

A SPECIAL REPORT  PERSONAL HEALTH

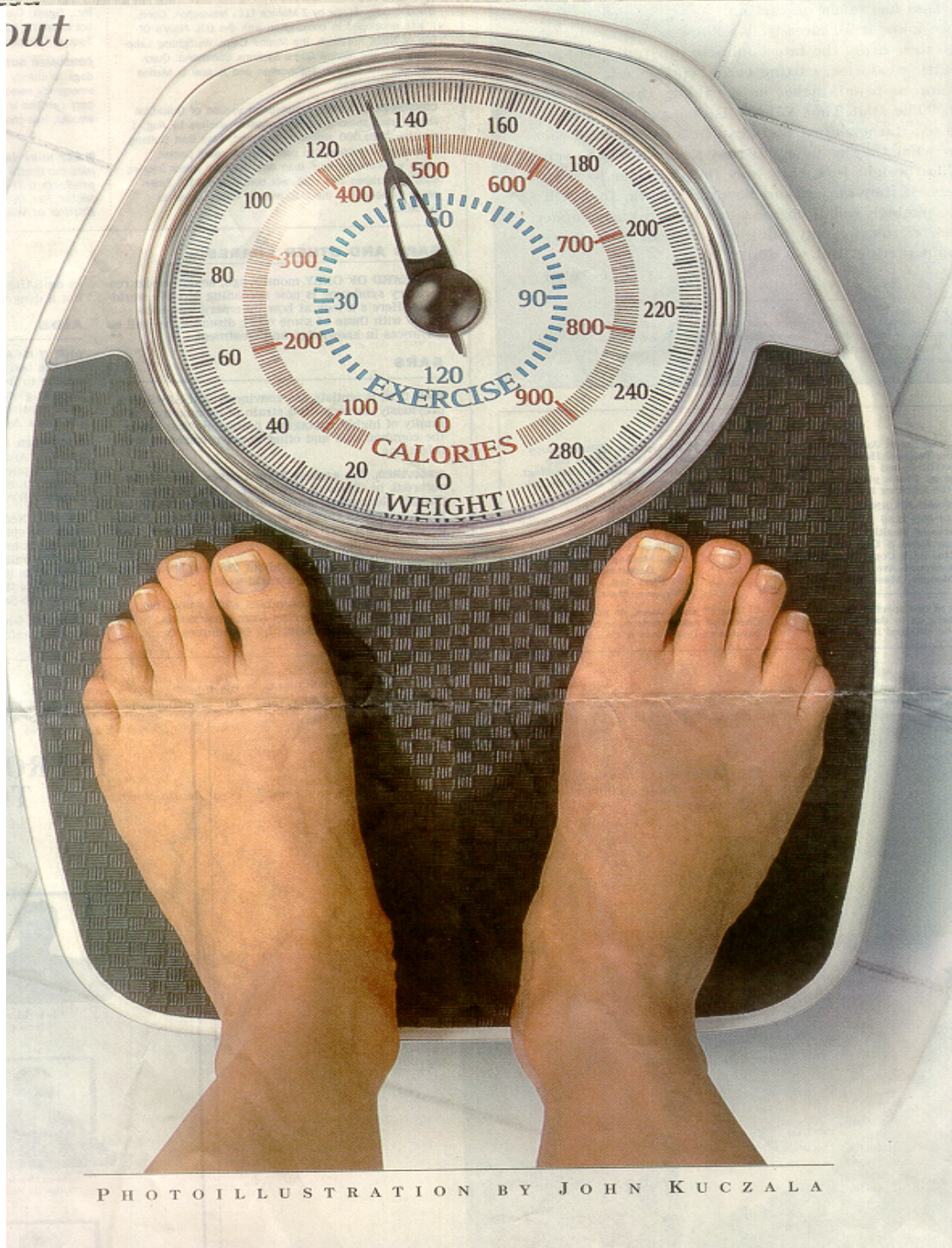
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The Diet That Works



PHOTOILLUSTRATION BY JOHN KUCZALA

What science tells us about successful weight loss

By TARA PARKER-POPE

IF STICKING TO A DIET WERE EASY, so many of us wouldn't be so fat.

