



# Healthy Body Composition Guide

## PREFACE

**Purpose:** The Healthy Body Composition Guide provides Department of the Air Force service members with resources to assist them in improving their health and performance through healthy eating, obtaining regular physical activity, getting restorative sleep and tobacco-free living as they relate to maintaining a healthy body composition.

### Follow Air Force Health Promotion:

- Web link: <https://www.airforcemedicine.af.mil/Resources/Health-Promotion/>
- Instagram: @AF\_HealthPromotion\_HQ
- Facebook: Air Force Health Promotion HQ
- Twitter: @AirForce\_HP

All references and internet links from non-U.S. Government sites, services, or products are provided for the reader's convenience. Resources and links in this publication are neither an endorsement nor a warranty of the services or products provided by such sites. The Department of Defense (DoD) does not exercise any responsibility over the content of these sites.

**To the Service Member:** The Air Force Medical Readiness Agency developed this guide to provide an overview of current nutrition and weight management practices, resources, and links to supporting programs.

**To the Commander:** Ensure you and your Service member are aware of the information and available resources outlined in this guide as they apply to your installation. While you are not trained or expected to prescribe diet education or provide nutrition counseling, knowing how to align available resources with your member's needs will assist them with enhancing their health, wellness and overall performance. Successful implementation of the Body Composition Program requires leadership engagement and support to encourage all Service members to live a healthy lifestyle year-round, every day for today's readiness and future longevity. All members in your unit who exceed the body composition are required to read this guide and provide a completed Individual Action Plan (IAP). A sample IAP appears on page 11 (Appendix B).

**Requirements:** Review of this guide is mandatory for all members with a high-risk body composition.

### Proponent:

This Air Force Body Composition Guide was prepared and distributed under the direction of:

Air Force Medical Readiness Agency  
Defense Health Headquarters  
7700 Arlington Boulevard  
Falls Church, VA 22042



## Health & Readiness Optimization (HeRO)

HeRO is the Air Force Medical Service comprehensive wellness strategy that focuses on critical components of performance: Sleep, Activity, Nutrition, and Tobacco-Free Living. HeRO promotes evidence-based strategies which target lifestyle changes that will guide improvements in health-related behaviors that impact performance and readiness.

### Sleep Optimization

Optimal sleep is critical to mission success. Inadequate sleep impairs essential tasks such as reaction times, the ability to detect and engage during a mission, and coordination. Mission readiness and improved sleep have been tied to reduced accidents, increased morale, and better judgment<sup>1</sup>. This is why proper sleep hygiene practices (i.e., those that promote optimal sleep duration and quality) are important for everyone. The National Sleep Foundation recommends 7 to 9 hours of quality sleep per night for individuals 18 years of age and older. Quality sleep promotes numerous benefits, including optimal cognitive and behavioral functions, decreased risk of heart disease and type 2 diabetes along with improved overall mental health and body composition.<sup>2</sup>

### Physical Activity

Physical fitness and activity are crucial to ensuring you are able to perform at your best and accomplish the mission. Exercise and movement help build key mental abilities such as memory, reaction time, attention span and learning.<sup>3</sup> According to the American College of Sports Medicine, adults should strive for at least 150 to 300 minutes of moderate-intensity physical activity every week in addition to activities that maintain or increase muscular strength on at least 2 days per week. Choose activities you enjoy and focus on moving as much as possible throughout the day.

### Nutritional Fitness

The benefits of healthy eating include improved brain function, delayed muscle fatigue, accelerated recovery from strenuous activity, improved overall military readiness and sustained health and disease prevention. This can be achieved by following an eating pattern that emphasizes eating more unrefined plant and nutrient dense foods and beverages with little or no added sugars, saturated fat and sodium.<sup>4</sup> Consistently making healthy food choices helps you stay energized and ensures you get the right nutrients to maximize performance.

### Tobacco-Free Living

Tobacco use is the leading cause of preventable disease, disability and death in the United States.<sup>5</sup> Tobacco products include all productions that may be configured to deliver nicotine, including but not limited to: cigars; cigarettes; electronic cigarettes; stem pipes; water pipes; hookahs; vaporizers; smokeless products that are chewed, dipped, sniffed, or vaped. Prevention of initiation is the best approach to ensuring a tobacco-free life.



