

Facts and Figures: Losing Weight by Getting Science

A FEW GOOD BOOKS AND MANY GROUNDBREAKING STUDIES

MOST OF US HAVE A FEW DIET BOOKS on our shelves. Each promises all-new insights, miracle cures, and ways to eat everything we would like to eat yet stay “Forever Thin.”

The first few chapters follow a formula: a physician, psychologist, celebrity, or the common man talks about his or her discovery, that unwanted byproduct of maturity—the mature body during its transition into adulthood. After soul-searching and unsuccessful attempts to reverse the contour changes and the weight gain and overcome the aging process, the writer finally finds the Holy Grail on the road to becoming the next diet guru. Each epiphany for altering the energy equation generates the next bestselling diet book for the ever-expanding audience of readers who are always seeking that elusive quick fix.

With a few notable exceptions, such tomes generically promise rapid weight loss by means of simple solutions based on pseudo-science. They don’t bother to take into account the great progress that has been made in the evolving science of obesity.

A few books even refer to some of the well-conducted studies that actually can facilitate weight loss for the 45 percent of women and the 30 percent of American men who are always “on a diet.” The explosion of scientific research in response to the alarming escalation of the national obesity epidemic has taught us a lot about what works and what doesn’t.

Neuroscientists have deconstructed the black box of “appetite” and “satiety.” State-of-the-art studies of eating behaviors in million-dollar clinical research centers in New York, New Orleans, Boston, and Houston, and clinical trials in Atlanta and San Antonio have all provided fascinating new insights into the relationship between food intake and fat storage, cell signals and cellulite formation, and the importance of food quality and timing in weight management. Snippets from groundbreaking studies air on the evening news and dot the pages of *The New York Times*, *The Wall Street Journal*, and *USA Today*.

This body of research is a treasure trove that provides support for the treatment methods our team has used and studied for the past three decades—explanations from other laboratories and other populations that show why the things we propose and use do work. These findings represent the scientific advancements of hundreds of committed research scientists. As summarized by Tara Parker-Pope in *The Wall Street Journal*, November 2003, “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.”

Cracking the obesity code has been a formidable task for many talented researchers. How exciting to look at their collective findings to support “proof of concept” for our dietary program and our protocol. Best of all, what we’ve learned through extensive research and experience can help you lose weight and regain your figure. Knowledge is power!

FACTS, NOT FANCY

Conspicuous Consumption

Fact #1: Calories do count

When I was growing up, the bestseller *Calories Don’t Count* hit the charts. The first of a long list of such books, this one challenged old teachings about the energy equation, selling a new message based on new scientific evidence. It pitched the idea that caloric balance was outmoded, ill-conceived, and unimportant to lifetime weight regulation. Unfortunately, this fallacy was picked up and carried on, a banner that became the underpinnings of many diets devised since the ‘60s.

Apparently, the concept of caloric balance is just not sexy. The notion that weight gain results from too many calories consumed for the number of calories expended doesn’t turn people on or sell books. It’s true but boring.

Countless diet-book authors have challenged the concept of caloric balance and offered “replacement theories” that were supposedly based on good science. *But the proof is in the fattening pudding.* Obesity in Americans of all ages and ethnicities has continued to spiral upward. Sadly, all effective diets—high-protein, high-carbohydrate, low-fat, low-sugar, grapefruit diet, ice-cream diet—all work only because they ultimately reduce caloric intake. Any plan that doesn’t lead to lowered calories just doesn’t produce meaningful loss of weight and excess body fat.

We all love novelty and simple solutions. The past few decades have promised immediate weight loss if you’ll just:

- Gorge on bacon and eggs
- Curtail your carbohydrates
- Consume excessive amounts of fruits (as long as other foods are eliminated)
- Restrict all sugar or just white sugar and white carbs

Such diets inspire confidence, easily draw converts, and may even deliver short-term weight loss. Unfortunately, expert after expert always come to one conclusion—that the real news on diet is depressing. The most successful diets, even with intense medical supervision, lead to early weight loss in the first six months, followed by a plateau of six months, and finally, regain of weight.

In fact, long-term weight reduction is so unusual that the National Institutes of Health created a registry so that those few lucky individuals who figure out how to lose weight and keep it off for two or more years could share their secrets with the scientists responsible for public health recommendations about diet and exercise!

Long-term weight loss is indeed rare, and that’s because it happens only when a dietary regimen (or exercise program) produces **a net caloric deficit** over time. A calorie is a calorie is a calorie, and 3,500 calories will always equal a pound. Overconsumption of as little as 10 calories (one potato chip) a day will produce a weight gain of 1 pound a year, or 10 pounds per decade. Reduce your daily intake by 150 calories a day (one can of soda), and you’ll lose 15 pounds in a year.

