**Weight Management**

Objectives:

* Discuss how to manage weight through diet
* Provide steps for starting a weight loss plan
* Reinforce the importance of physical activity in weight management
* Explain how to keep the weight off

The majority of Americans are unhappy with their current weight. Almost everyone would like to lose at least 5 pounds. A growing percentage of Americans are carrying enough excess weight to put them at risk for many diseases and even death. Few people, however, know enough about their own bodies to successfully manage their weight. Anyone planning to start a weight loss program should begin by carefully considering the following factors:

* How many calories are being consumed daily?
* How many calories are being expended?
* How much fluids are being consumed?
* How well are electrolytes being managed?

# Weight Management Through Diet

Achieving one’s ideal weight can be a real challenge. But like most endeavors in life, knowledge is power. The more people know about their diet, the better equipped they will be to manage their weight. Most people focus on the number of calories consumed. However, it is also important for them to know how many macronutrients are in the foods they eat. The most effective way to do this is performing a 10-day nutritional intake analysis. These analyses are best done on consecutive days to account for the habitual ebb and flow of one’s daily food intake.

Remaining healthy during any weight loss program is paramount. Fad diets that promise quick results do not consider the effects of rapid weight loss on the body. Restricting weight loss to 1 to 2 pounds a week is a far healthier approach. Slow weight also prevents the body from burning lean muscle since the body can only burn a certain amount of fat in a week. Dieters who experience steady declines in weight are more likely to keep the weight off. The term “diet” is often synonymous with strict routines that require drastic changes in one’s eating habits. In reality, the term “diet” simply describes the intake of food.

To lose weight, dieters need a clear understanding of how weight loss occurs. One pound of fat loss is going to require a reduction in caloric intake of 3,500 calories. When viewed in terms of daily food intake, to lose a pound a week, a dieter needs to reduce their daily food intake by 500 calories a day: 3,500 calories/7 days= 500 calories per day. To successfully lose 2 pounds per week, that reduction would have to be doubled to 1,000 calories per day. Attempting to lose 2 pounds or more per week would require a calorie reduction too drastic to be maintained and too restrictive to be healthy. Thus the recommendation of combining diet and exercise is the most effective method for experiencing weight loss. Subtracting 500 calories of food intake and exerting 500 calories in exercise will provide that same 1000 calorie reduction, but in a manner that is far easier to maintain, and certainly more enjoyable.

No matter what your weight loss goal is, even a modest weight loss, such as 5 to 10 percent of your total body weight, is likely to produce health benefits, such as improvements in blood pressure, blood cholesterol, and blood sugars.1

**Getting Started with Weight Loss**

The Centers for Disease Control and Prevention (CDC) recommends following the step-by-step guide published on its website, on this page: [Healthy Weight: Losing Weight. Getting Started](https://www.cdc.gov/healthyweight/losing_weight/getting_started.html). The same information is also reprinted below:

**Step 1: Make a commitment.**

Making the decision to lose weight, change your lifestyle, and become healthier is a big step to take. Start simply by making a commitment to yourself. Many people find it helpful to sign a written contract committing to the process. This contract may include things like the amount of weight you want to lose, the date you would like to lose the weight by, the dietary changes you will make to establish healthy eating habits, and a plan for getting regular physical activity.

Writing down the reasons why you want to lose weight can also help. It might be because you have a family history of heart disease, or because you want to see your kids get married, or simply because you want to feel better in your clothes. Post these reasons where they serve as a daily reminder of why you want to make this change.

**Step 2: Take stock of where you are.**

Consider talking to your health care provider. He or she can evaluate your height, weight, and explore other weight-related risk factors you may have. Ask for a follow-up appointment to monitor changes in your weight or any related health conditions.

Keep a "food diary" for a few days, in which you write down everything you eat. By doing this, you become more aware of what you are eating and when you are eating. This awareness can help you avoid mindless eating.

Next, examine your current lifestyle. Identify things that might pose challenges to your weight loss efforts. For example, does your work or travel schedule make it difficult to get enough physical activity? Do you find yourself eating sugary foods because that is what you buy for your kids? Do your coworkers frequently bring high-calorie items, such as doughnuts, to the workplace to share with everyone? Think through things you can do to help overcome these challenges.

