

Weight Management

We live in a culture looking for a magical formula to lose weight, burn fat, and build muscle. Every year there's a new diet book, diet product, diet pill, exercise gadget, and/or exercise philosophy promising quick and easy results.

Read on to learn...

- What is a healthy weight for you?
- What body fat percentage should you have? What is BMI?
- What is your body type, and how does your body type inform your weight goals?
- Is the media's "ideal body" realistic, or even healthy, for you?
- What can you do to achieve your personal best?
- How many calories do you need to achieve your weight goals?
- What's the best way to burn fat? Build muscle?

Did you know...

If you looked only at the weights and heights of a sample of Division I college football linemen, 80% would be classified as "morbidly obese"? This "extra" weight comes from muscle mass, large bones, and likely larger frame sizes, not necessarily from unhealthy levels of body fat.

How much should you weigh?

A lot of us get really hung up on **that number** on the scale. But weight doesn't define your health and fitness status! A crucial part of determining how much you should weigh has to do with what makes up that weight. For example, is your weight made up of a healthy ratio of muscle, bone, and fat? Knowing this can help you interpret your scale reading.

A lower body weight is not necessarily the goal to improve your health or enhance your appearance. Have you ever heard it said that muscle weighs more than fat? What that means is that muscle is *more dense* than fat. A pound of muscle weighs the same as a pound of fat, but muscle mass is more compact and only takes up 1/3 the space! If you make healthy lifestyle changes to lose weight, which would include regular exercise, you will almost certainly gain muscle and lose fat. The scale may stay the same or may even go up, but you lose inches, since muscle takes up less space.

Body Mass Index The body mass index (BMI) is a screening tool to assess weight status. You can use the calculation below to determine your BMI. Keep in mind that BMI is only based on height and weight; it does not take into consideration your body composition or genetics. A healthy weight for you may be higher than the BMI standards. Your eating habits, physical activity patterns, other lifestyle choices, body composition and genetics are more important than any number on the scale in determining what weight is right for you. Use BMI as a rough indicator, and consult a health care professional to help you determine what weight is right for you.

How do you calculate BMI?

BMI is calculated by the following formula: weight in kg / height in m². If you're not familiar with kilogram and meter measurements, follow the steps below to calculate your BMI.

Step 1. Take your weight (in pounds) x 705

Step 2. Divide that number by your height (in inches)

Step 3: Divide that number by your height (in inches) again

Example: Woman who is 5'3" and weighs 135 lb.

Step 1. 135 lb. x 705 = 95175

Step 2. 95175 / 63" = 1511

Step 3. 1511 / 63" = 24

BMI = 24

BMI Standards

Underweight	< 18.5
Healthy weight	18.5-24.9
Overweight	25.0-29.9
Obese I	30.0-34.9
Obese II	35.0-39.9
Obese III	40+

Body Fat

Body composition is a better indicator of your health and fitness status than body weight, but it is still not perfect. Your genes determine your body type. Some body types carry more fat than others—no matter what you eat or how much you exercise. Percent body fat does not necessarily tell you how healthy or fit you are, or tell you how you look. There are large-framed students who have a higher percentage of body fat who train for triathlons and eat a healthy balanced diet. Other students may be thin and have a lower percentage of body fat, but don't consume adequate calories or nutrients, lack physical endurance and strength, and don't look healthy or fit. Unlike BMI, there is no one universally accepted set of body fat standards. As a result, you may see many different reference ranges from various fitness organizations, fitness magazines, and gyms. Not all of these reference ranges are based on research or take into account such things as genetics. As a result, many ranges are too narrow to reflect the diversity of healthy and fit bodies. A normal and healthy percentage of body fat varies substantially, and charts and graphs should *not* be regarded as the “end-all-be-all” of what is healthy and normal for you personally.

Body Fat Standards

The American College of Sport's Medicine developed the following reference ranges based on research.

