Personalized Nutrition
Do you need a just-for-me diet?

TRICKY ADS
THE LATEST CROP

Cooking with tempeh

The scoop on ice cream
Making the World Safe for Junk Food

Malnutrition is still a matter of life and death in many parts of the globe. But, astonishingly, most of the world’s population now lives in countries where excess weight kills more people than underweight, says the World Health Organization.

According to the WHO, some 1.25 billion adults were overweight in 2016—nearly four out of every 10 adults on earth. Another 650 million were obese. Worldwide, obesity rates have nearly tripled since 1975. And it’s not just adults. Nearly 20 percent of children aged 5 to 19 were overweight or obese in 2016, notes the WHO.

“This shift to population-wide obesity is occurring with terrifying speed,” former WHO Director-General Margaret Chan said in 2016.

And with obesity comes a greater risk of heart disease, many cancers, and especially type 2 diabetes. So it’s no surprise that excess weight is linked to four million deaths a year worldwide.

And it’s no surprise that the worldwide obesity epidemic is unfolding as multinational food and soda companies—most of them based in the United States—are increasingly turning their sights to enormous untapped markets in less-affluent countries.

Fast food sales reportedly grew by 30 percent worldwide between 2011 and 2016, with explosive growth in Argentina, Vietnam, China, and India. Packaged foods grew 25 percent.

Here’s the rub. In a study funded by the U.S. National Institutes of Health that tracked tens of thousands of Chinese Singaporeans for a decade, those who consumed Western fast food at least twice a week were 27 percent more likely to get diabetes, and had a 56 percent higher risk of dying of heart disease, than those who never ate fast food.

How did food companies manage to penetrate these markets so quickly?

An extensive series in the *New York Times* has laid out the industries’ tactics in graphic—and heart-wrenching—detail (nytimes.com/series/obesity-epidemic). A few examples:

- **India.** Fighting a lawsuit that calls for bans on junk food and soft drink sales near schools.
- **Colombia.** Putting pressure on government agencies to stall a soda tax.

And Chile has enacted a slew of measures—including marketing restrictions, bans on cartoon characters and toys, and innovative front-of-pack labels—that have reportedly led companies to reformulate some 1,500 foods and drinks (presumably, to make them healthier). That’s no small matter in a nation where three out of four adults are overweight or obese.

And Dr. Chan has said, the obesity epidemic doesn’t represent a lack of individual willpower, but “a failure of political will to take on powerful economic operators, like the food and soda industries.”

And take them on, we will.

Peter G. Lurie, MD, MPH, President
Center for Science in the Public Interest

MEMO
“We’re in personalized nutrition’s infancy in part because it’s so complex,” Gardner explains. “We’re starting to chip away at it, but we’re not there yet.”

Your Genes

“We’re giving recommendations to populations, but people want to know what works for them,” said Ahmed El-Sohemy, professor of nutritional sciences at the University of Toronto and founder of the personalized nutrition company Nutrigenomix.

El-Sohemy was speaking at a National Academy of Medicine workshop on “Nutrigenomics and the Future of Nutrition” in December 2017. (Nutrigenomics is the study of how nutrients interact with genes.)

Who wouldn’t want diet advice tailored to their needs?

“We hope, in the long term, that personalized nutrition saves you from a heart attack, an osteoporotic fracture, cancer, chronic degenerative disease, and so on,” says Christopher Gardner, professor of medicine at Stanford University School of Medicine.

With new technology, researchers are beginning to tie together enormous amounts of data about a single person: genetics, the microbiome, blood biomarkers, lifestyle habits, and more. That data may someday lead to individual advice. But someday isn’t now.

“We’re in personalized nutrition’s infancy in part because it’s so complex,” Gardner explains. “We’re starting to chip away at it, but we’re not there yet.”

Your unique biology? Much of Habit’s advice is pretty generic.

Your Genes

“You are born with a unique genetic blueprint,” says Habit.com, the biggest name in direct-to-consumer personalized nutrition services. (Habit was started with a $32 million investment from Campbell’s—the soup company.)

