

Target Weight

Target weight is calculated as lean body weight (muscle & bone) plus the desired percentage of fat. Target weight is the weight an individual is aiming to attain.



If you know your body fat, determine what percent is good for you using the standards above. Then calculate your target weight using this formula:

$$\begin{aligned} \text{Current weight} \times \text{current \% fat} &= \text{fat weight} \\ \text{Current weight} - \text{fat weight} &= \text{lean weight} \\ \text{Lean weight} / (100\% - \text{desired \%}) &= \text{target weight} \end{aligned}$$



Target Weight Example (47 year old female):

170 lbs x 30% (or 0.30) = 51 lbs (fat weight)
Current weight = 170 lbs
170 lbs – 51 lbs (fat weight) = 119 lbs (lean weight)
Current % fat = 30%
119 lbs (lean weight) / (100% – 25%) = 119/0.75
Desired % fat = 25%
Target Weight = 158.7 pounds

Waist to Hip Ratio (WHR)

Data show that it may make a difference where the excess fat is deposited, with respect to medical complications. Obese people most vulnerable to disease tend to have more fat deposited in abdominal areas rather than hips and thighs. In other words, certain health risks may be greater for those with much of their body fat in the trunk and abdominal areas. This is called android obesity (or apple-shaped) in comparison to gynoid obesity (or pear-shaped, characterized by deposition of fat in the hips and thighs).



The ratio of waist and hip circumferences (WHR) is a simple and convenient method of determining apple or pear-shaped bodies (and obesity type present). Apples have a WHR > 0.80; pears have a WHR < 0.80.

How to determine your WHR:

1. Measure your waist (directly on the skin) to the nearest quarter inch;
2. Measure your hips around the buttocks. (Take several measurements at various levels and use the largest one); and
3. Divide the waist measurement by the hip measurement (see below).



WHR Example:

$$\frac{\text{Waist Circumference (inches)}}{\text{Hip Circumference (inches)}} = \frac{27.75 \text{ inches}}{36.5 \text{ inches}} \quad \text{WHR} = 0.760 \text{ (pear-shaped)}$$

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University of Nevada
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Weighing in on Body Fat

How Much Is Right for Me?

Interest in the measurement of body fat has grown tremendously during the last 20 years, largely because of its relationship to both health and athletic performance. Scientific data have linked obesity (an excessive accumulation of fat) with coronary heart disease, several types of cancer, stroke, diabetes, osteoarthritis, high blood cholesterol and high blood pressure. How do I know if my body fat poses a risk for my health?

BMI/Height & Weight Tables

BMI. Body Mass Index (BMI) is often used to screen for weight categories that may lead to health problems.

Calculated using your height and body weight, BMI is a very rough estimate of your overweight status and should be viewed as such. Although it is easily measured, it is not an accurate way of determining fatness or what you should weigh because it does not consider whether your composition of body weight is fat or muscle.

Use the chart to determine your BMI

Height (ft)	Weight (lbs)																															
	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	
4'11"	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
5'0"	20	21	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	
5'1"	19	20	21	22	23	24	25	26	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47		
5'2"	18	19	20	21	22	23	24	25	26	27	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46		
5'3"	18	19	19	20	21	22	23	24	25	26	27	27	28	29	30	31	32	33	34	35	35	36	37	38	39	40	41	42	43	44		
5'4"	17	18	19	20	21	21	22	23	24	25	26	27	27	28	29	30	31	32	33	33	34	35	36	37	38	39	40	41	42	43		
5'5"	17	17	18	19	20	21	22	22	23	24	25	26	27	27	28	29	30	31	32	32	33	34	35	36	37	37	38	39	40	41	42	
5'6"	16	17	18	19	19	20	21	22	23	23	24	25	26	27	27	28	29	30	31	31	32	33	34	35	36	36	37	38	39	40	40	
5'7"	16	16	17	18	19	20	20	21	22	23	23	24	25	26	27	27	28	29	30	31	31	32	33	34	34	35	36	37	38	38	39	
5'8"	15	16	17	17	18	19	20	21	21	22	23	24	24	25	26	27	27	28	29	30	30	31	32	33	33	34	35	36	36	37	38	
5'9"	15	16	16	17	18	18	19	20	21	21	22	23	24	24	25	26	27	27	28	29	30	30	31	32	32	33	34	35	35	36	37	
5'10"	14	15	16	16	17	18	19	19	20	21	22	22	23	24	24	25	26	27	27	28	29	29	30	31	31	32	32	33	34	34	35	36
5'11"	14	15	15	16	17	17	18	19	20	20	21	22	22	23	24	24	25	26	26	27	28	29	29	30	31	31	32	33	33	34	35	
6'0"	14	14	15	16	16	17	18	18	19	20	20	21	22	22	23	24	24	25	26	26	27	28	28	29	30	31	31	32	33	33	34	
6'1"	13	14	15	15	16	16	17	18	18	19	20	20	21	22	22	23	24	24	25	26	26	27	28	28	29	30	30	31	32	32	33	
6'2"	13	13	14	15	15	16	17	17	18	19	19	20	21	21	22	22	23	24	24	25	26	26	27	28	28	29	30	30	31	31	32	

Underweight Healthy Overweight Obese Extremely Obese

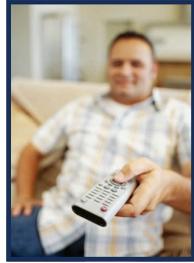
Height & Weight Tables. Height and weight tables are also a very poor method for determining overweight status. Similar to BMI, these tables do not consider body composition and only provide weight ranges recommended for various heights.