	<u>AGE</u>	<u>Women</u>	<u>Men</u>
Health Standards*	<40 yrs.	20-35%	8-22%
	>40 yrs.	25-38%	10-25%
Fitness Standards*	<40 yrs.	16-28%	5-15%
	>40 yrs.	20-33%	7-18%

High Risk*	<u>AGE</u>	<u>Women</u>	<u>Men</u>
Inadequate fat	all adults	<12-14%	<3-5%
Obesity	<40 yrs.	>35%	>22%
	>40 yrs.	>25%	>25%

“Health standards” reflect the percent of body fat that generally does not increase your risk for health problems. Excessive body fat, especially around the abdomen, can increase your risk for high blood pressure, diabetes, osteoarthritis, and heart disease. “Fitness standards” reflect the percent of body fat that generally results from greater physical training. A greater percentage of muscle and lower percentage of fat may improve strength, speed, endurance, and agility. However, dropping below 16% body fat for women and 5% body fat for men DOES NOT further increase your athletic performance or level of fitness. Instead, too low body fat can actually impair your physical health and performance. Men and women need a certain amount of body fat to insulate vital organs, regulate body temperature, and ensure adequate production of sex hormones. In particular, women who restrict calories and exercise excessively may have a very low percentage of body fat and consequently have very low estrogen levels and stop menstruating. Because estrogen keeps women’s bones strong, women who stop menstruating are at much greater risk for stress fractures and a debilitating bone-thinning disease called osteoporosis.

How do you measure body fat?

There are many methods for determining body composition, including skin fold measures, bioelectrical impedance, Dual Energy X-ray Absorptiometry (DEXA), Bod Pod (air displacement) and underwater weighing.

Which method is best? The accuracy of each method can be highly variable depending on the skill of the person doing the measurement, whether the person being measured is well hydrated or dehydrated, how good the equipment is, and/or the reference tables used. Most techniques have an error of at least 3%, plus or minus. That means that if your body fat is tested at 20%, it could really be anywhere between 17 and 23%. You can get one reading today and a different one tomorrow. DEXA tends to be the most accurate, but is also the most expensive.

To accurately monitor changes in body fat over time, be sure to use the same technique with the same person under the same conditions each time you take a measurement. If you switch to a different technique, you may get different results for any number of reasons having nothing to do with real changes in your body composition. It takes several months to see any true changes in body composition, so there’s no need to repeat testing more than once every 6 months.

Body Types

Each one of us inherits a unique body type. Even though the media would have us think otherwise, there are really many healthy and normal body types. For ease of reference, body types have been categorized into three main types, and those types have been further categorized as blends of the three main types. Each body type has advantages over the others for certain activities, but a person with any body type can be healthy and fit and look great!



Ectomorphs are generally tall and thin and have long arms and legs. These people have difficulty gaining weight and muscle no matter how much they eat or how hard they weight train. They have the body type you tend to see in ballet dancers, runway models, long-distance runners, and some basketball players. A very small proportion of the population has this type of body.

Mesomorphs are generally muscular, shorter, and have stocky arms and legs. These people are strong and tend to gain muscle mass when they do strength training. They may find it difficult to lose weight. They excel in power sports like soccer, softball, vaulting in gymnastics, and sprinting events in track and field.

Endomorphs are generally shaped like apples or pears and carry more body fat. Their bodies resist losing weight and body fat no matter how restrictive they are with their eating. In fact, the more they “diet,” the more their metabolisms slow down to resist weight loss. These people are better able to handle long periods of starvation and famine (which was a benefit to our ancestors). Sports they excel at are distance swimming, field events, and weight lifting.

If you don't think you fit into any of these, don't worry! Many of us fall somewhere in between. The important thing to know is that there are many body types, and all of these types are normal.