Finally, think about aspects of your lifestyle that can help you lose weight. For example, is there an area near your workplace where you and some coworkers can take a walk at lunchtime? Is there a place in your community, such as a YMCA, with exercise facilities for you and child care for your kids?

**Step 3: Set realistic goals**.

Set some short-term goals and reward your efforts along the way. If your long-term goal is to lose 40 pounds and to control your high blood pressure, some short-term eating and physical activity goals might be to start eating breakfast, taking a 15-minute walk in the evenings, or having a salad or vegetable with supper.

Focus on two or three goals at a time. Great, effective goals are —

* Specific
* Realistic
* Forgiving (less than perfect)

For example, "Exercise more" is not a specific goal. But if you say, "I will walk 15 minutes, 3 days a week for the first week," you are setting a specific and realistic goal for the first week.

Remember, small changes every day can lead to big results in the long run. Also, remember that realistic goals are achievable goals. By achieving your short-term goals day by day, you will feel good about your progress and be motivated to continue. Setting unrealistic goals, such as losing 20 pounds in 2 weeks, can leave you feeling defeated and frustrated.

Being realistic also means expecting occasional setbacks. Setbacks happen when you get away from your plan for whatever reason—maybe the holidays, longer work hours, or another life change. When setbacks happen, get back on track as quickly as possible. Also, take some time to think about what you would do differently if a similar situation happens, to prevent setbacks.

Keep in mind everyone is different—what works for someone else might not be right for you. Just because your neighbor lost weight by taking up running, doesn't mean running is the best option for you. Try a variety of activities: walking, swimming, tennis, or group exercise classes, to see what you enjoy most and can fit into your life. These activities will be easier to stick with over the long term.

**Step 4: Identify resources for information and support.**

Find family members or friends who will support your weight loss efforts. Making lifestyle changes can feel easier when you have others you can talk to and rely on for support. You might have coworkers or neighbors with similar goals, and together you can share healthful recipes and plan group exercise. Joining a weight loss group or visiting a health care professional, such as a registered dietitian, can help.

**Step 5: Continually "check in" with yourself to monitor your progress.**

Revisit the goals you set for yourself in Step 3, and evaluate your progress regularly. If you set a goal to walk each morning but are having trouble fitting it in before work, see if you can shift your work hours or if you can get your walk in at lunchtime or after work. Evaluate which parts of your plan are working well and which ones need tweaking. Then rewrite your goals and plan accordingly.

If you are consistently achieving a particular goal, add a new goal to help you continue on your pathway to success.

Reward yourself for your successes! Recognize when you are meeting your goals and be proud of your progress. Use non-food rewards, such as a bouquet of freshly picked flowers, a sports outing with friends, or a relaxing bath. Rewards help keep you motivated on the path to better health.2

**The Importance of Physical Activity in Maintaining a Healthy Weight**

On its website, the CDC explains the importance of including physical activity as part of any weight loss program. You can find information about the benefits of physical activity, recommended levels of physical activity, and the number of calories burned during common activities by clicking on this link to webpage: [Healthy Weight: Physical Activity for a Health Weight](https://www.cdc.gov/healthyweight/physical_activity/index.html). That same information is reprinted below.

**Why is physical activity important?**

Regular physical activity is important for good health, and it is especially important if you are trying to lose weight or to maintain a healthy weight.

* When losing weight, more physical activity increases the number of calories your body uses for energy or "burns off." The burning of calories through physical activity, combined with reducing the number of calories you eat, creates a "calorie deficit" that results in weight loss.
* Most weight loss occurs because of decreased caloric intake. However, evidence shows the only way to maintain weight loss is to be engaged in regular physical activity.
* Most importantly, physical activity reduces risks of cardiovascular disease and diabetes beyond that produced by weight reduction alone.

Physical activity also helps to–

* Maintain weight.
* Reduce high blood pressure.
* Reduce risk for type 2 diabetes, heart attack, stroke, and several forms of cancer.
* Reduce arthritis pain and associated disability.
* Reduce risk for osteoporosis and falls.
* Reduce symptoms of depression and anxiety.

