



# Carbohydrates and Weight Management

**W**here Do Carbohydrates Weigh In? Proponents of low-carbohydrate diets are attacking the wrong villain. They put the blame for Americans' struggle with the scale on carbohydrates. They point to carbohydrate consumption patterns of the U.S. population relative to the increasing prevalence of obesity as "proof" that carbohydrate intake causes obesity.

It is true that the percentage of calories consumed from carbohydrate foods has increased. But the more important fact is being overlooked: **the total number of calories in the average American's diet from all sources (carbohydrates, protein and fat) has increased by about 168 calories per day for men and 335 calories per day for women from 1971 to 2000! (1)** This equates to almost 17 pounds of weight gain for men and almost 35 pounds of weight gain for women in just one year.

Starchy carbohydrates, such as potatoes, seem to be specifically targeted by low-carbohydrate fanatics. But don't fall for the hype. There is actually little scientific evidence to support the notion that starchy vegetables, such as potatoes, *cause* obesity. In fact, most research indicates that diets high in complex carbohydrates are associated with a lower body weight (1). (Note: Carbohydrates are broadly classified as simple or complex, based on chemical structure. **Simple carbohydrates**, which include sugars, consist of one or two molecules. **Complex carbohydrates**, such as starch, have a more complex chemical structure, containing two or more molecules linked together.)

## Weight Control – A Balancing Act

Body weight is determined by what nutritional scientists refer to as *energy balance*. Basically, energy balance is the relationship between the calories you consume (energy intake) and the calories you expend (energy output). The relationship of energy balance to body weight can be summarized by the following equations:

Energy Intake = Energy Output = **Weight Maintenance**

Energy Intake > Energy Output = **Weight Gain**

Energy Intake < Energy Output = **Weight Loss**

Energy Intake: A calorie is a measure of heat energy. In foods, calories come from the macronutrients: carbohydrate, protein, and fat. The caloric values of each of these macronutrients are listed in the table below:

Source (1 gram)	Calories
Carbohydrate	4
Protein	4
Fat	9

Since one gram of fat has more than twice the calories of a gram of carbohydrate or protein, it's clear that lowering dietary fat can lead to fewer calories. In fact, that's precisely why moderate or low fat diets are recommended for weight loss or weight maintenance.

Energy Output: Many people mistakenly believe that they only "burn calories" when they exercise. In fact, your body is burning calories all of the time (yes, even when sleeping!). Calories are used to keep basic body functions going, to metabolize the foods you eat, and to do any form of physical activity.

Exactly how many calories people need varies, depending on such factors as gender, current body size, activity level and body weight goals (i.e., to maintain, lose or gain weight). A general rule of thumb for estimating BMR is to multiply body weight in pounds by a factor of 10 for females, 11 for males. For example, the BMR for a 135-pound female would be: 135 lbs. x 10 = 1350 calories. This value can then be multiplied by an activity factor. Since BMR makes up just 60 percent of daily caloric needs, this female would need about 2250 calories per day, less if she is short in stature and trying to lose weight.

## Making Calories Count

Leading nutrition experts agree that we gain weight when we eat more calories than we expend, regardless of where those calories come from (carbohydrates, protein, or fat). In fact, the scientific evidence supporting calorie balance is so strong that the Food and Drug Administration (FDA) recently published a report – appropriately named “Calories Count” – documenting the importance of total calories when it comes to weight control (2). The report states that maintaining “energy balance” is easier with a diet that is rich in a variety of fruits and vegetables as these foods tend to be very low in calorie content yet high in essential nutrients (in other words, they have a high nutrient density). Moreover, fruits and vegetables are high in dietary fiber, which promotes a sense of fullness without adding calories.

Clearly, limiting vegetables, like potatoes, is not a wise choice to achieve a healthy weight. A safe, tried-and-true method for long-term weight loss is to reduce calories by decreasing portion sizes. People tend to eat what food is served to them, so control portion sizes from the outset by following these tips:

- Use measuring cups and spoons when preparing food at home.

*A medium-sized, 5.3-ounce potato with the skin contains zero fat and cholesterol for 110 calories, but is rich in vitamin C and a good source of potassium and vitamin B6.*

- Portion out food according to the number of servings specified in a recipe yield.
- Compare the amount of foods you eat to serving sizes listed on food labels.
- Serve food on smaller plates.
- When dining out, select restaurants that offer reasonably-sized entrees, not oversized monstrosities.
- Avoid buffet-style restaurants, all-you-can-eat specials, second helpings and “free” refills.
- Share a meal with a friend, or take the second half home for another meal.

## Bottom Line: Small Steps Make a Big Difference

When trying to lose weight or hold steady at a desired one, there’s no need to turn to the latest “diet” or outcast your favorite foods. Small changes to your diet and exercise routine can make a big difference. Eating 100 calories fewer or expending 100 calories more in a day add up to a loss of 10 pounds in a year. Substituting ½ cup of salsa for a tablespoon of butter on a baked potato saves about 100 calories. And taking a brisk, 30-minute walk burns 100 calories. What’s even better is to do both to shed about ½ pound per week. A healthful eating plan can include all your favorite foods if they are in reasonable amounts and balanced out with daily physical activity.

1) Trends in intake of energy and macronutrients---United States, 1971-2000. *MMWR Weekly* February 6, 2004 53(04);80-82. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5304a3.htm/> Accessed May 3, 2007.

2) Astrup A and Raben A. Carbohydrate and obesity. *Int J Obesity*. 1995;19:S27-S37.

3) Calories Count: Report of the Working Group on Obesity. Available at: <http://vm.cfsan.fda.gov/~dms/owg-toc.html/> Accessed July 1, 2004.

For healthy recipes and nutrition information, go to: [www.potatogoodness.com](http://www.potatogoodness.com).

