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The Best-Seller Diets: Their Claims, Recipes, and Nutritionals

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Author's Note—*Ever since Lulu Hunt's* Diet and Health *became a bestseller in 1922, popular diet books have aimed straight for our hearts—and hips. South Beach, Beverly Hills, and Scarsdale have been enlisted in a national quest for thinness.*

Nearly all bestseller diets entice us with the promise of quick, easy, painless, simple, perfect weight loss. Several excellent reviews[1,2] have considered the advantages and disadvantages of popular diets, including those that feature dietary protein,[3] but none has focused exclusively on a sample of best-seller diets, as enjoyed by the public.

Here, I identify the claims of, scientific evidence for, and sustainability of 6 popular bestseller diets, each of which has been on the New York Times *bestseller list, and I also analyze their published recipes. The analyses exclude beverages other than milk and tea but include recommended snacks; they do not include supplemental nutrients. I have eaten food prepared from each of these books (and in the case of* The RealAge Diet*, actually developed, written, and tested nearly all of the recipes).*

Obesity: Where We Are

Americans spend $35 billion a year on the diet industry, and about 45% of women and 30% of men consider themselves on a diet at some time each year. Every year, nearly 6% of direct health care costs—more than $52 billion—are credited to obesity.[4]

Overweight is defined as BMI ≥ 25 kg/m^2. Flegal and colleagues analyzed the NHANES III data and found "the age-adjusted prevalence of obesity was 30.5% in 1999-2000 compared with 22.9% in NHANES III (1988-1994; $P < .001$). The prevalence of overweight also increased during this period from 55.9% to 64.5% ($P < .001$). Extreme obesity (BMI ≥ 40) also increased significantly in the population, from 2.9% to 4.7% ($P = .002$). Although not all changes were statistically significant, increases occurred for both men and women in all age groups and for non-Hispanic whites, non-Hispanic blacks, and Mexican Americans. Racial/ethnic groups did not differ significantly in the prevalence of obesity or overweight for men."[5]

Obesity is defined as BMI ≥ 30 kg/m^2. An analysis of the Framingham Heart Study data from 1948-1990 showed that, on average, obese adults at age 40 lived up to 7 years less than adults of normal weight. Adults who were obese and smoked lived 13-14 years less than normal-weight nonsmokers.[6]

Physicians are often at a loss for what to say to patients that will help them lose weight. Most physicians have had little or no training in clinical nutrition or behavior modification; find that pharmaceuticals too often have had adverse effects; believe that little they can say will make a difference to patients; and receive little reimbursement for the time

spent in the office with patients about this issue.[7] They recommend commercial weight-loss programs over bestseller diet books (*see Table 1*),[8] which fall into 3 categories: low carbohydrate, high carbohydrate, or specialty.

Low-Carbohydrate Diets

Low-carbohydrate, high-protein diets are effective in helping many people lose weight. They work in 3 ways: They restrict calories, although most do not claim to do so; they cause ketoacidosis, which dulls the appetite and sense of taste; and they limit selection of foods, which causes boredom in many people and reinforces the restriction of calories.

There are scientific reasons for these diets' effectiveness. Low-carbohydrate diets are usually high-protein, high-fat diets, too. With fewer carbs coming in, less insulin is produced. Less insulin means less fat deposition, and in theory, the body is forced to burn fat reserves for energy. Ketoacids then form, which the body attempts to flush out. Thus, the initial stages of a high-protein, low-carb diet are accompanied by diuresis and, sometimes, dramatic weight loss.

Recent popular diets falling under the low-carbohydrate, high-protein, high-fat banner started with Dr. Irwin Maxwell Stillman's *Quick Weight Loss Diet*, published and popular in 1967. Although Dr. Robert Atkins was the most well-known, well-published, and successful of the low-carb authors, Hellers and Eades also have bestselling books with the same thesis.

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Table 1. Bestseller Diets Reviewed

- *Dr. Atkins' New Diet Revolution*[9]
- *Sugar Busters! Cut Sugar to Trim to Fat*[10]
- *Eat More, Weigh Less*[11]
- *The Anti-Aging Zone*[12]
- *Suzanne Somers' Get Skinny on Fabulous Food*[13]
- *The RealAge Diet: Make Yourself Younger With What You Eat*[14]

Name: Atkins

History

First published in 1972, Dr. Atkins' *New Diet Revolution* has approximately 15 million copies in print—and more than 21 million when combined with other titles. Primarily about weight loss, the book advocates bacon and eggs for breakfast and rejects bread and pasta.

Core Claims

- The diet is not calorie restricted: Only the composition has changed, not the calories.
- The diet is low carbohydrate and ketosis producing. The more carbohydrates you eat, the less body fat you lose.
- Moderation is not the key: Abstinence stops food cravings (for carbs, which may have led to addictive eating patterns).
- Packaged food and most fruit and starches are unhealthy and unnecessary—fish, meat, poultry, some vegetables, nuts, and seeds are the foods to eat.

How You Do It

1. Have a medical checkup.
2. Eat 20 g of carbohydrates daily—about 3 cups of salad.
3. Eat the amount that makes you feel satisfied but not stuffed.
4. If it is not on the diet, don't eat it. Period.
5. Eat pure fat (butter, olive oil, mayonnaise, avocado, cheeses, cream, sour cream).
6. Eat protein (nuts, seeds, olives, meat, fish, poultry).
7. Avoid chewing gum, cough syrups and drops, fruits, breads, grains, starchy vegetables, and dairy other than cheese, cream, or butter.
8. Expect a 14-day induction period consisting of the steps above.