**How much physical activity do I need?**

When it comes to weight management, people vary greatly in how much physical activity they need. Here are some guidelines to follow:

**To maintain your weight.** Work your way up to 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent mix of the two each week. Strong scientific evidence shows that physical activity can help you maintain your weight over time. However, the exact amount of physical activity needed to do this is not clear since it varies greatly from person to person. It is possible that you may need to do more than the equivalent of 150 minutes of moderate-intensity activity a week to maintain your weight.

**To lose weight and keep it off.** You will need a high amount of physical activity unless you also adjust your diet and reduce the amount of calories you are eating and drinking. Getting to and staying at a healthy weight requires both regular physical activity and a healthy eating plan.

What do moderate- and vigorous-intensity mean?

Moderate: While performing the physical activity, if your breathing and heart rate is noticeably faster but you can still carry on a conversation, it is probably moderately intense.

Examples include:

* Walking briskly (a 15-minute mile).
* Light yard work (raking/bagging leaves or using a lawn mower).
* Light snow shoveling.
* Actively playing with children.
* Biking at a casual pace.

Vigorous: If your heart rate is increased substantially, and you are breathing too hard and fast to have a conversation, it is probably vigorously intense.

Examples include:

* Jogging/running.
* Swimming laps.
* Rollerblading/inline skating at a brisk pace.
* Cross-country skiing.
* Most competitive sports (football, basketball, or soccer).
* Jumping rope.

**The table on the next page provides a list of common physical activities and the average calories expended during those activities.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Calories Used per Hour in Common Physical Activities** | | | |
| Moderate Physical Activity | Approximate Calories/30 Min.  for a 154 lb. Person1 | Approximate Calories/Hr. for a 154 lb. Person1 |
| Hiking | 185 | 370 |
| Light gardening/yard work | 165 | 330 |
| Dancing | 165 | 330 |
| Golf (walking and carrying clubs) | 165 | 330 |
| Bicycling (<10 mph) | 145 | 290 |
| Walking (3.5 mph) | 140 | 280 |
| Weight lifting (general light workout) | 110 | 220 |
| Stretching | 90 | 180 |
| Vigorous Physical Activity | Approximate Calories/30 Min.  for a 154 lb. Person1 | Approximate Calories/Hr.  for a 154 lb. Person1 |
| Running/jogging (5 mph) | 295 | 590 |
| Bicycling (>10 mph) | 295 | 590 |
| Swimming (slow freestyle laps) | 255 | 510 |
| Aerobics | 240 | 480 |
| Walking (4.5 mph) | 230 | 460 |
| Heavy yard work (chopping wood) | 220 | 440 |
| Weightlifting (vigorous effort) | 220 | 440 |
| Basketball (vigorous) | 220 | 440 |
| 1. Calories burned per hour will be higher for persons who weigh more than 154 lbs. (70 kg) and lower for persons who weigh less.  Source: Adapted from [Dietary Guidelines for Americans 2005, page 16, Table 4](https://health.gov/sites/default/files/2020-01/DGA2005.pdf#page=16). | | | | |

**Keeping the Weight Off**

On its website the CDC admonishes that permanent weight loss is a result of making changes to eating habits that become a long-term part of a healthier lifestyle. The new 2020-2025 guidelines for healthy eating can now be found [here.](https://www.dietaryguidelines.gov/sites/default/files/2020-12/DGA_2020-2025_Infographic_MakeEveryBiteCount.pdf)

* The new guidelines for 2020-2025 emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products
* Includes a variety of protein foods such as seafood, lean meats and poultry, eggs, legumes (beans and peas), soy products, nuts, and seeds.
* Is low in saturated fats, *trans* fats, cholesterol, salt (sodium), and added sugars
* Stays within your daily calorie needs

You may access that section on their website by clicking [Healthy Weight: Improving Your Eating Habits](https://www.cdc.gov/healthyweight/losing_weight/eating_habits.html). It is also reprinted below.