“Our partnered CLIA-certified lab analyzes those nutrition-related genetic markers. These markers lay the foundation for your results.”

But it’s not clear how much genetic markers can help you. For example:

■ FTO. People with a variant of the FTO gene are more likely to be overweight or obese. But that doesn’t tell you much.

“If the risk variant for FTO helps to make you fatter, does that make it harder to lose weight?” asks John Mathers, director of the Human Nutrition Research Centre at Newcastle University in England.

To find out, he looked at eight weight-loss studies that enrolled roughly 9,500 overweight or obese volunteers. People lost weight just as effectively whether they had or didn’t have the risk variant for that gene,” Mathers explains.

“I think that’s very encouraging for people, because it means that their genes are not always their destiny. They can lose weight even if they carry the risk variant.”

His results should come as no surprise. Researchers have found 97 gene variants linked to weight, but together, they only explain roughly 3 percent of the differences in weight between people.

■ PPARG, ADRB2, FABP2. Gardner’s DIETFITS study used variants of three genes—PPARG, ADRB2, and FABP2—to classify people as more sensitive to fat (low-fat genotype) or to carbs (low-carb genotype).

Then the researchers randomly assigned 609 overweight adults to eat either a healthy low-carb or a healthy low-fat diet for a year. The low-carb group...
Get in the Habit?

“I’ve noticed that my clothes are looser on my body,” says Michelle H., one of the “success stories” on Habit.com. “I feel better. I noticed that I have more energy.”

Is it worth $299 to “take the Habit Nutrition Test,” receive your test results, and get your “nutrition plan”? I decided to find out.

First, I answered online questions about my height, weight, waist, blood pressure, and activity level. Then, once the Nutrition Test Kit arrived, I fasted for 12 hours.

I swabbed the inside of my cheeks to collect DNA for the genetic testing. I pricked my finger and dripped blood onto a collection card, so Habit could analyze the blood for my fasting blood sugar, cholesterol, and triglyceride levels.

Next came the “unique metabolic challenge” to find out how my body handles fats, carbs, and protein. I gulped down Habit’s sickeningly sweet Challenge Shake, which clocks in at 950 calories, 18 teaspoons of added sugar, and more than a day’s saturated fat. Urp.

After 30 minutes, I stabbed another finger for blood, and 90 minutes later, I went for a third finger. Done!

A few weeks after I sent off my samples, an email popped into my inbox. Exciting new information about me was just a few clicks away! Except it wasn’t.

Take the genetic results. It turns out I have two high-risk variants of the FTO gene, which are more common in people who are overweight or obese. (I’m neither.) Be “mindful of your genes,” instructed Habit, without telling me how.

I don’t have the gene variants that make people lactose intolerant or sensitive to caffeine, reported Habit. I didn’t need a genetic test to tell me that.

I have four gene variants linked to high blood sugar. However, according to Habit, my response to the Challenge Shake was “impressive.” Two hours after the last gulp, my blood sugar was almost down to my fasting level.

“You handled the fat in the Habit Challenge Shake with ease,” said my results, apparently because the shake didn’t make my triglycerides soar. “However, your bad (LDL) cholesterol level is high.” (At 107, my LDL was slightly above the 100 target.)

My fasting blood sugar, triglycerides, and good (HDL) cholesterol were normal—no surprise, since my doctor had measured them recently.

Then came my “Nutrition Plan.”

“You are a Range Seeker,” said Habit. Among the rules that should guide what I eat:

■ “You thrive on a wide variety of whole foods that are naturally nutrient-rich.” (Who doesn’t?)
■ “Due to how your body processes carbs, hidden sugars can have the wrong kind of impact.” (Don’t they always? And weren’t my blood sugar results “impressive”?)
■ “With 30% of your calories from fat, enjoy nuts, plant-based oils or other healthy options like avocados.” (True for everybody, no?)
■ “You have the genotype associated with increased inflammation...Consuming more foods rich in vitamin C...and vitamin E...may be beneficial to you.” (“May” is right. It’s not clear if C and E help.)