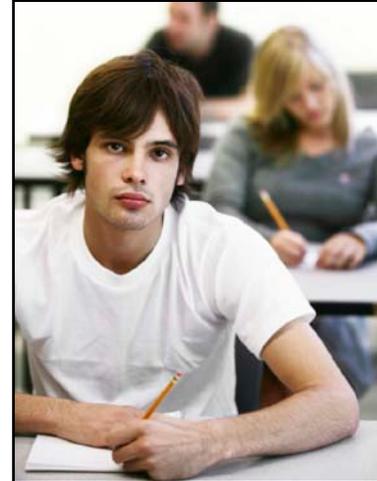
The Media's "Ideal" Body

The media sets unrealistic standards for what body weight and appearance is considered desirable.

Young girls are socialized to believe that Barbie is how a woman is supposed to look (i.e. no fat anywhere on your body, but large breasts). But, if Barbie were a real person, she would be 5'9" tall and weigh 110 pounds, only 76% of her healthy weight. Her measurements would be 39-18-33, and she likely would not be able to menstruate due to being underweight.

Similarly, young boys are given the impression that men are supposed to have muscles bulging all over their bodies. Take a look at their plastic action-figures like GI Joe Extreme. If GI Joe Extreme were life-size, he would have a 55 inch chest and a 27 inch bicep. In other words, his bicep would be almost as big as his waist and bigger than most competitive body builders.

The media's portrayal of what is desirable and normal keeps getting thinner for women and more muscular and cut for men. For example, 25 yrs. ago the average model weighed 8% less than the average American woman. Currently, the average model weighs 23% less than the average American woman. Similar trends are being seen with men. In the past 25 years, the average playgirl centerfold man has shed about 12 pounds of fat, while putting on approximately 27 pounds of muscle.



In reality, only about 5% of women have the tall and thin, model body-type, yet that is often what women aspire to be. Similarly, boys see a body ideal that is impossible to achieve without resorting to extreme measures such as taking steroids. There is a physiological limit to how much muscle a man's body can attain naturally, given his height and body fat percentage, just as there is a limit to how thin a woman can look due to her body type.

Another thing to keep in mind is that physical attractiveness is about more than body shape and size. It also matters how you present yourself (a bright smile can make a big difference!), or if you are a fun person to be with, or if you are confident about who you are, to name a few examples. It's important to know that you can do other things to improve your appearance without focusing exclusively on your body shape and size.

What can you do to achieve your personal best?

Realize that you cannot change your body type, and try not to compare yourself to others. You are who you are, and no one else can be you!

Invest time and money in yourself in ways that make you feel your best.

Examples include getting a manicure or massage, buying new clothes that flatter your unique body type. Purchase new fitness equipment (like walking shoes, gym bag, free weights, etc.), or enroll in a yoga, dance, or martial arts class. Avoid spending money on diet products.



If you weigh yourself, only do so once a week, and be sure to choose the same time of day and wear the same amount of clothes each time. It's normal for weight to fluctuate by a couple of pounds (up or down) daily or even at different times in the same day, due to fluid shifts or how much you've recently eaten, perspired, or gone to the bathroom. If you feel the need to measure your body fat percentage, only do so once every 6 months. Choose the same method and measurer, and remember that there tends to be a 3% margin of error with even the best methods.

Learn to fuel your body for optimal energy, fitness, and health! Check out one of the free nutrition workshops at the Wooden Center or visit the nutrition pages of this web site to find out how well your current eating plan meets your needs.

Move and enjoy your body, not because you have to, but because it makes you feel good! Go for a walk, a swim, or a bike ride, or dance to boost your energy, mood, and cardiovascular health. Do yoga, tai chi, or stretching to relax and improve your flexibility. Use weights, resistance bands, or your own body weight to build muscular strength and endurance. Check out [UCLA Recreation](#) for more ideas!

Learning to manage stress can sometimes influence how you feel about your body and weight. You might be surprised how reducing stress in other parts of your life can put your whole life in perspective! Check out the [stress management workshops](#) at Counseling and Psychological Services (CAPS).

Maintain a positive body image. Click here for more information and resources about [body image](#).