Everyone knows the formula—eat less, exercise more—but few people follow it. It's not for lack of trying. At any given time, 29% of men and 44% of women are on a diet.

But every would-be weight loser faces a slew of powerful evolutionary forces working to thwart even the most determined dieter. Put a new food in front of us, and we'll eat it, even if we felt full minutes earlier. When physical activity starts to burn up calories, a hunger mechanism kicks in, making us eat more. If we start to lose weight, other metabolic processes and brain signals make sure our hunger switch stays on.

"Throughout most of human evolution, we weren't sure where the next meal was going to come from," says Richard D. Mattes, food and nutrition professor at Purdue University. "Hunger is a mechanism to ensure we eat when we find food and that we eat as much of it as we can."

While the strategy worked just fine for the caveman, it's a problem if you live in a world where food is not only plentiful, but supersized. Factor in the various social, cultural and economic pressures to eat, and it seems the average dieter doesn't stand a chance.

So is losing weight impossible? Of course not. People lose weight and keep it off all the time.

Exactly how they do it is rooted in a body of scientific research that teaches us the secrets of a successful diet. Science tells us the types of foods we should eat, as well as the amounts. It tells us *how* to eat, as well as the ways to monitor our diet. It tells us the little tricks that can make all the difference between success and failure.

One thing is clear: The basic rules don't change. The only way to lose weight is to cut calories. The diet gurus sell a lot of books by making it seem otherwise. But while a given diet plan may tell you to count the carbs or the fat, your body is still counting calories. It doesn't matter if they are carb calories or fat calories or protein calories—in theory, your body will shed a pound for every 3,500 calories you cut (though in real life, it's not that simple).

So while popular diets promise sugar-busting, fat-flushing, carb-counting revolutions in weight loss, many of them miss the point. The diet that works isn't based on a single big idea. Instead, it's a set of scientifically based tools that are essential to weight loss—no matter what particular diet you're following.

STOP DRINKING SODA

Over the course of a year, one can of regular cola a day, at 140 to 150 calories, adds up to more than 50,000 calories, or about 15 pounds.

But calories alone are not what make beverages so insidious. Liquid calories have the potential to do more damage in terms of weight gain because they don't make you feel as full. The body simply doesn't "notice" calories that you drink as much as it does calories from solid foods—so you end up consuming far more

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calories than you would otherwise. (Liquid diets don't pose the same problem because the drink is intended as a replacement for other food.)

To test this theory, researchers at Purdue, in West Lafayette, Ind., devised an intriguing study a few years ago comparing liquid and solid calories. Fifteen participants consumed 450 calories of soda each day for four weeks and 450 calories of jelly beans during a different four-week period.

When the researchers tracked eating patterns during the study period, they discovered that the jelly-bean eaters ate the candy *instead* of other food, so their total daily caloric intake didn't change. But the soda drinkers drank the soda *in addition* to other foods, continuing to eat as they always had, so their calories for the month increased dramatically. As a result, they gained weight during the soda phase, but maintained their weight during the jelly-bean phase.

Barbara Croft of Worthington, Ohio, knows well the difference diet cola can make. In February 1999, she weighed 350 pounds. After being diagnosed with diabetes, she decided to diet. Her first step was to cut out the eight to 10 Pepsis she drank every day. The drinks added up to as much as 156 pounds a year.

Ms. Croft, 54 years old, also cut back on her food calories and started exercising. She lost 200 pounds and has kept it off for 2½ years. "Once you stop the soft drinks," she says, "it immediately makes a difference."

WRITE IT DOWN

Doctors have long been fascinated by people who claim to eat very little but can't lose weight—people who blame their dieting problems on metabolism, for instance, or heredity. But for many people, researchers believe, the problem lies elsewhere.