Trials

A recent meta-analysis[15] identified 107 studies describing 94 dietary interventions reporting data for 3268 participants; 663 participants received diets of 60 g/d or less of carbohydrates—of whom only 71 received 20 g/d or less of carbohydrates. Bravada and associates report that only 5 studies (nonrandomized and no comparison groups) evaluated these diets for more than 90 days. Among obese patients, weight loss was

associated with longer diet duration ($P = .002$) and restriction of calorie intake ($P = .03$) but not with reduced carbohydrate content ($P = .90$).

Not included in the meta-analysis is a recent study by Brehm and colleagues,[16] in which 53 healthy, obese, female volunteers (mean BMI, 33.6 ± 0.3 kg/m^2) were randomized to a diet of 30% total fat, restricted calories, or a very low-carb diet; 42 (79%) completed the trial, which lasted 6 months. The very low-carbohydrate diet group lost more weight (8.5 ± 1.0 vs 3.9 ± 1.0 kg; $P < 0.001$) and more body fat (4.8 ± 0.67 vs 2.0 ± 0.75 kg; $P < 0.01$) than the low-fat diet group. Another study looked at adherence to such a program, with intake of 25 g of carbs daily, and had a similar dropout rate: 41 of 51 enrollees remained in the program for 6 months, without apparent ill effects, and with significant weight and body fat loss.[17]

Evaluation

On average, 2070 calories come from the book's recipes—compared with the 2700+ consumed on average by Americans. So, the diet is calorie restricted. It is also deficient in some foods and nutrients: specifically, soluble fiber, mono and polyunsaturated fats, fruit, fish, legumes, calcium, folate, and nuts. Some nutrients are excessive; specifically, saturated fats. (*See Table 2*.)

The diet induces ketoacidosis, which can cause dehydration, halitosis, and rapid weight fluctuation, among other maladies. Rapid weight regain occurs on resuming eating carbohydrates. The principal problem for Atkins followers seems to be long-term compliance because the diet is hard to stick with—as it has strict prohibitions. Steaks, cheese omelets, bacon, and burgers are what's for dinner, and for many people, it gets tiring. In addition, dieters who think they are depriving themselves of all carbohydrates may create a fierce, lusty longing for them.

On the other hand, Atkins' emphasis on reducing processed foods, simple sugars, and starches (which are often high calorie and low nutrient) and on reducing calories are nutritional principles that are generalizable and useful.

Despite the distinct possibility that it increases the risk for coronary disease and specific cancers, Atkins has something else to offer: the idea that it isn't just fat grams that count and that focusing on fat alone is not the answer. The diet shifts the fear away from fat (some of which is actually healthy, including fats in nuts and fish) and toward sugar (little of which is healthy). Highly processed carbohydrates, like sugar, do make many people hungrier: The insulin spike after eating potatoes and white rice by themselves is real, and so is the crankiness and discontent that can come with it. French fries, commercially baked muffins, doughnuts, and Pop-tarts are clearly empty calories and clearly not on Atkins.

Current Status

Atkins had a cardiac arrest in April 2002, at age 71—an event that he was reported to have attributed to cardiomyopathy. He died in April 2003 of traumatic brain injury after a slip on an icy sidewalk in New York. His brand now includes at minimum, 95 food products, cruises, Atkins Health and Medical Information Services, and a "nutritional approach," instead of a diet. A *New York Times* magazine article in July 2002 argued that his approach had not been given its due and that diets low in fat and high in carbs might actually be the cause of our national obesity epidemic.

Name: Sugar Busters!®

History

Written by 3 physicians and a businessman and originally self-published in New Orleans, this book was so successful that a major publisher picked it up for national distribution: It has sold more than 2.5 million titles when combined with other

Table 2. The Atkins Diet: Nutritional Contents of 10 Days of Recipes

Food/Nutrient	Actual Recipes*
Calories per day (on average)	2070
Protein (g/d)	127
Carbohydrates (g/d)	48
Fat (g/d)	146.5
% of calories that are fat	63.7
% of fat that is saturated	43
Saturated fat (g/d)	62.6
% of fat that is monounsaturated	35.8
Cholesterol (mg/d)	1087
Fiber (g/d)	10
Sodium (mg/d)	2570
Potassium (mg/d)	2653
Iron (mg/d)	15.2
Calcium (mg/d)	599
Folate (μ/d)	360
Vitamin E (IU/d)	12.5
Vitamin C (mg/d)	56
Fish (oz/week)	5.6
Nuts (oz/week)	2.5
Lycopene (servings/d)	1.4
Flavonoids (mg/d)	4.1

* Excluding beverages, except milk and tea, and including recommended snacks.

The RealAge optimum is less than 20 g per day of saturated and trans fat. This column lists only saturated fat, since few diets and menus use partially hydrogenated vegetable oils, or processed foods with partially hydrogenated vegetable oils.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat.* New York, NY: Harper Collins; 2001:101.

spin-off titles. Primarily about weight loss, it advocates giving up processed foods and vegetables that are sweet, such as corn and carrots.