I don’t know what Habit recommends for “Protein Seekers,” “Plant Seekers,” “Fat Seekers,” or its three other seekers. But the advice for Range Seekers is pretty generic.

I also got a list of “Hero foods”—swiss chard, asparagus, quinoa, tofu, almonds, olive oil, and kidney beans. “Why kidney beans instead of, say, chickpeas?” I asked a Habit dietitian. “If you want to have chickpeas instead of kidney beans, that totally works,” she replied. So much for personalization.

And why did Habit give me targets—the usual Recommended Dietary Allowances—for 12 vitamins and minerals, but no advice for calcium, iron, or sodium? The dietitian couldn’t say. (Habit declined my request to speak with a staff scientist.)

On the plus side, Habit’s diet plan was loaded with fruits, vegetables, and other healthy foods. The advice may not be “just for you,” but at least it seems to be good advice.

—Caitlin Dow

Many drops of blood later...
• high triglycerides
• high blood pressure
• excess weight
• low vitamin D levels
• lactose intolerance
• metabolizing caffeine slowly

But chances are, you already know if you have gas, diarrhea, or bloating after drinking milk or whether a cup of coffee after lunch will keep you up all night.

And an ordinary checkup can tell you if your blood pressure, blood sugar, triglycerides, or weight is high or if your HDL or vitamin D is low.

What’s more, “for type 2 diabetes, body weight, and cardiovascular disease, non-genetic risk factors are much more important than your genetic risk,” says Cecile Janssens, research professor of epidemiology in the Rollins School of Public Health at Emory University. She’s talking about your blood pressure, blood sugar, HDL, etc.

And because genes aren’t the whole ball of wax, companies like Habit don’t stop there. (See “Get in the Habit?”)

“In the early days, almost everyone just talked about genetics, but now researchers are studying a much broader range of characteristics,” notes Mathers.

“I think that’s a sensible move, because genetics are only one part of the picture.”

**The Microbiome**

“Your gut has a unique army of trillions of microorganisms at your disposal,” says Viome. “Enlist them to work for you today and join the wellness revolution.”

For a mere $399 (and a stool sample), Viome offers “a personalized, easy-to-follow plan with precise diet, nutrition and supplement recommendations” based largely on the microbes in your gut.

But the evidence to back up that advice is “pretty thin,” says Mathers.

“Much of the microbiome work is interesting,” he explains, but so far, it has only revealed links, not what explains them.

For example, Danish researchers measured two types of bacteria—Prevotella and Bacteroides—collected from 62 adults in a study pitting the New Nordic Diet (which is rich in whole grains, vegetables, and fruit) against an average Danish diet (which is high in refined carbohydrates and processed foods).5

After six months, participants who had relatively more Bacteroides at the start of the study had lost a similar amount of body fat on either diet. But those with relatively more Prevotella lost seven more pounds of fat on the New Nordic Diet than on the average Danish diet.

Interested. But that doesn’t tell you much. Could something else about people with relatively more Prevotella explain why they lost more fat on the New Nordic Diet?

What’s more, most people have no idea which bacteria they have more of. And even if they did, no one knows how to change the microbes in their gut.

“There’s not yet enough evidence demonstrating that if you eat X or Y, you produce these particular changes in your microbiome and they translate into some health outcome,” says Mathers.

**Blood Sugar**

In 2015, Israeli researchers released surprising news from a study measuring how the blood sugar of 800 people responded after they ate a total of more than 47,000 meals.6

“They monitored enough people and enough eating episodes that they could say, ‘Two people eating the same amount of carrots or cookies or broccoli would have very different blood sugar responses,’” says Stanford’s Christopher Gardner.

The researchers combined that information with other data—on the participants’ diets, weight, exercise, gut microbiomes, and more—to predict how different people’s blood sugar would react to eating different foods. Their goal: to devise diets that prevent spikes in post-meal blood sugar.

