

# Total Nutrition

## A New Way to Keep Weight in Line

(NAPSA)—When you watch your weight, you watch calories. But, Barbara Rolls, Ph.D., a weight loss researcher at Penn State, urges dieters to take calorie consciousness a step further by looking at the number of calories in a given *weight* of a food—or what she calls, its “energy density.” Foods with proportionately fewer calories per gram (weight) fill you up, says Rolls, and leave you feeling full longer than foods that have more calories in a smaller volume.

Studies show that people eat a fairly constant amount or weight of food each day. The premise of Rolls’ work is that if people choose the same amount of food as they normally do, but select ones that are less energy dense, they will lose weight. Unlike most weight loss plans that tend to cut portion sizes and leave dieters hungry and wanting for more, choosing a diet rich in low-energy dense foods gives you the best of both worlds—reasonable portions, a full stomach and fewer calories.

Three main elements affect a food’s energy density—fat, water and fiber.

**Fat**—Considered the most energy-dense element in a food, fat provides nine calories per gram. Carbohydrates and protein on the other hand, contain only four calories per gram. Because fat packs calories into a food, selecting lower fat foods easily lowers energy density and cuts calories.

**Water**—Water adds volume and weight to foods without adding calories. For example, calorie-wise, one-quarter cup of raisins is the same as nearly two cups of whole grapes. The grapes satisfy hunger more. Selecting foods with a high water content, such as fruits and vegetables, or finding ways to add water to foods, like adding fruit to the top of cereal lowers energy density and staves off hunger.

**Fiber**—Fiber works by adding bulk without adding calories. Fiber-rich foods tend to take more time to chew, which adds to satiety (sense of fullness) and they slow how quickly foods empty from the stomach, leaving you feeling full longer. Fiber-rich foods

### Determining The Energy Density Of A Food

$Calories = \text{Energy density} \times \text{Gram weight of 1 serving}$

Look at the nutrition label of a food.

1. Find the number of calories listed per serving size.
2. Find the serving size (at the top) and find in parentheses, the number of grams in one serving.
3. Divide the calories by the weight. A simple rule of thumb: if the number of calories is less than the number of grams in a serving, the food has an energy density below 1.0 and is considered a “low energy dense” food. If the calories are twice the grams, the food has an energy density of 2.0 and is considered a higher energy dense food.

**Very Low Energy Dense Foods:** 0.6 or less. Examples: fruits, vegetables, skim milk and broth-based soups.

**Low Energy Dense Foods:** 0.6 to 1.5. Examples: Cereals with low-fat milk, low-fat meats, beans and legumes, low-fat mixed dishes and salads.

**Medium Energy Dense Foods:** 1.5 to 4.0. Examples: Meats, cheeses, high-fat mixed dishes, salad dressings and some snack foods.

**High Energy Dense Foods:** 4.0 to 9.0. Examples: Crackers, chips, chocolate candies, cookies, nuts, butter and full-fat condiments (mayonnaise, cream sauce, etc.)

Source: Volumetric Weight Control Plan by Barbara Rolls, PhD and Robert Barnett, Harper Collins, 2000



include whole grains, fruits, vegetables and legumes.

### Putting it all together—

The best way to lower the energy density of your diet is to lower fat intake while adding water and fiber to your favorite dishes. Some ways to do this:

- Select whole-grain breads, cereals, rice (brown) and pasta (whole wheat). Check the nutrition labels and ingredient listings to ensure you are getting whole grains.
- Add in or increase the amount of vegetables in cooked pasta or rice—you increase volume with very few calories.
- Substitute legumes such as kidney beans, peas and lentils for meat in casseroles.
- Add slices of tomato, lettuce, cucumber, etc., to sandwiches.

**A Great Start Toward Total Nutrition**—Include a broth-based soup at mealtime. Rolls’ research shows it reduces the number of calories a person eats at a meal and it staves off hunger for hours afterward. Drinking water or other beverages before a meal is not the same. They satisfy thirst but do nothing for hunger. Soup works like food—it sets off the signals in your body that help you feel full.

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