## Table of Contents

<b>Chapter 1: Healthy Body Composition</b> .....	5
<b>Chapter 2: Goal Setting</b> .....	6
<b>Chapter 3: Energy Balance</b> .....	7
<b>Chapter 4: Interventions &amp; Supporting Resources</b> .....	8
<b>Appendix A: Programs &amp; Applications</b> .....	9
<b>Appendix B: Sample Action Plan</b> .....	11
<b>Appendix C: References</b> .....	12



## Chapter 1 – Healthy Body Composition

Maintaining a healthy body composition is vital to overall health, well-being and physical capability which is essential for operational readiness. While body weight influences health, it is the distribution of the components of body weight (fat, muscle/lean tissue, and bone) that have the greatest impact on performance and obesity-related health conditions. Excess body fat located in the visceral (abdominal) region is closely associated with an increased risk of developing cardiovascular or metabolic diseases.

### What is visceral body fat?

Visceral fat is a type of fat stored deep inside the belly and wrapped around the organs, including the liver and intestines. Visceral fat often makes the belly stick out or gives a person an 'apple' shape. It also produces chemicals and hormones that can be toxic to the body. Even in individuals with a “healthy” body weight, having excess visceral fat still carries a range of health risks.

### What are the health risks of visceral fat?

High levels of visceral fat contribute to metabolic syndrome, a collection of disorders that include high blood pressure, obesity, high cholesterol and insulin resistance. Together, these factors increase the risk of stroke, heart disease and type 2 diabetes.

Excess visceral fat can also contribute to:

- cancer (particularly of the colon, breast, and prostate)
- asthma
- liver disease
- gall bladder disease and gout
- fertility problems
- lower back and knee pain
- osteoarthritis

The Air Force assesses body composition in Service Members using waist-to-height ratio (WHtR). It is calculated by dividing waist circumference by height.

### Why does the Air Force use WHtR to measure body composition?

WHtR is an established methodology that uses stature and waist circumference to assess fat distribution in the abdominal region. It has been validated across individuals varying in age, gender and ethnic groups. Having a WHtR of 0.50 or higher is associated with increased likelihood of numerous health outcomes such as high blood pressure, diabetes or musculoskeletal injuries.

### What are the risk categories associated with WHtR?

<b>Low Risk</b>	<b>WHtR <math>\leq</math>0.49</b>
<b>Moderate Risk</b>	<b>WHtR 0.50 – 0.54</b>
<b>High Risk</b>	<b>WHtR <math>\geq</math>0.55</b>



## Chapter 2 – Goal Setting

Getting started on the journey to achieve a healthy weight and body composition can be overwhelming. Individuals often make the mistake of trying to do too much too soon, making unsustainable lifestyle changes, setting unrealistic goals, or falling for “miracle” weight loss diets or supplements. There is no one-size-fits-all solution or plan. It is important to take into consideration personal preferences, values, and motivation when seeking options and support to assist and empower positive lifestyle change.

### FIND YOUR WHY

Getting and staying motivated is challenging. When it comes to lifestyle modifications most people start strong and then compliance and enthusiasm starts to waiver. Focusing on the “why” is important to guide your journey and to help you maintain motivation when frustrated or overwhelmed with the demands of career and family roles and responsibilities. When facing these situations, cut yourself some slack. It is important to have self-compassion and value progress over perfection. Small changes will add up to big improvements over time.

*Consider “who” or “what” motivates you to live a healthier life?*

### SET S.M.A.R.T. GOALS

1. Be Specific—establishing your “why” is the first step. Also consider the following questions:

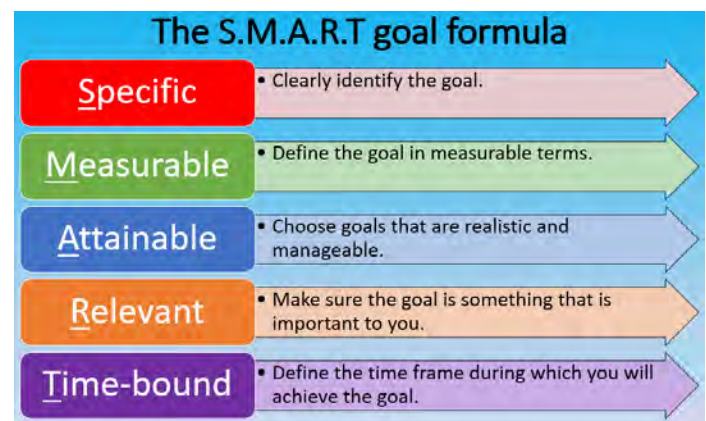
- What do I want to accomplish?
- How will I achieve this goal?
- What resources are involved?