**Reflect, Replace, Reinforce: A process for improving your eating habits**

* Create a list of your eating habits. Keeping a food diary for a few days, in which you write down everything you eat and the time of day you ate it, will help you uncover your habits. For example, you might discover that you always seek a sweet snack to get you through the mid-afternoon energy slump. Use this [diary](https://www.cdc.gov/healthyweight/pdf/food_diary_cdc.pdf) to help. It's good to note how you were feeling when you decided to eat, especially if you were eating when not hungry. Were you tired? Stressed out?
* Highlight the habits on your list that may be leading you to overeat. Common eating habits that can lead to weight gain are:

- Eating too fast

- Always cleaning your plate

- Eating when not hungry

- Eating while standing up (may lead  
 to eating mindlessly or too quickly)

- Always eating dessert

- Skipping meals (or maybe just  
 breakfast)

* Look at the unhealthy eating habits you have highlighted. Be sure you have identified all the triggers that cause you to engage in those habits. Identify a few you would like to work on improving first. Don't forget to pat yourself on the back for the things you are doing right. Maybe you almost always eat fruit for dessert, or you drink low-fat or fat-free milk. These are good habits! Recognizing your successes will help encourage you to make more changes.
* Create a list of "cues" by reviewing your food diary to become more aware of when and where you are "triggered" to eat for reasons other than hunger. Note how you are typically feeling at those times. Often an environmental "cue," or a particular emotional state, is what encourages eating for non-hunger reasons.
* Common triggers for eating when not hungry are:
  1. - Opening up the cabinet and seeing  
      your favorite snack food.
  2. - Sitting at home watching   
      television.
  3. - Before or after a stressful meeting  
      or situation at work.
  4. - Coming home after work and  
      having no idea what's for dinner.
  5. - Having someone offer you a dish  
      they made "just for you!"
  6. - Walking past a candy dish on the   
      counter.
  7. - Sitting in the break room beside  
      the vending machine.
  8. - Seeing a plate of doughnuts at the  
      morning staff meeting.
  9. - Swinging through your favorite  
      drive-through every morning.
  10. - Feeling bored or tired and thinking  
       food might offer a pick-me-up.

Circle the "cues" on your list that you face on a daily or weekly basis. Going home for the Thanksgiving holiday may be a trigger for you to overeat, and eventually, you want to have a plan for as many eating cues as you can. But for now, focus on the ones you face more often.

Ask yourself these questions for each "cue" you have circled:

Is there anything I can do to avoid the cue or situation? This option works best for cues that don't involve others. For example, could you choose a different route to work to avoid stopping at a fast food restaurant on the way? Is there another place in the break room where you can sit so you are not next to the vending machine?

For things I cannot avoid, can I do something differently that would be healthier? Obviously, you cannot avoid all situations that trigger your unhealthy eating habits, like staff meetings at work. In these situations, evaluate your options. Could you suggest or bring healthier snacks or beverages? Could you offer to take notes to distract your attention? Could you sit farther away from the food so it won't be as easy to grab something? Could you plan ahead and eat a healthy snack before the meeting?

Replace unhealthy habits with new, healthy ones. For example, in reflecting upon your eating habits, you may realize that you eat too fast when you eat alone. So, make a commitment to share a lunch each week with a colleague, or have a neighbor over for dinner one night a week. Other strategies might include putting your fork down between bites or minimizing other distractions (i.e., watching the news during dinner) that might keep you from paying attention to how quickly—and how much—you are eating.

Here are more ideas to help you replace unhealthy habits:

Eat more slowly. If you eat too quickly, you may "clean your plate" instead of paying attention to whether your hunger is satisfied.

Eat only when you are truly hungry instead of when you are tired, anxious, or feeling an emotion besides hunger. If you find yourself eating when you are experiencing an emotion besides hunger, such as boredom or anxiety, try to find a non-eating activity

to do instead. You may find a quick walk or phone call with a friend helps you feel better.

Plan meals ahead of time to ensure that you eat a healthy well-balanced meal.

