

New York Times

July 11, 2006

PERSONAL HEALTH

Forget the Second Helpings. It's the First Ones That Count.

By **JANE E. BRODY**

With summer in full swing and clothing at a yearly minimum, concern about weight is naturally at an annual maximum. You may wonder why we just keep becoming fatter despite all the diets millions of Americans have latched onto in recent decades.

Don't any of them work? And, if not, why not? Hasn't all the research into the causes and treatment of weight problems yielded clues to help most people achieve and maintain normal body weight?

Well, folks, it has. But most people choose not to listen. They seem to prefer quick fixes that may yield fast short-term results but have little or no lasting value.

Americans now spend more than \$46 billion a year on weight-reduction programs, an amount that has grown more than 1,000-fold in the last three decades. Money literally thrown away. To be sure, [genetics](#) plays an important role in the weight problems of some people, perhaps 10 percent of those who are seriously overweight.

But genes do not account for the doubling and tripling of [obesity](#) rates among both adults and children since the 70's. For this there is only one possible explanation: the environment in which our genes are forced to act — the foods people eat, how they eat them and how they expend the energy their bodies do not need.

I have often written about the vital role of physical activity in balancing the weight equation. Here I will focus on the intake side of that equation.

Portion Size Counts

I'll start with what seems to be a mantra for most Americans: bigger is better. Bigger cars, bigger houses, bigger portions. About 30 years ago the restaurant industry tried to introduce Americans to a French dining style called cuisine minceur, small, elegant portions served on large, usually white plates (but priced as if the plates were heaped with food).

It was doomed from the get-go. Americans want more for their money, and more is what they got. Portions big enough to feed a horse.

It's not just McDonald's. Nearly every dish and beverage Americans now consume is supersized compared with what they used to eat (and, I might add, at a time when more energy was spent just getting through the demands of the day).

An average serving of pasta is now 480 percent greater than the one-cup recommended serving size, Lisa Young and Marion Nestle, nutritionists at [New York University](#), reported in 2002 in *The American Journal of Public Health*. Some cookies, they found, are 700 percent larger.

A New York bagel, now sold nationwide, weighs five or six ounces. That is five or six bread portions, supplying about 500 calories, not counting cream cheese or butter. The muffin tins from my childhood produce muffins one-third the size of those at Starbucks.

Restaurants like fast-food and takeout establishments, as well as family-style businesses, pile on food with no regard for recommended portions.

Drinks are in 24-ounce sizes or larger, often with free refills. And most people eat and drink what they pay for.

Only the most expensive restaurants seem to emphasize quality over quantity, serving reasonable portions that satisfy a normal appetite and do not leave diners feeling stuffed.

It is an unfortunate twist of fate that the cheapest dining establishments serve the most food.

Every packaged food now sold in America with a [nutrition](#) information label states the serving size and calories per serving, but few people bother to read it.

Or if they do read it, they pay no attention and eat however much they want. Here is a list to clip and paste on a refrigerator or in the pantry cupboard to help remember what a portion is:

GRAINS AND GRAIN PRODUCTS 1 slice bread, $\frac{1}{4}$ bagel, $\frac{1}{2}$ cup cooked rice or other grains, 2 ounces uncooked pasta (about 1 cup cooked spaghetti), $\frac{1}{2}$ to $1\frac{1}{4}$ cups ready-to-eat cereal (depending on type), $\frac{1}{2}$ cup cooked cereal.

DAIRY PRODUCTS 1 cup milk, 6 to 8 ounces yogurt, 2 tablespoons cream cheese, 1 ounce hard cheese, $\frac{1}{2}$ cup ice cream.

MEAT AND MEAT SUBSTITUTES 3 ounces cooked meat, poultry or fish, $\frac{1}{4}$ cup canned tuna, 2 tablespoons peanut butter, 1 egg, 1 cup cooked dry beans, 3 ounces tofu.

FRUITS AND VEGETABLES $\frac{1}{2}$ cup cooked or cut-up fruits or vegetables, 1 cup salad greens, 1 medium potato, orange, apple or banana, $\frac{3}{4}$ cup fruit or vegetable juice.

CONDIMENTS, ETC. 1 tablespoon vegetable oil, butter or margarine, 2 tablespoons salad dressing, 1 teaspoon sugar, 2 tablespoons whipped topping.

SOFT DRINKS Note this last item. Eight ounces of a soft drink, not the 12 ounces in a modern can or the 24 in a typical McDonald's serving. Unless it is an artificially sweetened product, you are consuming water with 7 teaspoons (108 calories) of sugar in every 8 ounces. That's 21 teaspoons of sugar in a 24-ounce soda.

This is not to say you must limit yourself to just one portion of the listed foods at a meal. But if eating more than one, you have to remember to double, triple or quadruple the calories per serving on the label.

Also note that a single serving of different products can supply vastly different numbers of calories. Thus, a cup of low-fat yogurt with fruit and sugar can have 240 calories, whereas a cup of artificially sweetened nonfat yogurt has 100.

Half a cup of Java Chip ice cream from Starbucks has 250 calories, but the same serving of Edy's (Dreyer's) Espresso Chip has 150. Frozen yogurt may sound less

fattening than ice cream, until you read the label — 200 calories in a half-cup of Haagen-Dazs frozen yogurt.

A Role for Energy Density

Dr. Barbara J. Rolls and colleagues at [Pennsylvania State University](#) have recently shown that portion size acts independently with another characteristic of meals — energy density — in satisfying hunger and reducing the number of calories ingested.

What is likely to be more satisfying, a quarter-cup of raisins or two cups of grapes? Both supply about the same number of calories. How many calories are packed into a given amount of food can make a big difference in how many extra calories people consume.

The more energy-dense a food is — that is, the more calories per ounce or gram — the more calories people tend to consume.

In previous studies, Dr. Rolls found that, all other factors being equal, people eat about the same weight of food each day.

If those foods are in the moderate range of energy density like meat, cheese, pizza and French fries or at the high end of energy density like crackers, nuts and cookies, people consume more calories than they do if their meals contain lots of low-energy-density foods, like soup, green salad, nonstarchy vegetables and fruit.

The main ingredient that influences energy density is water. The more water in a food, the fewer calories per ounce it is likely to contain. But drinking water with meals does not have the same effect as eating a food naturally high in water like broccoli or watermelon, Dr. Rolls said.

A second important factor in satisfying appetite is fiber, which is found in whole grain breads and cereals, brown rice and other whole grains, beans and other legumes, fruits and vegetables. Fiber adds noncaloric bulk to foods. It is filling, it holds water, and it slows the absorption of food, so people are more likely to feel satisfied before they overeat.

This is the first of two columns about overeating. Next week: Fat pets and fat owners.