tea without cream or sugar, club soda, mineral water, iced water with lemon or lime. | 0 |
| Approximate Total for Day | 1185 |

Table C-12
Sample 1500-calorie menu

| Meal | Average calories |
|--|------------------|
| <i>Breakfast</i> | |
| 1 cup fruit or juice (unsweetened) | 100 |
| 1 ounce meat, cheese or egg, prepared without fat | 80 |
| 1 slice toast (white, whole wheat, rye) | 70 |
| One-half cup cooked cereal or $\frac{3}{4}$ cup dry cereal (unsweetened) | 70 |
| 1 cup skim milk | 80 |
| 1 teaspoon margarine | 45 |
| Total | 445 |
| <i>Lunch</i> | |
| 3 oz. serving lean meat (or 2 oz. meat and 1 slice cheese) | 210 |
| 2 slices of bread or 1 bun or 1 roll | 140 |
| 1 serving cooked vegetables | 25 |
| (Leaves and stems 25 calories per $\frac{1}{2}$ cup; starchy vegetables 70 calories per one-third cup) | |
| 1 tossed vegetable salad | 10 |
| 1 tablespoon low-calorie dressing | 30 |
| 1 piece of fresh fruit (medium to large) | 80 |
| 1 small or $\frac{1}{4}$ cup drained fruit, 40 calories | |
| Total | 520 |
| <i>Dinner</i> | |
| 3 oz. serving lean meat | 225 |
| one-half cup starchy vegetable (with small amount added fat) | 100 |
| Serving cooked vegetable | 25 |
| 1 tossed vegetable salad | 10 |
| 1 tablespoon low-calorie dressing | 30 |
| 1 piece fresh fruit (medium to large) | 80 |
| 1 cup skim milk | 80 |
| Total | 550 |
| Choose Zero Calorie Beverages: | |
| Coffee or tea without cream or sugar, club soda, mineral water, ice water with lemon or lime. | 0 |
| Approximate Total for Day | 1515 |

C-15. Some final advice

- a.* Get motivated. Forget those old excuses: “But I’ve got a large frame—you know, big bones,” or “Everyone in my family is big—it’s hereditary,” or “Gosh, I haven’t weighed 180 pounds since I was 15 years old,” or “I can pass the APFT, so why lose weight?”
- b.* If you’re serious about losing weight, it will be easy to give up these typical excuses. Dieting is up to you—if you are willing to try. Don’t be angry that you have to lose weight; think of it as something you have chosen to do. You may be a good Soldier now, but you want to strive to be the best.
- c.* Try not to be food centered. Eating should be a source of enjoyment and satisfaction and not substitute for feelings of boredom, anger, loneliness, or discouragement. Occupy your time with other activities not related to food. This is important if you plan on being successful at losing weight. Make up your mind to control food instead of letting food control you.
- d.* Construct new habit patterns. Make your meals last longer, slow down, enjoy flavors, pause halfway through meals and don’t stuff yourself. Make meals as pleasant as possible even if you are cutting down on what you eat.
- e.* Don’t be discouraged by weight plateaus (periods when no weight loss occurs despite your dieting and exercise efforts). Your body is adjusting to your new eating habits and changes are taking place. Stick with it!
- f.* You are always responsible for what you are eating. Don’t cheat; remember, overeating hurts no one but yourself.
- g.* If you need extra help with your diet contact the nutrition clinic at your nearest treatment facility. For an exercise plan the physical therapy clinic at your nearest medical treatment facility is an excellent resource; designated unit fitness trainer or training NCOs are also excellent resources to consult for basic nutrition information and exercise program development.
- h.* Use DA Form 5511 (Personal Weight Loss Progress) to keep track of your progress.
- i.* Remember all the work it took to get you to your desired weight. Don’t let this be wasted effort.
- j.* For best results, combine dietary plans with regular exercise to:
- k.* Your dining facility provides low calorie menu plans to assist in your weight control efforts (see tables C-11 and C-12 for sample menu patterns).

Glossary

Section I Abbreviations

AD

active duty

ADS

active duty support

ADT

active duty for training

AGR

Active Guard/Reserve

APFT

Army Physical Fitness Test

ARNG

Army National Guard

AWCP

Army Weight Control Program

CG

commanding general

CNGB

Chief, National Guard Bureau

DA

Department of the Army

DODI

Department of Defense instruction

ETS

expiration term of service

HRC

Human Resources Command

IRR

Individual Ready Reserve

MACOM

major Army command

MEB

medical evaluation board

NCO

noncommissioned officer

PCS

permanent change of station

PEB

physical evaluation board

RC

Reserve Component

TDY

temporary duty

TPU

troop program unit

TRADOC

U.S. Army Training and Doctrine Command

USAR

U.S. Army Reserve

Section II**Terms****Body composition**

The human body is composed of two major elements: lean body mass (which includes muscle, bone, and essential organ tissue) and body fat. Body fat is expressed as a percentage of total body weight that is fat. For example, an individual who weighs 200 pounds and 18 percent body fat has 36 pounds of fat. Women generally have a higher percentage of body fat than men because of genetic and hormonal differences; thus, body fat standards differ among men and women by age groups.

Health care personnel

Trained physicians (military or civilian employees or contract personnel), physician's assistants, registered nurses, dietitians, and physical/occupational therapists under supervision of the unit surgeon or the commander of the medical treatment facility. For the purpose of this regulation, this term includes personnel of U.S. forces and host nations.

Overweight

A Soldier is considered overweight when his or her percent body fat exceeds the standard specified in paragraph 3-1c of this regulation.

Professional military or civilian schooling

This includes all individual training courses beyond initial entry training. It does not include unit training involving crews and teams. Initial entry training includes basic branch course or equivalent for officers; warrant officer entry course for nonprior service personnel; and basic training, advanced individual training,, one station unit training, and one station training for enlisted personnel.

Satisfactory progress

Progressing toward a point to meet the body fat standards described in paragraph 3-1c. Weight loss of 3 to 8 pounds per month is required for satisfactory progress.

Weight control

An individual program by which each Soldier attains and maintains an acceptable weight and body composition through self-motivation or involvement in an official weight control program.

Section III**Special Abbreviations and Terms**

There are no special terms.

UNCLASSIFIED

PIN 003345-000

USAPD

ELECTRONIC PUBLISHING SYSTEM
OneCol FORMATTER WIN32 Version 235

PIN: 003345-000

DATE: 11-29-06

TIME: 09:42:03

PAGES SET: 53

DATA FILE: C:\wincomp\r600-9.fil

DOCUMENT: AR 600-9

SECURITY: UNCLASSIFIED

DOC STATUS: REVISION