A rigorous study of patients who followed a popular carb-restricted regimen for six months showed that study

subjects lost weight by cutting carbs simply because they ate less overall. When they limited their carbohydrates and other foods that were allowed, they consumed fewer calories. It's what nutritionists call the "no crackers, less cheese" rule.

As an endocrinologist, I've had a unique opportunity to evaluate and treat hormonal conditions that cause weight gain or decrease weight loss in motivated women despite good efforts in regard to diet and exercise. No question, subtle (and not-so-subtle) endocrine disturbances can make weight management difficult. Thyroid problems, cortisol excess, growth hormone deficiency (seen in patients with pituitary tumors and other pituitary abnormalities), and undetected insulin elevations all make it hard for people to shed excess pounds. Correcting these endocrine defects, typically with hormone replacement or other treatments, facilitates, but never guarantees weight loss. **You still have to diet and/or exercise regularly. Long-term weight loss requires lifestyle changes and ongoing dietary vigilance.** Any physician, nutritional counselor, diet guru, or author who promises otherwise is ill-informed and irresponsible and not really telling the truth!

Ghrelin and Girth

Fact #3: Hunger is all in your head

Ghrelin is the hot new hunger hormone. After you eat a meal, ghrelin goes down, but it rises steadily over the next few hours until it reaches a critical level and tells your brain "time to eat another meal." You reach the highest ghrelin level at 2 a.m., which may account for night eating in those of you who stay up late.

Several factors regulate ghrelin production. One is the volume of food in your stomach because the decline in ghrelin is what signals fullness and tells you it's time to stop, put down your fork, and leave the table.

According to several studies, bariatric surgery that reduces the size of the stomach also reduces ghrelin levels. This is an important mechanism that leads to decreased food intake and weight loss after gastric bypass surgery. Ghrelin has also been given part of the blame for the new association of sleep deprivation with appetite excess. Ghrelin levels rise when sleep declines below 4 hours per night, and the food preferences of those sleep-deprived subjects were all in the high-carb categories (candies, cookies, cakes, and pretzels).

Fluids and foods influence ghrelin differently. Plain water doesn't reduce ghrelin, but water with added sugar or salt produces a significant change. This suggests that your brain perceives water differently from the way it perceives food. These studies fit with studies of fullness in humans, like the one at Penn State that showed women who ate chicken rice soup lost more weight than women who had the identical meal but ate it as 8 ounces of water plus chicken rice casserole. The book *Volumetrics*, by Dr. Barbara Rolls, summarizes this research.

The Mogul Protocol's Carb-Modified Diet is high in vegetables, low-fat proteins, and "acceptable" fruit and fiber. These dietary recommendations have worked well for more than a generation of women I've treated in three decades of medical practice. What's different today is the metformin we've added to complete the picture and make it far easier for women to take off weight. Our data and that of other researchers show that metformin lowers the levels of ghrelin in the bloodstream.

The Lowdown on Low Carbs

Fact #5: Low-carb diets cut calories

Finally, after Americans converted to low-carb lifestyles, as sales of Krispy Kreme plummeted and sugar-free Snackwells skyrocketed, results from several low-carb-diet clinical trials began to emerge. Three studies in 2003 challenged traditional views of the optimal balance of carbs, fat, and protein for weight loss.

Nutrition experts responded by citing these conclusions:

- Ad-lib high-fat diets worked because they limited food choices.
- These diets produced weight loss comparable to and possibly better than traditional, high-carb diets in the short term (six months).
- One-year weight loss was poor with both dietary extremes.

My view is that the high-fat (low-carb) diet of the '70s is *not* the answer to the high-carb (low-fat) diet of the '90s. The 2003 dietary studies demonstrate the low success rates of restrictive diets in general and reinforce the virtues of a regimen that provides a wide variety of food choices and avoids all calorically dense foods, whether fats, simple sugars, carbohydrates, or protein.

Timing Is Everything

Fact #6: When you eat is as important as what you eat

A landmark study from The Clinical Research Center at Harvard (published in 1999) showed that the glycemic indexes of the foods you eat for breakfast determine how much you eat later in the day. This study of overweight, non-diabetic adolescents underscored that a low-glycemic-index breakfast not only has a beneficial effect on the production of important fuels in the body, as well as stress hormones, appetite signals, and neurotransmitters for the following 4 hours, but decreases food intake many hours later. Thus, you can see the advantages of eating your starches later in the day, a recommendation that is the cornerstone of our Carb-Modified Diet.