Core Claims

- Carbohydrates, and specifically sugar, cause weight gain and act as toxins because of the large insulin surges, which sugar ingestion produces.
- Sugar is sugar whether refined and processed (eg, soda pop) or unrefined and unprocessed (eg, corn).
- Too much insulin leads to storing excess sugar as fat; limiting insulin will cause weight loss.
- Insulin insensitivity causes obesity and diabetes mellitus in overweight adults.
- Saturated fats—including eggs, sausage, bacon, cheese, and butter—are better than carbohydrates and are important to metabolism.
- Caloric restriction leads only to temporary weight loss.
- Fruit should not be combined with carbs and fats.

How You Do It

1. Eat carbohydrates that have a low glycemic index, lean meats, and unsaturated fats in moderation. Fruits, except watermelon, pineapples, raisins, and bananas, are OK.
2. Eliminate potatoes, corn, white rice, bread from refined flour, beets, carrots, refined sugar, corn syrup, molasses, honey, most sauces and dressings, and sugared colas and beer because they have a high glycemic index.
3. Drink alcohol (especially red wine) in moderation, as it has less sugar than an ear of corn.
4. Eat at least 3 meals instead of 1 or 2, with infrequent snacking; missing meals will alter the body's insulin response to insulin secretion and increase fat storage.
5. Eat 1 portion—not 2 or 3.
6. Eliminate late night snacks and large meals before bed.

Trials

See previous meta-analysis, for Atkins. Sugar Busters!® has been used for diabetics. Many clinicians now use a limited carbohydrate diet in the treatment of type II diabetes, with an emphasis on lean protein, especially vegetable protein and unsaturated fats.

Evaluation

Overall, this diet does something well: It eliminates nutrient free calories in sugary desserts and sodas and is a less-restrictive, lower-fat version of the Atkins diet plan that allows you to eat the right kind of carbohydrates. It definitely should result in weight loss, even without mentioning exercise. (*See Table 3*.)

But few flavonoids, legumes, nuts, and little calcium are present, and any diet that eliminates some fruits and vegetables eliminates their beneficial fiber, vitamins, and phytonutrients—all components in which Sugar Busters!® is deficient. The emphasis on saturated fats is worrisome for overall health and a big potential problem for the long term, though the recipes reflect a more moderate approach than does the text. Its insulin theory, while logical in some ways, has yet to be proven, and this is not an easy diet to stay on.

On the plus side, however, its glycemic index focus is relevant, though glycemic load—not simply how quickly 100 g of food in isolation makes blood glucose rise but instead, the amount of carbohydrate in a food multiplied by the glycemic index of that carbohydrate—is probably more relevant. And this diet is hard to follow without cooking food yourself; in that sense, it's good—almost anything we cook at home will be better for us than what we eat out.

So, Sugar Busters!® helpfully de-emphasizes sugar and too many servings. There are better carbs: whole grain breads; sweet potatoes, turnips, and rutabagas; brown and basmati rice; whole fruit, without sugar or juice added, for sweeteners; and whole oatmeal and bran cereals. Sugar Busters!® would be in favor of such carbs, and you should

Table 3. The Sugar Busters!® Diet: Nutritional Contents of 10 Days of Recipes

Food/Nutrient	Actual Recipes*
Calories per day (on average)	1375
Protein (g/d)	88
Carbohydrates (g/d)	128
Fat (g/d)	60.2
% of calories that are fat	39.4
% of fat that is saturated	33.7
Saturated fat (g/d)	20.3
% of fat that is monounsaturated	42.7
Cholesterol (mg/d)	282
Fiber (g/d)	20.2
Sodium (mg/d)	1654
Potassium (mg/d)	2981
Iron (mg/d)	13.3
Calcium (mg/d)	718
Folate (μ/d)	326
Vitamin E (IU/d)	10.7
Vitamin C (mg/d)	163
Fish (oz/week)	8
Nuts (oz/week)	3
Lycopene (servings/d)	4.5
Flavonoids (mg/d)	7.5

* Excluding beverages, except milk and tea, and including recommended snacks.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat*. New York, NY: Harper Collins; 2001:108.

be too. But whether it positively affects overall health, with animal fats so dominant in the diet, is questionable.

Current Status

Amazon.com records 6 titles for Sugar Busters!®, including Kids, a Workbook, a Cookbook, a New one, and a Shopper's Guide. An Internet search turns up the Authors' Choice® Sugar Busters!® Classic Chocolate, and a voice file that offers to have the listener lose weight while eating cookies. The authors have turned to pediatric obesity as a market and continue to create spin-offs of the original work, which continues to be hugely successful. The 3 physician authors continue to practice medicine, according to their bios on their publisher's web site.

High-Carbohydrate Diets

Dean Ornish is the most well-known proponent of these, though Drs. Neal Barnard, John McDougall, and Nathan Pritikin have been among their champions.

High-carbohydrate diets were popular in the late 1980s and early 1990s and have a seductively simple thesis: Fat has 9 calories per gram; carbohydrate and protein have 4 calories per gram; alcohol has 7 calories per gram. Thus, you can eat more than twice as much carbohydrate and protein than you can fat; alcohol is essentially wasted calories, as it provides no nutrients. In addition, vegetarian sources of protein (ie, legumes and beans) have little fat and a great deal of soluble and insoluble fiber, which promotes satiety. Feeling full should stop you from eating, reduce caloric intake, and promote weight loss, while still providing you with the nutrients you need for overall health.