A New York study monitored a group of obese patients who complained they couldn't lose weight on 1,200 calories a day. But researchers found there was nothing metabolically unusual about the patients. Instead, the study found the group was eating, on average, 47% more than it claimed and exercising 51% less.

The deception isn't always intentional. "If you ask someone to recall what they ate that day, I guarantee you a handful of M&M's is forgotten," says Lawrence J. Cheskin, director of the Johns Hopkins University weight-management center in Baltimore.

But many studies show dieters who religiously record what they eat lose more weight and keep it off better than

those who don't keep food records. The more days a person records the food they eat, the greater the weight loss. A Chicago study looked at eating habits over the holidays. On average, participants gained 500% more in holiday weeks than in other weeks. But those who consistently kept food records *lost* weight.

WEIGH YOURSELF OFTEN

Most weight-loss programs tell dieters to stay off the scale so they won't get discouraged by the slow pace of weight loss.

But that conventional wisdom is wrong: Weighing often—*really* often—is one of the keys to successful weight loss. Look at the members of the National Weight Control Registry, a collection of 4,500 successful dieters who have lost at least 30 pounds and kept it off for a year. (The average member has lost 66 pounds and kept it off for six years.) Seventy-five percent of registry members weigh themselves at least once a week, while 44.5% weigh at least once a day. (To join the registry, call 1-800-606-NWCR.)

A study of people who lost weight on the Weight Watchers program showed regular weigh-ins helped dieters react before too much damage was done. People who used a three-pound gain as a cue to restart their diets were more likely to have long-term success.

EAT BIG FOOD

A Pennsylvania State University study fed normal-weight women over two days. The women ate as much as they wanted of different types of high-calorie and low-calorie foods.

When researchers tallied the women's intake, they found the women instinctively ate about three pounds of food a day. The calorie content didn't seem important to the women in determining how much they ate—even when it dropped by 30%. In other words, the women seemed satisfied by a certain volume of food, not calories.

So the trick for the dieter isn't to eat less food, but to pick foods that pack relatively few calories by weight, says Barbara J. Rolls, the Penn State nutrition professor and author of the "volumetrics" diet books. An easy way to do this is to think big. Choose foods that are bulked up by water or fiber. For instance, for 100 calories, you can eat a quarter-cup of raisins or two cups of grapes. Adding vegetables can double the size of a pasta dish without much of a calorie increase.

Soups are also big food—even though liquid calories usually don't satisfy hunger. The reason could be psychological, or it may simply be that soups are more substantive, so the body treats them as a food.

The difference soup can make is startling. In one study, women were given

1½ cups of chicken-rice casserole and a 10-ounce glass of water to drink. Another day, the water was mixed with the casserole, turning it into 2½ cups of soup. Both portions contained 270 calories.

After the main course, the women could eat other foods. The casserole group consumed 396 calories for lunch. The soup group stopped at 289 calories. The body, it appears, didn't factor in the water when it was consumed as a beverage, but bulking up the casserole with water made the meal more satisfying.

PAY ATTENTION TO PORTIONS

Studies of the way children eat during early childhood show that our eating instincts can change. One study put large portions of macaroni and cheese in front of two groups of children. The three-year-olds ate normal amounts, but the five-year-olds ate most of it.

"We're born with a better ability to listen to bodily signals than we're later exhibiting," says Dr. Rolls. "Between three and five, kids are getting rewired for cleaning their plates."

The process continues into adulthood. In one study, Dr. Rolls switched a popular restaurant dish of baked ziti with a portion that was 50% larger. Patrons didn't notice the bigger size and ate most of the dish, consuming 45% more calories than when the portion was smaller. The lesson: If a dieter doesn't pay attention to portion size, the body won't either.

REPLACE A MEAL

Counting calories is hard. How many were in the dinner you made last night, or the meal at the restaurant last week?