Reinforce your new, healthy habits and be patient with yourself. Habits take time to develop. It doesn't happen overnight. When you do find yourself engaging in an unhealthy habit, stop as quickly as possible and ask yourself: Why do I do this? When did I start doing this? What changes do I need to make?

Be careful not to berate yourself or think that one mistake "blows" a whole day's worth of healthy habits. You can do it! It just takes one day at a time!

**Health Risks of Being Underweight**

The 2003–2006 National Health and Nutrition Examination Survey [(NHANES)](https://www.cdc.gov/nchs/data/hestat/underweight/underweight_children.htm) estimated that 1.8 percent of adults and 3.3 percent of children and adolescents in the United States are underweight. Being underweight is linked to nutritional deficiencies, especially iron-deficiency anemia, and to other problems such as delayed wound healing, hormonal abnormalities, increased susceptibility to infection, and increased risk of some chronic diseases such as osteoporosis. In children, being underweight can stunt growth. The most common underlying cause of underweight in America is inadequate nutrition. Other causes are wasting diseases, such as cancer, multiple sclerosis, tuberculosis, and eating disorders. People with wasting diseases are encouraged to seek nutritional counseling, as a healthy diet greatly affects survival and improves responses to disease treatments. Eating disorders that result in underweight affect about eight million Americans (seven million women and one million men).

**Anorexia Nervosa**

Anorexia nervosa, more often referred to as “anorexia,” is a psychiatric illness in which a person obsesses about their weight and about food that they eat. Anorexia results in extreme nutrient inadequacy and eventually to organ malfunction. Anorexia is relatively rare—the National Institute of Mental Health ([NIMH)](https://www.mentalhealth.gov/what-to-look-for/eating-disorders/anorexia) reports that 0.9 percent of females and 0.3 percent of males will have anorexia at some point in their lifetime but it is an extreme example of how an unbalanced diet can affect health. Anorexia frequently manifests during adolescence and it has the highest rate of mortality of all mental illnesses. People with anorexia consume, on average, fewer than 1,000 kilocalories per day and exercise excessively. They are in a tremendous caloric imbalance. Moreover, some may participate in binge eating, self-induced vomiting, and purging with laxatives or enemas. The very first time a person starves him- or herself may trigger the onset of anorexia. The exact causes of anorexia are not completely known, but many things contribute to its development including economic status, as it is most prevalent in high-income families. It is a genetic disease and is often passed from one generation to the next. Pregnancy complications and abnormalities in the brain, endocrine system, and immune system may all contribute to the development of this illness.

The primary signs of anorexia are fear of being overweight, extreme dieting, an unusual perception of body image, and depression. The secondary signs and symptoms of anorexia are all related to the caloric and nutrient deficiencies of the unbalanced diet and include excessive weight loss, a multitude of skin abnormalities, diarrhea, cavities and tooth loss, osteoporosis, and liver, kidney, and heart failure. There is no physical test that can be used to diagnose anorexia and distinguish it from other mental illnesses. Therefore, a correct diagnosis involves eliminating other mental illnesses, hormonal imbalances, and nervous system abnormalities. Eliminating these other possibilities involves numerous blood tests, urine tests, and x-rays. Coexisting organ malfunction is also examined. Treatment of any mental illness involves not only the individual, but also family, friends, and a psychiatric counselor. Treating anorexia also involves a dietitian, who helps to provide dietary solutions that often have to be adjusted over time. The goals of treatment for anorexia are to restore a healthy body weight and significantly reduce the behaviors associated with causing the eating disorder. Relapse to an unbalanced diet is high. Many people do recover from anorexia, however most continue to have a lower-than-normal bodyweight for the rest of their lives (see [Note 11.33 "Video 11.3"](https://2012books.lardbucket.org/books/an-introduction-to-nutrition/s15-energy-balance-and-body-weight.html#zimmerman_1.0-ch11_s04_s02_s01_n01)).