High-carbohydrate diets are among the best studied: Entire food industries were created around their popularity, and so was a singular focus on fat as the macronutrient that matters most. Even today, many people look at the fat grams or percentage of calories from fat first when inspecting a label, though that is not the most efficient or effective approach. Nevertheless, high-carbohydrate diets still have their advocates, and much of that advocacy is vocal in the peer-reviewed literature and in popular culture.

Name: Ornish

History

Ornish, a board certified cardiologist, has studied very low-fat, high-carbohydrate vegetarian diets for more than 20 years and has achieved remarkable success. His first book, *Reversing Heart Disease*, has sold more than 10 million copies, and, with other titles, he has sold more than 25 million books. He has published his work in the peer-reviewed medical literature, although some of it has been criticized for small sample sizes.

Core Claims

- Small changes cause the worst of both worlds—the hassle of deprivation without the benefits of changes big enough to have a very noticeable effect.
- Vegetarian diets are low in disease-causing substances, including cholesterol and saturated fat, and high in protective substances, such as phytoestrogens, lycopene, and polyphenols.
- Complex carbohydrates—vegetables, fruits, and legumes—are nourishing, unlike simple carbohydrates.
- Oils are excluded because they are liquid fat. The more olive oil you eat, the higher your cholesterol level will be, and the more weight you will gain.
- Calories per gram are what make the difference in weight loss: All oils are pure fat, and fat has 9 calories per gram or 14 grams per tablespoon.
- Calories are unlimited, because you will get full before you get too many calories.
- Caffeine potentiates stress.

How You Do It

1. Eat a variety of low-fat foods consisting primarily of fruits, vegetables, grains, and legumes (complex carbohydrates) supplemented with moderate amounts of nonfat dairy and egg whites.
2. Avoid full fat animal foods, as they are not nourishing and are fattening.
3. Eat only 10% of calories from fat.
4. Reduce intake of salt.
5. Wean yourself from caffeine.
6. Reduce your intake of simple carbohydrates like sugar.
7. Have no caffeine.

Trials

The diet is scientifically based. Ornish's Lifestyle Heart Trial[18] demonstrated that intensive lifestyle changes may lead to regression of coronary atherosclerosis after 1 and 5 years. Twenty of 28 patients (71%) motivated by the presence of life-threatening heart disease and selected by referral to Ornish were able to continue the diet over 5 years. The experimental group declined from a mean bodyweight of 91.4 kg on average to 80.6 kg after 5 years; the control group's body weight rose from 75.7 kg to 77.1 kg.

Ornish is well regarded for his innovative approach to coronary artery disease; in a landmark 1995 publication,[19] in 20 patients with severe coronary disease, he demonstrated modest regression of coronary artery stenoses after risk factor modification consisting of an intensive regimen of a very low-fat vegetarian diet, mild-to-moderate exercise, stress management, and group support. Decreased size and severity of perfusion abnormalities on rest-dipyridamole PET images were the important outcome measures.

Evaluation

The book's recipes show just 1758 calories, with 358 g of carbohydrates daily. Just 7% of calories come from fat. The diet is also low sodium. Deficient in healthy fats, fish, and nuts, but rich in calcium, folate, potassium, and fiber, this diet hits most scientific bases. He does not recommend fish because those highest in the cardioprotective omega-3 fatty acids, including salmon, mackerel, and sardines, are also the

highest in fat and cholesterol. (*See Table 4*.)

Some people have found the Ornish prevention diet difficult to adhere to: Americans like the flavor of fat, its texture and feel, and it takes 6-8 weeks at minimum to adjust one's palate to a much lower-fat diet. Adherence, in fact, is the biggest problem with this diet, especially in the absence of the Ornish program's other components, and if simply used as a weight loss diet, instead of a coronary artery disease program. On the other hand, the diet's nutritional analysis shows an excellent range of nutrients, both macro and micro, and it is well-researched and well-documented; it has been popular, as well.

Current Status

Medicare is currently running a trial of the Ornish diet. Over the next 3 years, about 1800 elderly heart patients, at a cost of $7200 each, will follow the program, run out of at least 15 centers whose staffs are trained by Dr. Ornish, for 1 year. Ornish has also tried a version of this diet with men with prostate cancer, hoping to forestall its advances; these data are not yet reported. He now recommends 3 g per day of fish oil or flaxseed oil, which also contains omega-3s, for women; for men, he recommends only fish oil.

Table 4. The Ornish Eat More, Weigh Less Diet: Nutritional Contents of 5 Days of Recipes

Food/Nutrient	Actual Recipes
Calories per day (on average)	1758
Protein (g/d)	67
Carbohydrates (g/d)	358
Fat (g/d)	14
% of calories that are fat	7.2
% of fat that is saturated	29.6
Saturated fat (g/d)	4.2
% of fat that is monounsaturated	22.8
Cholesterol (mg/d)	22
Fiber (g/d)	50
Sodium (mg/d)	1842
Potassium (mg/d)	6615
Iron (mg/d)	21
Calcium (mg/d)	1235
Folate (μ/d)	703
Vitamin E (IU/d)	9
Vitamin C (mg/d)	441
Fish (oz/week)	0
Nuts (oz/week)	0
Lycopene (servings/d)	3.8
Flavonoids (mg/d)	23

* Excluding beverages, except milk and tea, and including recommended snacks.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat*. New York, NY: Harper Collins; 2001:115.