Calories

How many calories do you need to achieve your weight goals?

In order for your weight to stay the same, the energy (or calories) you consume should equal the energy (or calories) you expend. In most cases, it's really a simple matter of energy balance: "Calories In" must equal "Calories Out." "Calories In" includes what we eat and drink. "Calories Out" includes our resting metabolic rate, thermic effect of food, and physical activity. Your personal calorie requirement depends on these three factors.

Calculate Your Total Calorie Needs :

There are many equations to estimate your total calorie needs based on your RMR and level of physical activity (NOTE: the thermic effect of food is usually not accounted for since its role is so minor). It is important to realize that all these equations are just estimates. You may need more or less depending on genetic differences in RMR and your body composition. Consult a qualified health professional for more information about your personal calorie needs.

Step 1: Estimate RMR

Men **Healthy body weight x 11 calories**

Women **Healthy body weight x 10 calories**

IMPORTANT NOTE: This is just an estimate of what your body requires at rest. If you have more muscle than the average person, you probably require more calories at rest than this equation suggests. If you have more fat than the average person, you probably require fewer calories at rest than this equation suggests. Remember, muscle mass is much more metabolically active than fat tissue. If you are 30 lbs. or more overweight (and that excess weight is mostly fat, not muscle), you can use your desired vs. actual body weight when calculating your RMR.

Step 2: Multiply RMR by Activity Factor

	Women	Men
Very Light/Sedentary (sitting or standing all day) e.g. lab/computer work, typing, painting	1.3	1.3
Light (walking and some movement throughout day) e.g. student, teacher, homemaker, child	1.5	1.6

care worker		
Moderate (job with some physical work or <u>moderate</u> intensity exercise 4-5 x/wk. for about one hour) e.g. gardening, carrying loads, most recreational exercisers	1.6	1.7
Heavy (job with heavy manual labor or <u>vigorous</u> intensity exercise 5-6 x/wk. for one or more hours) e.g. roofer, carpenter, many athletes	1.9	2.1
Exceptional (intense physical training for many hours every day) e.g. professional or collegiate athletes during their seasons	2.2	2.4

How Can I Burn Stored Body Fat?

The only way to lose weight is to create a **calorie deficit**. One pound of fat equals 3500 calories. So, in theory, to lose ½ pound to 1 pound a week, that means creating a deficit of 250 to 500 calories per day (either by eating fewer calories or burning more in physical activity). Of course, genetic differences determine how easy it is for you personally to lose weight. In one recent study, researchers overfed a group of people 1000 extra calories every day for 8 weeks and found that there was a huge difference in the amount of weight gained (ranging from 3 to 16 pounds)! The researchers concluded that the people who gained less weight were able to “waste” the extra calories by fidgeting more and giving off more body heat. The people who gained more weight lacked this capability and simply stored the extra calories. For more tips on healthy weight loss, go to [“Lifestyle Strategies For a Healthy Body Weight.”](#) To maximize fat loss, minimize the drop in your metabolism, energy, mood, and grades, and increase the chances that you won't gain it back, **lose weight slowly!** Decrease your intake slightly by 300-500 calories per day and increase your exercise level. Aim for about 0.5-2 lb. weight loss per week. If you are very overweight, 2 lb. per week is acceptable. But, if you only have a few pounds to drop, the rate should not exceed 0.5-1 lb. per week.

How Do I Build Muscle Mass?

The only way to gain weight is to create a calorie excess. So, in theory, to gain ½ pound to a pound a week, you need to create an excess of 250-500 calories per day. Whether or not those extra calories go towards building muscle or body fat depends on whether or not you exercise. Of course, as with weight loss, genetic differences make it easier for some people to gain weight and harder for others. If your metabolism speeds way up every time you eat more, you may have to consume many more calories before you'll achieve results. We are all wired differently. For more tips on weight gain, go to ["Weight Gain Strategies"](#) and ["Bulking Up FAQs."](#)