

Feel Full on Fewer Calories

On paper, losing weight doesn't look that hard. Eat less, burn more calories and the extra pounds should melt away. But what if eating less leaves you feeling hungry and deprived much of the time? Instead of losing weight, many people simply lose their motivation. It seems that volume of the food on your plate matters just as much as the total of calories in that food. This concept is the foundation of "volumetrics" and other healthy eating models. Today we'll look at:

- Volumetrics
- Calorie or energy density
- The "plate" method

Volumetrics

According to obesity researcher Barbara Rolls, Ph.D., it is the *volume* of food you eat that makes you feel full after a meal, not the total number of the calories in that meal. Successful weight management can be achieved by keeping a similar volume of foods in your diet but swapping out high-calorie foods for lower-calorie options. Rolls calls this style of eating "volumetrics." It's based on her research in satiety (the state of being full) at Pennsylvania State University where she is a professor of nutritional sciences.

Rolls's latest science-based guide to weight loss, *The Ultimate Volumetrics Diet*, will be published in the spring of 2012.

Calorie Density

To understand how volumetrics works you'll need to become familiar with the concept of calorie or energy density. This refers to the number of calories per gram of food.

Foods that are high in calorie density contain a high number of calories per gram. Examples of calorie-dense foods are cookies, candies, oils and butter. These foods contain a lot of calories but are not likely to fill you up or keep you feeling full for long. Foods that are low in calorie density contain a low number of calories per gram. These foods will fill you up with fewer calories and will keep you feeling full longer. Veggies, fruits, and broth-based soups are just a few examples of foods that are low in calorie density.



Your first step with this eating plan is to zero in on the **calorie density** of the food on your plate. That means cutting back on foods that pack lots of calories and replacing them with an equal volume of foods with fewer calories.

Foods that are high in calorie density contain the most calories per weight. Portion control is critical with high-calorie dense foods. Fats like butter and olive oil provide the most calories per gram than any other calorie source. They provide 9 calories per gram. Consider this: a single pat of butter adds 36 calories to your slice of morning toast.

Alcohol comes in second highest on the calorie density list.

Refined carbohydrates come in third. Carbohydrate-rich foods are the primary source of calories for most Americans. Carbs are just about everywhere from sugary beverages to snack chips to plain pasta, white rice and white bread.

Include reasonable portion sizes of foods in the medium-calorie density group. Medium density foods include hard-boiled eggs, beans and peas, dried fruits and whole-grain breads.

Low-calorie density foods have very few calories per gram of weight. Eating foods in this group will help you feel full without a calorie overload. Most fresh fruits and vegetables fall into this category. Broth-based soups, plain fat-free yogurt, fat-free cottage cheese, many types of seafood and lean poultry belong here too.

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MyPlate

The USDA's new MyPlate icon is a visual tool designed to help Americans make healthier food choices. It could easily be called the "Feel Full on Fewer Calories Tool." MyPlate is meant to take the place of the familiar Food Guide Pyramid and to help guide Americans in choosing a healthy diet. The plate graphic suggests that half of the national dinner plate be devoted to vegetables and fruits, one quarter of the plate goes to whole-grain foods and the remaining quarter is for meat or other high-protein foods. This 2-1-1 ratio ensures you meet your daily goal of abundant low-density calorie vegetables and fruits while limiting higher calorie density foods.



Calorie Density Comparisons

Calorie density can be demonstrated by looking at what you get for 100 calories worth of specific foods.

Compare these trios of food choices:

A 1-ounce slice of Swiss cheese, the thinner half of a whole-grain bagel and 2 1/2 cups steamed green beans all deliver about 100 calories each.

Or:

1 1/2 tablespoons blue cheese salad dressing, 2/3 cup garlic croutons and 5 1/2 cups shredded romaine lettuce all deliver about 100 calories each.

Water and fiber increase the volume of foods while reducing energy density. This accounts for the low energy density of vegetables and fruits. Nearly everyone needs more of these foods in our diets anyway. The USDA's Dietary Guidelines for Americans recommend we get 4-6 cups a day while the average American eats less than half that. While these plant foods are low in calorie density, they get high marks for nutrient density. Almost all are excellent sources of vitamins, minerals and health-protective phytochemicals.

Physical Activity

Eating a diet rich in low calorie density foods can help you lose weight, but exercise strongly influences whether or not it stays off. Studies show that dieting plus physical activity is the most effective recipe for losing weight, but for keeping it off, physical activity matters most. Therefore physical activity is vital to any weight loss or maintenance plan. The US Department of Health and Human Services recommends that adults get at least 30 minutes of moderate intensity physical activity at least 5 days a week.

Summary

To feel full on fewer calories don't focus on the total calories you're consuming. Instead look at the volume of the foods on your plate. Swap in more foods that are in the low calorie density group. This category includes vegetables, fruits and very lean meats and seafood. The MyPlate tool is a handy guide to help you create meals that are high in vegetables and fruits.

Sources

<http://www.choosemyplate.gov/steps/stepstohealthierweight.html>

Barbara J. Rolls and Robert Barnet, *The Volumetrics Weight Control Plan: Feel Full on Fewer Calories*, QUILL 2000.