Specialty Diets

Specialty diets may take an eclectic approach: They may eliminate some foods but not others and not necessarily along nutrient lines; or they may eliminate no food or nutrient but combine them in ways that are specific.

Name: Zone Diet

History

Barry Sears is a microbiologist and investigator whose recent book, *The Anti-Aging Zone*, recommends a diet comprised of 40% carbohydrates, 30% protein, and 30% fat. This diet is not about losing weight, but rather about using food as a drug to control insulin and by doing so, improve the production of good eicosanoids that help maintain hormonal flow. Sears has sold more than 4 million books since *A Week in the Zone*, published in 1995.

Core Claims

- Maintain key hormonal systems in a "zone" (not too high, not too low).
- Food is a drug to control insulin levels, which improves the production of good eicosanoids.
- Excess insulin causes obesity and fat storage.
- Too much exercise increases free radical formation and cortisol levels.
- The 4 pillars of aging are excess insulin, excess blood glucose, excess free radical production, and excess cortisol.

How You Do It

1. Have some low-fat protein at every meal and snack (no larger or thicker than the palm of your hand).
   - At each meal, eat the above serving size of protein with low-glycemic index vegetables.
   - Have a piece of fruit for dessert.
   - Add a dash of monounsaturated fat like olive oil, slivered almonds, or guacamole.
2. Every meal and snack should be 40-30-30.
3. Snacks are the same but only one-third the size of a zone meal.
4. During the day, you should have 3 zone meals and 2 zone snacks with never more than 5 hours passing between a zone meal or 2-3 hours after having a zone snack.
5. Exercise moderately and reduce stress through meditation.

Trials

Despres compared a Zone-like diet with the American

Heart Association (AHA) phase 1 diet in overweight, otherwise healthy men.[20] (The AHA diet of carbohydrate: protein: fat was 55:15:30 and the Zone-like diet was 37:31:32). When on the Zone, the men consumed about 25% fewer calories when snacking than when they followed the AHA diet. The diet has also been studied in pediatrics: Ludwig and colleagues reported 81% fewer calories consumed after a single low-glycemic index, 40:30:30 meal compared with a higher-carbohydrate, higher-glycemic index meal.[21]

Evaluation

The Zone diet should be effective in affecting weight loss: It has a substantial calorie deficit, mostly by lowering carbohydrate consumption. Although it claims not to be high protein or high fat, the analysis indicates that it is (129 g and 35.5%, respectively) and somewhat high in sodium. (*See Table 5*.)

Table 5. The Anti-Aging Zone Diet: Nutritional Contents of 10 Days of Recipes

Food/Nutrient	Actual Recipes
Calories per day (on average)	1655
Protein (g/d)	129
Carbohydrates (g/d)	158
Fat (g/d)	65.2
% of calories that are fat	35.5
% of fat that is saturated	28.2
Saturated fat (g/d)	18.4
% of fat that is monounsaturated	46.6
Cholesterol (mg/d)	228
Fiber (g/d)	35.6
Sodium (mg/d)	3374
Potassium (mg/d)	6170
Iron (mg/d)	25.5
Calcium (mg/d)	935
Folate (μ/d)	779
Vitamin E (IU/d)	15.5
Vitamin C (mg/d)	475
Fish (oz/week)	3.5
Nuts (oz/week)	2.1
Lycopene (servings/d)	11
Flavonoids (mg/d)	25

* Excluding beverages, except milk and tea, and including recommended snacks.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat*. New York, NY: Harper Collins; 2001:127.

Problems also include somewhat unclear science: The biochemistry of eicosanoids and their role and the precise relationship between obesity and insulin (whether causative, associated, inversely causative, or other) has yet to be elucidated. The need for constant calculation makes this a difficult diet to follow closely, both scientifically and practically. In addition, the marked reduction of whole grain breads and cereals, essential to people who exercise regularly and are physically active, has earned criticism from athletes.

Overall, however, it appears to be a reasonably healthy short-term weight-loss diet: It emphasizes low-glycemic carbohydrates; adequate amounts of protein mostly from lean sources; and consuming monounsaturated and omega-3 fats, while avoiding trans fatty acids.

Current Status

A search of Amazon.com reveals 28 titles by Barry Sears, which use the word "zone." Zone meals can be delivered door-to-door in dozens of locales and are popular in Southern California. In Hollywood, bagels go stale at parties, and pasta and rice are rare, unless they are made with soy protein in addition to wheat. Dr. Sears' Zone meals and bars, Zone t-shirts, and Zone Fish Oil are all available on the Internet.

Name: Somers

History

Suzanne Somers has had a brilliant, pioneering career as an actress and model and has forged another successful career as an author. Somers has sold millions of books and urges her readers to adopt a lifestyle that allows them to "enjoy food rather than fear it, in which food becomes a friend and partner."

Core Claims

- To reprogram your metabolism to burn fat, food should be combined in specific combinations.
- White foods have negative nutritional effects and hinder digestion and weight control.
- When proteins and carbohydrates are eaten together, their enzymes "cancel each other out," stopping the digestion process and causing weight gain.

How You Do It

1. Eliminate sugar, white flour, white rice, and potatoes.
2. No "funky" foods, including high-starch foods, caffeine, and alcohol.
3. Eat fruit alone or on an empty stomach.
4. Eat protein and fat with vegetables (Proteins are meat, poultry, fish, and eggs; fats are those found in their natural state like oil, butter, cream, and cheese).
5. Separate protein and fat from carbohydrates (carbohydrates are whole grain pastas, cereals, breads, beans, and nonfat dairy products; vegetables are low-starch fresh vegetables).