2. Measuring or keeping track of progress will help you stay motivated.

3. Ensure that you can realistically achieve the goal(s) you have established.

4. Consider how relevant the goal is or what purpose it will achieve—does the goal complement your “why”?

5. Prioritized time-sensitive goals are more likely to be achieved than those without a timeline.



### GAIN AWARENESS

Being mindful of how you feel and of emotional cues or triggers that influence your decisions can help to keep you on track with meeting your lifestyle goals.

#### SOCIAL

Do your co-workers or family members affect your eating or drinking habits?  
In group settings, do you choose to just go along with what everyone else is doing?

#### EMOTIONAL

How often do you reach for food, alcohol or tobacco when you are bored, angry, stressed, lonely, sad, happy or excited?

#### SITUATIONAL

Are you tempted by the bowl of candy at your co-worker’s desk or the cake at the promotion ceremony or retirement?  
Do you snack while watching TV at night?

#### PHYSICAL

Do you overeat when you are starving or have missed a meal?



## Chapter 3 – Energy Balance

Energy balance is one of the most important factors in maintaining a healthy body composition. The amount of energy or calories you consume (energy INPUT) is balanced with the energy your body uses for things like breathing, digesting and being physically active (energy OUTPUT).

When energy INPUT exceeds energy OUTPUT, those excess calories are stored as body fat. This is true whether the calories came from fats, carbohydrates, proteins or alcohol.

Decreasing energy INPUT and increasing energy OUTPUT to create a negative energy balance allows the body to burn fat.

### DECREASING INPUT

Calculate your calorie needs for fat loss. There are many different calculations or tools to determine calorie needs for fat loss. It is important to note that your lifestyle (occupation), age, gender and activity level are also important to consider. Seeking assistance from a qualified health professional (such as a Registered Dietitian) who can help in determining your calorie needs is encouraged. Reducing your intake by too many calories can be counterproductive and be extremely dangerous to your health.

- Calorie needs based on current body weight

CURRENT WEIGHT	CALORIES/DAY
< 150 lbs	1,200 – 1,500
150 – 200 lbs	1,500 – 1,800
201 – 225 lbs	1,800 – 2,200
226 – 250 lbs	2,200 – 2,500
251 – 300 lbs	2,500 -- 2,800

- Multiply your goal weight by 10. For example, if your goal weight is 180 lbs, your estimated calorie need is 1,800 calories per day (180 x 10 = 1,800).

- Use the calorie calculator at: <https://www.calculator.net/calorie-calculator.html>



### INCREASING OUTPUT

- Aim for 10,000 – 15,000 steps per day (track your steps with a smart watch or phone for reference)
- Make time for your fitness routine: Schedule 30 – 60 minutes of moderate/vigorous exercise every day.
- Strength train 2 – 3 times per week
- Use idle time to be active



Average Calories Burned During 30 Minutes		
155 lbs	Activity	185 lbs
182	Weight Lifting	217
253	Rowing	302
178	Walking (3.5 MPH)	213
207	Walking (4.0 MPH)	247
233	Swimming	278
281	Running (5.0 MPH)	335
419	Running (7.0 MPH)	500
233	Cycling (10 MPH)	278
330	Cycling (13 MPH)	394

Source: <https://ExRx.net/calculators/calories>



## Chapter 4 – Interventions & Supporting Resources

Interventions that address lifestyle and behavior modifications related to dietary intake and physical activity are generally the most successful at achieving the desired results. There are many resources and support available to assist service members in achieving and maintaining a healthy body composition. Reference **Appendix A** for a detailed listing of available programs and resources.

### MEDICAL

The first step for service members with a high-risk body composition is to contact your PCM team for a medical evaluation. The medical evaluation will include a review of your past medical history, assessment for potential secondary causes of obesity and screening for other disease or conditions influenced by obesity such as hypertension, diabetes, thyroid disorders, sleep apnea, elevated cholesterol and metabolic syndrome. Your medical team will also assist in helping you to establish S.M.A.R.T. goals and identifying available resources to help you achieve success.