The result: DayTwo, which, for $349, will design a personalized diet for you.

While the research behind DayTwo is impressive, says Gardner, “I’m skeptical, to say the least. You can’t pin the risk for diabetes or cancer or heart disease solely on blood sugar.”

That also goes for weight loss. Gardner’s DIETFITS study tested whether people who appeared to have insulin resistance would lose more weight if they cut back on carbs more than on fat.4

(Insulin resistance—which means that your insulin isn’t good at moving blood sugar into your cells—often goes hand-in-hand with high blood sugar and often leads to type 2 diabetes.)

“It makes a lot of intuitive sense that people who are on their way to diabetes would have a hard time handling carbs,” notes Gardner.
Half of the people in the DIETFITS study ate a healthy low-fat diet, and half ate a healthy low-carb diet. “And we asked everybody to get rid of refined grains and added sugars and to eat as many vegetables as possible,” explains Gardner.

But after a year, the participants with the highest insulin secretion lost no more weight on a low-carb diet than on a low-fat diet. (A person with greater insulin secretion may have insulin resistance, which is difficult to measure.)

“I totally bought into the idea that those folks would do better on a low-carb diet,” Gardner acknowledges.

His bottom line on DayTwo: “I’m really happy when people add new tools to the research toolbox. But I’m really frustrated when it gets turned into ‘We’re done! Thank goodness we figured it out. Now we know what you should eat.’”

**Secret Formulas**

“Partnering with experts in the fields of systems biology and nutrition, we make sure that the connection between each test result, metric, and recommendation we make is backed by significant scientific evidence,” says Habit.

But that evidence is a secret.

“There is a lack of transparency,” says Emory’s Cecile Janssens. “We have no clue what they are doing.”

And Habit’s formula for creating personalized diets may sound more advanced than it is. “Using a proprietary formula sounds so chic,” says Janssens. “Trust us, it’s complex. Believe us, the company seems to be saying. I don’t think there’s anything complex behind it.”

Newcastle University’s John Mathers also wants to see the data.

“You could argue that if people want to waste money on some ‘harmless’ product, then so be it,” he says. “But if it’s going to be a serious attempt to make a difference to public health, then I’d like to see those programs based on solid evidence.”

The first generation of personalized diet services could also have other downsides.

“My biggest fear isn’t that we will hurt people physically,” says Gardner. “It’s that we will get people more and more frustrated with scientific knowledge. These companies have overstepped the science, making claims that aren’t true. People will try it, be unsuccessful, and we’ll lose their trust even more.”

**Good Advice Ignored?**

“The same dietary advice cannot be good for everyone, because we are all different,” Eran Elinav told the *New York Times* in 2016. Elinav is co-author of the study that led to DayTwo and professor of immunology at the Weizmann Institute of Science in Israel.

“This is why we have failed so miserably at controlling the obesity epidemic.”

Mathers disagrees.

“There is nothing wrong with the dietary guidelines,” he argues. “The problem is that people don’t follow them.”

That’s the one upside of personalized diets: In Mathers’s Food4Me study, people were more likely to follow diet advice if it was tailored to their needs.7

“If we give people sound advice that is relevant to them, that helps to motivate diet change,” says Mathers.

But what most of us need doesn’t require a personal diet plan.

“Americans get a quarter or more of their calories just from added sugars and refined grains, and they get an embarrassingly low number of calories from vegetables,” says Gardner.

Shifting to a veggie-rich diet that’s low in white flour and added sugars would have a huge impact, no personalization required.

“It’s not about being a meat eater or a whole-wheat eater,” says Gardner.

“If you could get everybody to do the added sugar, refined grain, vegetable thing first, then you could tweak around the edges. But I’m not sure there’d be much left to tweak.”

To help people make those changes, the food environment—with pizza, burritos, burgers, fries, sodas, shakes, chips, doughnuts, waffle cones, and more at our fingertips 24/7—has to change.