6. Eat carbohydrates with vegetables.
7. Wait 3 hours before switching from a protein-fat meal to a carbohydrate meal and vice versa.
8. Do not skip meals, eat at least 3 meals a day, and eat until you are satisfied and comfortably full.

Trials

I was unable to find scientific data specifically for or against Ms. Somers' diet. She does provide anecdotes and endorsements from many people who have tried her diet and lost weight.

Evaluation

The analysis shows a significant calorie deficit, so weight loss should occur. But nearly 57% of calories provided come from fat, over a third of which is saturated. The diet is light on needed nutrients—fiber, flavonoids, and folate. (*See Table 6.*)

This is a very difficult diet to follow: the food combining itself is challenging and complicated. Food combining has not been shown to have any long-term effectiveness, and the "science" behind this work and theory of digestion is of uncertain origin.

Brown rice, beans, vegetables, and fruits may be thought of as "sustained-release carbs," with which Ms. Somers might reasonably agree. Along with avoiding the 4 white poisons: white rice, white bread, white pasta, and white potatoes (presumably this goes for Yukon Golds and Purple Peruvians, too), is advice Somers' would adapt too, and it is certainly true that these foods, eaten in excess, will cause weight gain.

Table 6. The Suzanne Somers Get Skinny Diet: Nutritional Contents of 10 Days of Recipes

Food/Nutrient	Actual Recipes
Calories per day (on average)	1787
Protein (g/d)	92
Carbohydrates (g/d)	99
Fat (g/d)	113
% of calories that are fat	56.9
% of fat that is saturated	33.6
Saturated fat (g/d)	38
% of fat that is monounsaturated	47.7
Cholesterol (mg/d)	520
Fiber (g/d)	16.3
Sodium (mg/d)	2024
Potassium (mg/d)	3033
Iron (mg/d)	12.5
Calcium (mg/d)	696
Folate (μ/d)	271
Vitamin E (IU/d)	11.1
Vitamin C (mg/d)	172
Fish (oz/week)	4.3
Nuts (oz/week)	0.4
Lycopene (servings/d)	6.8
Flavonoids (mg/d)	13

* Excluding beverages, except milk and tea, and including recommended snacks.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat.* New York, NY: Harper Collins; 2001:125.

Current Status

In 2001, Ms. Somers revealed that she had breast cancer and sought homeopathic treatment; reports in 2003 are that she feels well and energetic. Her latest book—Amazon lists 15 overall—is *Suzanne Somers' Fast and Easy* and is the fifth installment in the Somersize series: Her previous *Eat, Cheat and Melt the Fat Away* was No. 1 on the *New York Times* list.

Name: RealAge Diet

History

Roizen is an anesthesiologist and internist who created the RealAge concept when challenged by a patient to prove that she could become physically younger if she quit smoking. Roizen asked La Puma, an internist, medical ethicist, and professionally trained chef, to create the recipes, behaviors, and nutritional strategies for the RealAge diet. The diet is not intended for weight loss but for reducing the rate of biologic aging; weight loss is an unintended side effect. With other titles, *The RealAge Diet* has sold more than a million copies: its primary audience is baby boomers and older adults.

Core Claims

- Food and nutrients in food can slow or even reverse the effects and rate of aging of your arteries, your immune system, and your sense of balance.
- Even foods that are thought of as fattening can reduce your rate of aging, because they contain other nutrients that do so—for example, dark chocolate contains flavonoids; nuts contain healthy fats and protein; and red wine contains polyphenols.
- Specific phytonutrients and other nutrients can have specific effects on how genes are expressed and how chronic diseases often associated with obesity are controlled.
- For example, people with high blood pressure can reduce their rate of (arterial) aging by eating magnesium and calcium-rich vegetables and fruits, as demonstrated in the DASH

(Dietary Approaches to Stop Hypertension) Diet trials.

- An optimal weight for biologic age reduction is a BMI of approximately 23.

How You Do It

1. Make small substitutions that make a big difference: Eat fish instead of meat, olive oil instead of butter, avocado instead of sour cream, and nuts instead of chips.
2. Minimize your intake of saturated and trans fats, empty calories, red meat, and simple sugars.
3. Avoid stress while eating.
4. Learn to read between the lines on menus, and ask for and pay for exactly what you want when you eat out.
5. Think of food as nutrients-per-bite and nutrient-rich.
6. Eat small frequent meals; eat when you are hungry; try to eat in a single, special place at home; have celebration meals up to 4 times annually; and try not to eat when you feel like eating but are not hungry.

Trials

The RealAge Diet was created with an analysis of 25,000 peer-reviewed studies: Roizen and La Puma state that each claim in the book has 4 peer-reviewed studies in humans to support it. The recipe analyses were reviewed at Northwestern and Stanford Universities; the calculations for numbers of years younger for any given behavior were created by scientists at www.RealAge.com. The explanation for how this is calculated is reviewed.