**Video 11.3**

*What I Gained in Recovery from Anorexia*

[(click to see video)](http://www.youtube.com/v/Q7mYmEhh2fY)

*On a more positive note, watch this personal account of what can be gained from anorexia recovery.*

**Bulimia**

Bulimia, like anorexia, is a psychiatric illness that can have severe health consequences. The [NIMH](https://www.mentalhealth.gov/what-to-look-for/eating-disorders/bulimia) reports that 0.5 percent of females and 0.1 percent of males will have bulimia at some point in their lifetime.

Bulimia is characterized by episodes of eating large amounts of food followed by purging, which is accomplished by vomiting and with the use of laxatives and diuretics. Unlike people with anorexia, those with bulimia often have a normal weight, making the disorder more difficult to detect and diagnose. The disorder is characterized by signs similar to anorexia such as fear of being overweight, extreme dieting, and bouts of excessive exercise. Secondary signs and symptoms include gastric reflux, severe erosion of tooth enamel, dehydration, electrolyte imbalances, lacerations in the mouth from vomiting, and peptic ulcers. Repeated damage to the esophagus puts people with bulimia at an increased risk for esophageal cancer. The disorder is also highly genetic, linked to depression and anxiety disorders, and most commonly occurs in adolescent girls and young women. Treatment often involves antidepressant medications and, like anorexia, has better results when both the family and the individual with the disorder participate in nutritional and psychiatric counseling.

**Binge-Eating Disorder**

Similar to those who experience anorexia and bulimia, people who have a binge-eating disorder have lost control over their eating. Binge-eating disorder is not currently diagnosed as a distinct psychiatric illness, although there is a proposal from the American Psychiatric Association to categorize it more specifically. People with binge-eating disorder will periodically overeat to the extreme, but their loss of control over eating is not followed by fasting, purging, or compulsive exercise. As a result, people with this disorder are often overweight or obese, and their chronic disease risks are those linked to having an abnormally high body weight such as hypertension, cardiovascular disease, and Type 2 diabetes. Additionally, they often experience guilt, shame, and depression. Binge-eating disorder is commonly associated with depression and anxiety disorders. According to the [NIMH](https://www.nimh.nih.gov/health/statistics/eating-disorders), binge-eating disorder is more prevalent than anorexia and bulimia, and affects 3.5 percent of females and 2.0 percent of males at some point during their lifetime. The National Institute of Mental Health. Treatment often involves antidepressant medication as well as nutritional and psychiatric counseling.

**Terminology Checklist**

**Binge Eating Disorder:** Eating large amounts (typically an entire day’s worth) of calories in one sitting. Often done at night and alone.

**Anorexia Nervosa:** A disorder where someone constricts caloric intake leading to extreme leanness.

**Bulimia Nervosa:** Typically associated with large amounts of food, paired with a purge. This is what makes up the Binge-Purge cycle.

**Test Your Knowledge**

1. To lose one pound of fat \_\_\_\_\_\_\_ calories must be burned.
   1. 1500
   2. 2000
   3. 3000
   4. 3500
2. This is the type of eating disorder where someone eats too less calories for a long period.
   1. Binge-Eating Disorder
   2. Anorexia
   3. Bulimia
   4. Muscle Dysmorphic Disorder
3. The Eating disorder that happens at night, often alone:
   1. Binge-Eating Disorder
   2. Anorexia
   3. Bulimia
   4. Muscle Dysmorphic Disorder
4. The eating disorder that has a binge-purge cycle.:
   1. Binge-Eating Disorder
   2. Anorexia
   3. Bulimia
   4. Muscle Dysmorphic Disorder
5. The % of Americans currently Overweight:
   1. 33
   2. 45
   3. 66
   4. 90

Key

1. d
2. b
3. a
4. c
5. c

**References:**

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2. <https://www.cdc.gov/healthyweight/losing_weight/getting_started.html>.
3. <https://www.cdc.gov/healthyweight/prevention/index.html>
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5. <https://health.gov/sites/default/files/2020-01/DGA2005.pdf#page=16>
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7. <https://www.cdc.gov/healthyweight/pdf/food_diary_cdc.pdf>
8. <https://www.youtube.com/watch?v=Q7mYmEhh2fY>
9. <https://www.mentalhealth.gov/what-to-look-for/eating-disorders/anorexia>
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