### NUTRITION

A Registered Dietitian, Diet Technician or Health Educator may provide individual or group education and counseling on creating a meal plan to reinforce your goals. Nutrition services vary by location but may include programs such as:

- Best S.E.L.F. – This program addresses 4 components of lifestyle modification (Nutrition, Activity, Mindfulness and Sleep) to facilitate loss of weight and body fat. The curriculum consists of 5 sessions designed to help service members seeking to lose or maintain their weight and enjoy an overall healthy lifestyle.
- Healthcare to Health (H2H) – H2H is a group-lifestyle balance (GLB) program led by specially trained lifestyle coaches that addresses obesity and has been proven to prevent or delay the onset of diabetes through weight reduction and increased physical activity.

### BEHAVIORAL

Working with a behavioral or mental health provider or health coach can help you pursue behavioral and lifestyle changes to achieve your goals. They can also help you work through other concerns or issues that may be interfering with your ability to make lifestyle changes. Available behavioral health resources include:

- Primary Care Behavioral Health (PCBH) Provider
- Embedded/Integrated Mental Health Provider
- Military and Family Life Consultant (MFLC)
- Military OneSource “Health Coaching”
  - <https://www.militaryonesource.mil/confidential-help/specialty-consultations/health-wellness-coaching/>



### PHYSICAL ACTIVITY

Regular physical activity is important for overall health and especially important when trying to lower body fat. Daily physical activity increases the number of calories your body burns and helps to create a “calorie deficit” that leads to fat loss.

Complete the DAF Form 4446A, AF Fitness Screening Questionnaire (FSQ) – if you are cleared to take the AF Fitness Assessment, then you are cleared to exercise. Otherwise, contact your PCM team for further discussion. Fitness resources at your location could include:

- Fitness/exercise specialists at your installation Fitness Center or Health Promotion staff
- Embedded/Integrated Certified Strength and Conditioning Specialist or Exercise Physiologist
- In-person or virtual fitness classes (Installation Fitness Center, commercial products)
- Mobile Fitness apps (commercial, unit sponsored, or DoD developed, such as [MissionFit](#))

MissionFit






## Appendix A – Programs & Applications

### Online/Virtual/Tele-Health Programs:

- Military OneSource “Health Coaching”  
<https://www.militaryonesource.mil/confidential-help/specialty-consultations/health-wellness-coaching/take-command-of-your-well-being-with-a-health-and-wellness-coach/>
- VA Move! – MOVE! is a weight management, health promotion program designed to improve the lives of Veterans. MOVE!’s core ideas—encouraging healthy eating behavior, increasing physical activity, and promoting even small weight losses—are easy to follow and based on the latest in nutrition science.  
[MOVE! Weight Management Program Home \(va.gov\)](#)
- “Basics for Reaching a Healthy Weight” – A weight management program from Health Net Federal Services/Tricare that provides basic information to get you started with losing weight through good nutrition and exercise.  
[Reaching a Healthy Weight \(hnfs.com\)](#)
- “Healthy Weighs for Life” – A self-paced program from Health Net Federal Services/TRICARE that includes 6 sessions and a variety of tools to help you manage your weight.  
[Healthy Weighs for Life \(tricare-west.com\)](#)
- “Assessing Your Readiness for Healthy Change” – An online resource that will help you evaluate how ready you are to take steps toward making healthy lifestyle changes along with information and skills to prepare for and make change.  
[AYR4HC Resources \(tricare-west.com\)](#)

### Mobile Applications:

- MissionFit - The MissionFit app provides a 12-week program of exercise routines, along with a library of 90+ exercises with detailed instructions including video, images and textual description.  
[MissionFit on the App Store \(apple.com\)](#)  
[MissionFit - Apps on Google Play](#)
  - MOVE! Coach - The MOVE! Coach is a phone app that offers a self-guided program that provides everything needed to set, track, and achieve diet, physical activity, and weight goals.  
[MOVE! Coach on the App Store \(apple.com\)](#)  
[MOVE! Coach - Apps on Google Play](#)
- 
- Food and Exercise Apps – Listing includes information and links to several popular food diary applications.  
[Food-diary apps to keep you on track | HPRC \(hprc-online.org\)](#)