Evaluation

This book does not aim for weight loss but notes it as an incidental effect. No food group is excluded, though red meat and poultry are not at the center of the plate. The book integrates into a single metric what is known about the prevention and treatment of chronic disease related to arterial and immune function. It aims to make eating fun and easy and uses some gourmet ingredients but short cooking times to make cooking less intimidating and time-consuming. (*See Table 7.*)

Current Status

In 2003, the authors taught the first Cooking and Nutrition Elective for Medical Students in the United States, at SUNY-Upstate Medical University. A search of Amazon.com reveals 5 titles with the RealAge brand: Neither Roizen nor La Puma currently sell other products. RealAge.com crashed when more than a million people tried to access it after it appeared on Oprah! Since then, it has become the second most-visited health site, after MayoClinic.com. La Puma uses the *RealAge Diet* book and quiz in clinical practice; the cookbook *Cooking the RealAge Way* offers a Kitchen IQ quiz to identify whether your kitchen and pantry can make your biologic age younger.

Discussion

This analysis of 6 popular diets yields several core observations.

Underlying Mechanism of Action: Calorie Restriction

Although each of the diets cites theoretical or "scientific" evidence to support its mechanism of action, in fact, they all create weight loss through calorie restriction. This is usually, though not always, accomplished by eliminating a food group or severely limiting a single macronutrient.

High-protein and low-carbohydrate diets work because by cutting out carbohydrates, people dramatically reduce their calorie intake. Currently, curtailing carbohydrates is popular, and Atkins, Sears, Somers, and Steward all curb carbs. Atkins asks you to have just 20 g of carbs daily initially; because most calories in US diets come from carbohydrates, almost anyone will lose weight with this approach.

On the other end of the spectrum, Ornish advocates eating a low-fat diet that includes carbohydrates but dramatically reduces the intake of animal protein and fat. His diet eliminates the medical concern about high levels of protein and fat in the diet; however, its modest protein and minimal fat intake cause concern about adequacy—not for deficiencies

Table 7. The RealAge Diet Plan: Nutritional Contents of 10 Days of Recipes

Food/Nutrient Recipes	Actual
Calories per day (on average)	1640
Protein (g/d)	70
Carbohydrates (g/d)	270
Fat (g/d)	46
% of calories that are fat	24
% of fat that is saturated	31
Saturated fat (g/d)	14.5
% of fat that is monounsaturated	42
Cholesterol (mg/d)	89
Fiber (g/d)	30.2
Sodium (mg/d)	2201
Potassium (mg/d)	3530
Iron (mg/d)	14.9
Calcium (mg/d)	710
Fish (oz/week)	14.5
Nuts (oz/week)	12
Lycopene (servings/d)	4
Flavonoids (mg/d)	31

* Excluding beverages, except milk and tea, and including recommended snacks.

Adapted from: Roizen MF, La Puma J. *The RealAge Diet: Make Yourself Younger With What You Eat.* New York, NY: Harper Collins; 2001:133.

but for optimal functioning. Although Ornish eliminates a different food group than the low-carbohydrate diet, he has the effect of restricting calories, because the highest calorie foods (alcohol and fat) are minimized.

Eating a small amount of (healthy!) fat at the start of the meal reduces the rate of absorption of sugar, effectively lowering glycemic load, and blunting the rise and rate of rise of serum glucose. This diminishes insulin secretion and allows you to feel full faster. It takes about 10 minutes for this effect to begin and 20 minutes for it to be realized fully.

All Carbohydrates are Not Created Equally

Carbohydrates are not all the same: I think of them as short acting and sustained release. Simple carbohydrates are short acting: often refined and highly processed (eg, sugar in all its forms, and bread, pasta, and rice that are not whole grain). Complex carbohydrates are sustained release: often unrefined and minimally processed. Simple carbs have little fiber; complex carbs have more. Simple carbs tend to have high-glycemic indices and loads; complex carbs have low-glycemic indices and loads.

Simple carbs appear to induce hunger quickly, spiking blood glucose and subsequently insulin, with a rush of energy and then a crash, and then more hunger. The rise and fall in hunger makes it harder to control caloric intake and can lead to more snacking, which too often means high-calorie, low-nutrient foods. Simple carbs (ie, French fries, soda pop, many commercial muffins, cereals and breads, white pasta, cakes, pastries, candies, and doughnuts) are best minimized in the weight-loss diet.

Complex carbs, on the other hand, belong in the middle of the plate. They are found in brown rice, whole oats, whole grain breads and pastas, beans of every kind, whole vegetables, and whole fruits (not in syrup, no matter how light). These carbs take longer to process, fight hunger longer, and appear useful in a weight-loss diet.

All Fats are Not Created Equally

Saturated fats, featured in several of the high-protein books—Atkins, Somers, Steward—have been demonstrated to promote atherosclerosis, arterial aging, and immune system aging. Unsaturated fats, the most popular of which are olive and canola oil, also include fish, seed, and nut oils. These are promoted by other books—Zone and RealAge—as essential, healthful, and preferred. Trans fats are not featured in any of the diets, though some books recommend commercial products with partially hydrogenated vegetable oil—most stick margarine, many store-bought baked goods, and almost every food item that is packaged and shelf-stable.

Ornish is correct that very low-fat diets—less than 15%, or in his cardiac disease reversal diet, 10%—have been associated with regression of arterial lesions, weight loss, and maintenance of weight loss, especially when combined with daily exercise, yoga for flexibility, and a support group. This very low-fat diet has been criticized as unsustainable, but with commitment, it is indeed sustainable.