Using improper methods or public ideals can be a dangerous practice for determining a target body weight. It is recommended that concerned individuals consider measurement of body composition as an alternative to body weight. Using body composition, you can determine what percent of your total weight is fat.

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Body Composition

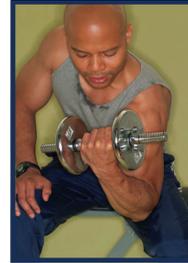
Overweight and overfat are not synonymous terms. Since you can be overweight and not overfat and vice versa, body weight alone may not be a good indicator of fatness. The human body is comprised of 3 major components: *muscle, bone and fat*, commonly referred to as *body composition*. Percent body fat, the percent of your total body weight represented by *fat* weight, is the preferred index and also depends on how much muscle and bone you have, also called *lean* weight.



Sedentary Male:
Fat—25%
Lean—75%
(Muscle & Bone)

For example, two adult males of similar build (6 feet tall, large boned), same weight (200 pounds) and age (25 years) may vary in their body composition. The sedentary male may have 25 percent body fat (considerably high), whereas the athletic male may have 10 percent body fat (very lean). While both men may be *over* the desirable weight for their height, as defined in common height and weight tables, only the man with 25 percent body fat is considered overfat. His counterpart having only 10 percent body fat has a greater lean weight and should not consider his weight a health risk. The man with 10 percent body fat is overweight but not overfat.

Athletic Male:
Fat—10%
Lean—90%
(Muscle & Bone)



Muscle weighs more than fat, which is important to note when you are using exercise as part of your weight management program. You may have stages when the increase in muscle from regular exercise causes your body weight to increase. Don't panic, you can still be losing the undesirable fat weight even though the scale may not reflect your progress. Check your progress by measuring yourself. You can check your waist circumference or consider having your body composition measured.

There are several methods that can be used to measure your body composition such as skinfold pinch tests, bioelectrical impedance, air displacement (Bod Pod), bone density (DXA) and underwater weighing. These methods result in an estimation of percent body fat. Body composition can be measured at a university or reputable health and fitness facility. Once you know your percent body fat, then a target weight can be determined based on your lean body weight.

Gender & Body Composition. Women have more body fat than men. This is the bad news. The good news is women are allowed a higher body fat than men! This physiological difference may be due primarily to the fact that women require additional fat for childbearing.

Age & Body Composition. As you get older, body fat tends to increase. Though total body fat goes up, subcutaneous fat (just below the skin) seems to decrease in later years. The increase is found within the internal fat deposits which more than compensate for the decrease in subcutaneous fat deposits (just below the skin). This effect can make some skinfold measurement formulas less accurate for older populations. Although fat does increase with age, exercise and a healthy diet are important to maintain a more favorable ratio of body fat to lean tissue.

Body Composition Norms

How much body fat is right for me? – Using the phrase “am I overfat” now, instead of “am I overweight,” the question still remains, “How do I know?”

- Essential Fat** – First, one must understand that all bodies require some fat for basic metabolic function, especially for the nervous system insulation and protection of the internal organs. This fat is called essential.
- Storage Fat** – This refers to the excess fat that is stored by the body. The amount of stored fat is a function of one's eating behavior and exercise patterns. Appropriate values vary depending on the lifestyle of a given individual.

“Trained” refers to college athletes, professional athletes, body builders and often the optimal level of many dedicated exercisers and trained individuals

“Healthy” refers to the healthy, allowable weight

“Unhealthy” refers to the level at which one's body fat may become a health detriment or risk for disease, termed obesity

Standards (Target) Adult Percent Body Fat

	Essential	Trained	Healthy	Unhealthy
Female	8%	9-19%	19-32%	>32%
Male	5%	6-16%	16-25%	>25%

The YMCA recommends that females be between 19% to 23% body fat (25% for older women). A woman with more than 32% body fat is considered to be at risk for disease. It has been suggested from a health standpoint that men should be 16% body fat, although this may be a little low for the average male. The YMCA recommends that males be between 16% to 20% body fat. A male with more than 25% body fat is considered to be at risk for disease.

“American Average” percentages reveal the average body fat of the American population (in 2000). As Americans, we possess more fat than we should. The range for both males and females reflects an age variance from 20-60 and over. Remember, don't view the “average” as the “standard”.

American Average* Adult Percent Body Fat

Age	20	30	40	50	60+
Female (23-31%)	23%	24%	27%	30%	31%
Male (14-25%)	14%	18%	21%	23%	25%

**Represents the “average” in 2000, not to be confused with the “standard.”*

Sources: YMCA Fitness Testing and Assessment Manual, 4th ed. (2000) & ACSM's Guidelines for Exercise Testing and Prescription, 7th ed. (2006)