### Websites and Information:

- Human Performance Resources by CHAMP (HPRC) – Nutrition and fitness information for Warfighters and their families.  
[HPRC – The military’s source for fitness, wellness, and performance nutrition \(hprc-online.org\)](#)
  - Warfighter Nutrition Guide – The Warfighter Nutrition Guide contains strategies and recommendations for all aspects of performance nutrition for Military Service Members.  
[Warfighter Nutrition Guide | HPRC \(hprc-online.org\)](#)
  - Get into Fighting Weight: A Total Force Fitness Guide – This guide includes a series of challenges and “check-ins” to help you identify and optimize various factors that affect your health to help you achieve peak performance.  
[Fighting Weight | HPRC \(hprc-online.org\)](#)
- Operation Supplement Safety (OPSS) – Department of Defense dietary supplement resource for the military community,



leaders, healthcare providers and civilians.

[Operation Supplement Safety | OPSS](#)

- Centers for Disease Control and Prevention (CDC) Healthy Weight, Nutrition and Physical Activity – Site includes links to a variety of information related to maintaining a healthy body composition.  
[External Resources | Healthy Weight, Nutrition, and Physical Activity | CDC](#)
- National Institutes of Health (NIH) Body Weight Planner – Useful tool that allows users to make personalized calorie and physical activity plans to reach a goal within a specific period and to maintain it following.  
[About the Body Weight Planner | NIDDK \(nih.gov\)](#)
- Defense Commissary Agency (DECA) – Website provides tips to guide healthy food choices while shopping. Includes info such as: Recipes, customizable shopping list and health information.  
<https://www.commissaries.com/>
- Physical Activity Calorie Counter – Calculator from the American Council on Exercise that will help you determine how many calories you burn during daily activities.  
[ACE Fit | Physical Activity Calorie Counter \(acefitness.org\)](#)



## APPENDIX B – Sample Action Plan

PART III. INTERVENTION PROCESS (High Risk)	
INDIVIDUAL ACTION PLAN:	
Individual Action Plans outline the strategies, resources and counseling options the member will use to work towards reducing WHtR to Low / Moderate Risk Categories. Resources and counseling options vary by location, but member may also consult the Health and Readiness Optimization (HeRO) Body Composition Guide for universally accessible resources.	
Resource 1: Registered Dietitian	Application Strategy: Scheduled appointment with Registered Dietitian on _____ for nutritional counseling.
Resource 2: MissionFit App	Application Strategy: I downloaded the MissionFit App and will incorporate the exercise routines and along with getting at least 45 minutes of moderate cardiovascular activity 3 to 4 times each week.
Resource 3: Get Into Fighting Weight: Total Force Fitness Guide	Application Strategy: I will download the Get into Fighting Weight guide and complete the associated challenges to help me reach my peak performance.
Resource 4: Military OneSource Health and Wellness Coach	Application Strategy: I enrolled in the health and wellness coaching service. I know that I need to make changes to my lifestyle and could use the extra motivation to set goals and work through challenges that will come up.

## APPENDIX C - References

1. Troxel, Wendy M., Shih, Regina A., Pedersen, Eric R., et al. Sleep in the Military. *Rand Health Quarterly*. 2015;5(2):19.
2. Hirshkowitz, M., Whiton, K., Albert, S. M., Alessi, C., Bruni, O., DonCarlos, L., Hazen, N., Herman, J., Adams Hillard, P. J., Katz, E. S., Kheirandish-Gozal, L., Neubauer, D. N., O'Donnell, A. E., Ohayon, M., Peever, J., Rawding, R., Sachdeva, R. C., Setters, B., Vitiello, M. V., & Ware, J. C. (2015). National Sleep Foundation's updated sleep duration recommendations: final report. *Sleep health*, 1(4), 233–243. <https://doi.org/10.1016/j.sleh.2015.10.004>
3. 2018 Physical Activity Guidelines Advisory Committee. *Physical Activity Guidelines Advisory Committee Scientific Report* Washington, D.C.: U.S. Department of Health and Human Services; 2018. 779 p
4. U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. [www.DietaryGuidelines.gov](http://www.DietaryGuidelines.gov)
5. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>