That may be one reason several studies have shown that people who replace several meals a week with portion-controlled foods such as commercial liquid diets or frozen meals have more success losing weight and keeping it off.

A Brown University study gave one group of dieters prepackaged meals, while others were told to cut calories. Some of the dieters were paid for weight loss, receiving up to \$25 a week for losing weight. Money made no difference in encouraging weight loss. But dieters who used prepackaged meals lost 31% more weight in the first four months of the study than those who simply tried to cut calories.

"The best way to induce weight loss is to design a no-brainer diet," says Thomas Wadden, director of the University of Pennsylvania weight and eating disorders program. "People don't know how many calories are in a pepperoni pizza. But you know if you've had a meal replacement you've had 200 calories. It's the perfect antidote for supersize portions."

MONOTONY WORKS

Most dieters think eating a wide variety of foods is the key to a successful diet. They're wrong.

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Weighty Numbers

- 14**
Number of calories in a potato chip
- 29**
Number of pounds you would gain from eating one extra potato chip a day for 20 years
- 19.8**
Percentage of adults who say they are obese
- 30.5**
Percentage of adults who really are medically obese
- 30**
Percentage by which people typically underestimate how many calories they eat
- 1,795**
Average number of daily calories successful weight losers probably eat
- 24**
Percentage of U.S. adults who consume five servings of fruits and vegetables a day
- 510**
Number of calories in a plain Panera cinnamon crunch bagel
- 2**
Hours it would take a 160-pound person to walk off a plain Panera cinnamon crunch bagel
- 14**
Hours a 160-pound person needs to walk to lose a pound
- 148**
Average increase in daily calories consumed, compared with 20 years ago
- 140**
Calories in a regular 12-ounce Coke
- 10**
Diameter, in inches, of a typical restaurant plate 20 years ago
- 12**
Diameter, in inches, of a typical restaurant plate today

Sources: Purdue University Department of Foods and Nutrition; Journal of the American Medical Association; National Weight Control Registry; U.S. Centers for Disease Control and Prevention; www.panera.com; www.netnutritionist.com; U.S. Department of Agriculture; Coca-Cola Co.; American Institute for Cancer Research

The body has different satiety quotients for different types of foods. The mechanism meant our ancestors could pig out on protein when they found it, but would still have room for more if they stumbled on a cache of berries moments later. It's the reason so many of us end Thanksgiving dinner stuffed with turkey, dressing and sweet potatoes, but somehow manage to find room for pie. Variety excites the appetite.

For dieters, though, variety is trouble. The more choices you have, the more you will eat. In laboratory studies, people choosing from a variety of foods will eat 60% more than those given a single food—bad news for dieters who love a good buffet.

Ms. Croft says she eats pretty much the same thing every day—egg substitutes and toast for breakfast; tuna fish, a fruit and vegetable and yogurt for lunch, and three ounces of fish or chicken and a vegetable for dinner.

"Monotonous is much easier," she says. "The hardest thing for me is to go to a cocktail party someplace where people are standing around with food sitting out. That's next to impossible."

But monotonous eaters walk a tight-rope. If they feel too restricted, they will become bored with their diet. As a result, they seek variety on special occasions—weekends or holidays—and then quickly get back to the more predictable routine.

WATCH THE MORNING CARBS

Losing weight is all about calories. But sticking to a diet is all about hunger.

There's growing evidence that some carbohydrates make you hungrier. The worst culprits are those found in refined grain products, like white bread, doughnuts, bagels and cereals. Your body uses them far more quickly than slow-release carbs found in most fruits and vegetables.

Eating bad carbs early in the day—and many breakfast foods qualify as bad carbs—may make matters worse. Some researchers think carbs in the morning may block the body's ability to keep blood sugar stable later in the day—meaning that you stay hungry even if you have protein for lunch. It may simply be that carbs in the morning are worse because you have more hours left in the day for hunger to screw up your diet.