The Fallacy of Phase 1

Fact #8: Deprivation is destructive to your diet

It's reassuring to report that, although we hear a lot of confusion and controversy about which diet works best, there's one area where all the experts agree: Overly restrictive diets don't work. After an intense evaluation of dietary regimens, members of The National Institutes of Health's Nutrition Committee recommended caloric reduction in the moderate range, about 1,200 to 1,800 calories per day for most women and men who are 10 to 20 percent above their ideal body weight.

The committee denounced "very-low-calorie diets (VLCDs)," those that restrict you to 400 to 1,000 calories per day. Data on VLCDs show two major flaws:

- They are ineffective.
- They have very high dropout rates.

The Mogul Protocol discourages restrictive dieting practices from Day 1. This key feature sets it apart from many other diet programs. From my perspective, melba toast and cottage cheese, 3-ounce protein servings, or 8-ounce meal replacements just don't work for long-term weight loss in most dieters older than age five.

With the addition of metformin, you get to skip the super-strict Phase 1 that characterizes so many diets. And, you avoid the very-low-calorie diet that The National Institutes of Health has panned. You don't need to give up fruits and carbohydrates to jump-start your metabolism or flush out fat to control those insulin spikes characteristic of Syndrome W (or any level of insulin resistance). Plus, you don't have to worry about gaining weight like you did when you "advanced" or moved past Phase 1 of the Atkins or South Beach Diet.

With The Mogul Protocol, concurrent use of medication targets and treats underlying insulin resistance and

reduces hyperinsulinemia. So you don't need to suffer severe dietary deprivation to overcome the insulin elevations that trigger appetite when you eat forbidden fruits and starches. This expands your dietary options from Day 1 of the diet. This lets you focus on making those all-important long-term changes without severe food restriction in near starvation mode.

A second key feature of The Mogul Protocol is that “one” on the top of the 4-3-2-1 Pyramid—the weekly treat. It's there to make sure you avoid the dietary deprivation and boredom that characterize the real-time weight loss of so many other diets. After the first month of the diet or the first 5 pounds lost, you get to enjoy a small piece of your cousin's birthday cake or your Aunt Polly's pecan pie, or your favorite restaurant's decadent Fudge Indulgence (but be sure you follow the rules on pages 105–106 to keep this “legal”). After you lose 25 pounds, or 10 to 15 percent of your initial body weight and your insulin levels decline 30 to 50 percent, you will probably be able to expand your weekly treat to bi- or tri-weekly frequency.

The flexibility is one reason you'll find The Mogul Protocol easy to live with. And that's why so many of the women I've followed (some for a decade now) find The Carb-Modified Diet an easy and effective way to maintain long-term weight loss forever.

Fact #10: Forget about diets to lose weight

Diet” is a word I try to avoid when helping women start a weight-loss program. Diets are on-again, off-again phenomena. Instead, I point to the “dietary component” of our program, and I focus on promoting long-term eating changes. Words are powerful agents for change, and the terms “flexible food plan” and “eating plan” more correctly reflect our philosophy. I don't believe in dieting.

A recent story in the “Styles” section of *The New York Times* featured celebrity waifs and doyennes of the under-forty fashion world who praised their favorite diets and diet gurus. Successful premenopausal dieters reported recent eating epiphanies, noting proudly that they were “on” the Atkins or South Beach, Weight-Watchers, or Jenny Craig. (Before that, it was Stillman or Scarsdale or the earliest version of Weight-Watchers, the NYC Department of Health Diet.)

All of these diets reduce caloric intake and result in weight loss . . . in the short term, and there's the problem.

As any obesity expert will tell you, the big obstacle for weight-watching people is “long-term dietary adherence.” What you need most is to be on “your own diet.” You need to understand, once and for all, that there's absolutely nothing magical about a piece of paper, a brochure, or a book.

Let's be brutally honest here. When you contemplate going “on” the diet of the month, it signifies your not-so-unconscious intent of going “off” it at some yet-to-be-determined future point. Losing weight is a process—a series of learned skills. You need to develop a series of food choices and strategies for overcoming overeating in the real world of food. Hone those skills, and they're yours forever.

You'll find no simple substitute for the confidence you get from losing weight by creating your own dietary blueprint and using it to make changes in what and when you eat. Learning to eat correctly is just like learning to play a musical instrument, ride a bike, or ski a slope. You progress only with practice and coaching and the right tools. When you lose weight on the latest-greatest fad diet, or by swilling powders or potions, you never acquire the necessary tools to keep those lost pounds off forever. **The Carb-Modified Diet is really not a “diet”—it's a lifestyle change!**