The RealAge Diet advocates eating a tablespoon of guacamole before dinner, or crusty whole grain bread dipped in a half teaspoon of olive oil, or 6-12 tree nuts to help absorption of fat-soluble vitamins, to take the edge off your appetite, to lower the glycemic index of carbohydrates ingested, and to make sure that the fat you eat is modest in quantity, is high quality, and healthy.

Behavioral Approaches May Be More Effective Than Nutritional Ones

Three components of weight—weight gain since age 18 for women, or age 21 for men, yo-yo dieting (defined as losing and then gaining more than 5% or more of your body weight in any 5-year period), and your absolute weight-to-height ratio—each matter to health. Ornish, Sears, RealAge, and Somers provide food choices and menus that largely fit the criteria for promoting health that have been shown repeatedly in the peer-reviewed literature to promote health.

Each of these 4 also emphasizes a behavioral approach along with nutritional changes. Such an approach has been shown to be effective in, for example, promoting fruit and vegetable consumption and raising alpha tocopherol and ascorbic acid levels, rather solely than a nutritional approach.[22] An approach that gauges and uses patients' stages of readiness to subtract foods with trans fats, for example, or to add more vegetables, is likely to be more sustainable than simple advice to add or subtract foods.

Recommendation and Conclusions

Each of these diets has something to offer—even if it is "eat fewer calories and exercise more." How can that advice translate effectively for most people? Here are some sensible guidelines:

1. Eat more fruit, vegetables, legumes, nuts, and fish. *Be specific about which ones and how often*.
2. Eat less red meat, drink few juices and no sodas, and eat fewer desserts. Again, be specific: Ice cream once monthly, 23 almonds, 5 days per week.
3. Substitute traditionally high-fat dairy products with lower-fat dairy and soy. Foods: milk, yogurt, cheese, dressings, ice cream.
4. Start and stick to a 6-day weekly (everyone gets a day off) low-to-medium impact strength and stamina building activity schedule, starting with walking or water aerobics and adding lunges and half squats.

Even this sensible approach, however, would not guarantee weight loss that would be long term—and that is what's missing from all the bestseller diets. To keep weight off and create habit change, 4 behavioral steps are essential. They are:

- self-monitoring regularly;
- individualization of diet;
- 150-300 minutes of enjoyable activity weekly; and
- personal, one-on-one accountability for the program.

These 4 steps are not part of bestseller diets and, indeed, are not part of most diet plans. But they are essential and effective, whether your patients are busy executives or busy homemakers, and whether your patients see you in the office or free clinic, live in Pensacola or Appalachia, and travel by private

jet or city bus.

Don't look for these 4 steps in the next bestseller diet book, because they have no gimmick. Do look for them as a benchmark against which to measure any diet or cookbook that appears on the bestseller list, or program offered to your patients.

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CME Questions

19. Which one of the following is *not* a low-protein, high-carb diet?
    a. Ornish
    b. Pritikin
    c. Atkins
    d. McDougall

20. Which one of the following is *not* a low-carb, hgh-protein diet?
    a. Atkins
    b. Ornish
    c. Somers
    d. Sugar Busters!®

21. How many kilograms per meter squared does someone need to be clinically obese?
    a. 10
    b. 15
    c. 20
    d. 30

22. Accountability and individual personalization of diet are necessary, behavioral steps to keep weight off once lost.
    a. True
    b. False

23. The mechanism of weight loss in each bestseller diet is calorie restriction.
    a. True
    b. False

Answers: 19.(c); 20.(b); 21.(d); 22.(a); 23.(a)

Audio Conference

Seasonale: A Revolutionary Contraceptive

Extended hormonal contraception is drawing dramatic attention due to the desire of many women to reduce or eliminate the number of withdrawal bleeds associated with current birth control methods. The first extended-use oral contraceptive, Seasonale, was just approved by the FDA and is expected to have an enormous effect on family planners and OB/GYNs. This new therapy will reduce the number of periods a woman has to 4 a year. Researchers also are looking at extended use of the NuvaRing contraceptive vaginal ring and the Evra transdermal contraceptive patch.

To bring you up to speed with the exciting changes in this field, Thomson American Health Consultants offers ***Extended-use Contraception: What You Should Know About Seasonale and Other Options***, an audio conference on October 9, from 2-3 p.m., ET. The conference will be replayed continuously for 48 hours following the original airdate to make it as convenient as possible for busy professionals to attend.

"I consider [Seasonale] to be the most important change in hormonal contraception since birth control pills initially became available," says Robert Hatcher, MD, MPH, editor of *Contraceptive Technology Update*, and professor of gynecology and obstetrics at Emory University.

Presenters will be Hatcher, who will act as moderator; Lee Shulman, MD, professor of OB/GYN at Northwestern University, Chicago; and Sharon Schnare, RN, FNP, CNM, MSN, a family planning clinician and consultant in Seattle.

After listening to this program, participants will be able to:

- discuss current and future options for extended-use hormonal contraception;
- list advantages of extended-use hormonal contraception;
- recognize potential problems with extended-use hormonal contraception; and
- identify best candidates for extended-use hormonal contraception.

Each participant in the conference can earn FREE CE or CME credits for 1 low facility fee. Invite as many participants as you wish to listen to the audio conference for $99, and each person will have the opportunity to earn 1 nursing contact hour or 1 AMA Category 1 CME credit. The conference package also includes handouts, additional reading, a free 48-hour replay of the live conference, and a CD recording of the program.

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