One study, published in the March 1999 issue of the journal *Pediatrics*, gave 12 overweight boys instant oatmeal or a vegetable omelet and fruit for both breakfast and lunch. Later, they ate whatever they wanted. During the five hours after lunch, the oatmeal boys ate 81% more calories than the omelet eaters.

Teri Crane, a 57-year-old travel agent in Woodland Hills, Calif., says cutting carbs, particularly in the morning, has helped her lose 30 pounds. "I could never figure out why if I ate bread or a doughnut or waffle for breakfast that I would be starving shortly thereafter," she says. "I switched to eggs and feel content."

Dieters who don't want eggs every day can switch to egg whites, yogurt or fruit, or at least try a better-quality carb such as a high-fiber cereal.

The science is far from conclusive. "You could start a fistfight at a nutrition meeting on this topic," says Louis J. Aronne, director of the comprehensive weight-control program at New York Presbyterian Hospital. Even so, some of his patients have been helped by cutting out breakfast carbs, he says.

Susan B. Roberts, who runs the Tufts University energy metabolism laboratory and was a co-author of the omelet study, says more research is needed. But until then, Dr. Roberts offers a simple rule of thumb. "If you're hungry two hours after a meal, you're eating the wrong foods."

RETHINK EXERCISE

Everyone thinks exercise is the only way to lose weight. But the truth is, it's a lousy way to lose weight. Working out gives you all kinds of health benefits, but weight loss generally isn't one of them.

It takes an enormous amount of exercise to burn a meaningful number of calories. A woman who walks 30 minutes a

day, six days a week, will burn a paltry 830 calories. Theoretically, it would take her more than four weeks to expend the 3,500 calories needed to lose one pound.

But the math isn't that simple. When a person starts exercising, all kinds of compensatory mechanisms kick in to defend body weight. The natural tendency is to increase eating enough to make up for the calories lost to exercise.

Even if you resist the hunger pangs, the body finds other ways to conserve calories. Your walk may be a little slower, or you may rest on the sofa a moment longer—all of which eats up all or part of the caloric deficit created by exercise.

In a May 2000 University of Kansas study, one group of overweight women exercised for 30 minutes, three days a week. A second group took two 15-minute brisk walks five days a week. After 18 months of exercise, the first group lost just 2.1% of its starting weight, while the second group didn't lose any weight.

"We need to understand what we can get from exercise—the worst thing we can do is make false claims," says Joseph E. Donnelly, director of the energy balance laboratory at the University of Kansas. "How disappointing is it for a woman to start her 50th exercise program to find no results for the 50th time? She'll be depressed, eat more and say 'I'll never exercise again,' because she expected too much from it."

What about intense exercise? Another study, presented at the American College of Sports Medicine last year, put overweight college students on treadmills for 45 minutes, five days a week, for 16 months. At the end of the study, women participants had gained more than a pound. Men fared better, losing about 10 pounds—but they had to burn the caloric equivalent of 60 pounds to do it.

Of course, people who combine diet with exercise will lose weight, but that's because they're dieting. At best, the exercise will help them lose just a few pounds more than they would have otherwise.

None of this gets you off the hook. While exercise often won't make you thin, it's generally the only way to keep from getting fat again.

That's because on any given day, we make small overeating mistakes we don't even notice. A handful of potato chips or a tablespoon of salad dressing each has about 100 calories. But a 100-calorie daily mistake adds up to 10 pounds a year. Regular exercise keeps you from gaining weight by correcting those small eating mistakes that are virtually unavoidable.

Exercise also helps redistribute the percentage of lean mass and fat mass in the body, which can lower risk for a number of health problems. Lean mass also has a higher metabolic rate, but for most people, the difference won't be noticeable because they will still need fewer calories than when they were fat.

The best evidence that exercise makes a difference is found among the members of the National Weight Control Registry. On average, successful dieters in the registry spend 2,800 calories a week—or about an hour a day—on exercise. ■