“We just have way too much packaged, convenient, hyper-palatable, ultra-processed food,” says Gardner.

And without those changes, he adds, even the best personalized diet advice won’t matter.

“Unless we change the food environment and social norms, it’s going to be nearly impossible for people to cut back on refined grains and sugars, and to also make those smaller tweaks.”

Ginkgo biloba doesn’t prevent dementia or cognitive decline in older people, and doesn’t help boost memory in younger folks either, according to the best independent studies.

If you want to take it anyway, here’s something to consider: Chances are, the ginkgo you think you’re buying isn’t the ginkgo you get.

**Adulterated Content**

“Consumers would find it disappointing that the ‘ginkgo’ in so many supplements isn’t 100 percent ginkgo,” notes Stefan Gafner, chief science officer at the American Botanical Council.

But industry insiders aren’t surprised. In 1999, when ConsumerLab.com first started testing ginkgo supplements, there was something fishy about the ginkgo in a quarter of the 30 brands that it sampled. In its 2003 testing, seven of nine ginkgo products flunked. In 2008, it was five of seven. And this year, it was six out of 10.

What’s going on?

“To reduce their costs, some manufacturers (or their ingredient suppliers) provide less ginkgo than claimed or use material that has been adulterated or ‘spiked’ with one or more compounds or extracts from other plants that can trick simple chemical tests,” notes ConsumerLab, which uses more sophisticated tests.

“This makes a product with little or no real ginkgo appear to be the real thing. In fact, it is now believed that ginkgo is among the most adulterated herbs on the market.”

(Which brands passed this year’s test? That information is available only to ConsumerLab’s subscribers.)

Others have found similar problems. In a 2012 study, seven of 18 ginkgo supplements purchased in suburban Washington, DC, or online “were clearly adulterated,” notes Gafner.

And in a 2016 survey organized by the BBC, 33 of 35 ginkgo supplements purchased in London or online were adulterated. One contained no ginkgo at all.

**Money, Money, Money**

“Industry experts agree that the adulteration of ginkgo extracts is intentional,” says Gafner.

 gland ginkgo...or ginkgo? There’s no way for shoppers to tell.

(The pro-herb, nonprofit American Botanical Council is part of a consortium that is pushing supplement makers to clean up their act.)

Real ginkgo extract is expensive. It takes roughly 50 pounds of dried leaves to make one pound of extract.

“Most of the products contain some ginkgo,” notes Gafner. But some companies add cheaper compounds—they can cost as little as one-twentieth what ginkgo costs—that not all lab tests can pick up as frauds.

“Consumers think dietary supplements are supposed to be inexpensive,” says Gafner. “Price pressure definitely has something to do with manufacturers cutting corners. That’s unacceptable.”

**Ginkgo with Benefits?**

The evidence that ginkgo can protect your brain is anything but compelling.

In a 2008 study funded in part by the National Institutes of Health (NIH), researchers gave 3,069 men and women aged 75 and older 240 milligrams of ginkgo or a placebo every day. (They made sure the supplements had the right amount of ginkgo.) Over the next six years, the ginkgo takers were just as likely as the placebo takers to be diagnosed with dementia.

And among those in the study who didn’t develop dementia, ginkgo was no better at slowing declines in memory, attention, use of language, or executive function (planning and organizing).

Trials of ginkgo on memory, attention, and executive function in younger people have also come up empty.

Some people with intermittent claudication—aches and cramps caused by poor circulation in the legs—claim that ginkgo relieves the pain of walking. But a Cochrane Collaboration review of 11 clinical trials found nothing much.

No harm, no foul? Not exactly.

“If you’re older, have a known bleeding risk, or are pregnant you should be cautious about ginkgo possibly increasing your risk of bleeding,” notes the NIH.
**Pitch Imperfect?**

BY LINDSAY MOYER & BONNIE LIEBMAN

As long as there’s a Madison Avenue, companies will twist the truth to pitch their products as healthy, real, essential, or name-your-buzzword-du-jour. So they play up nuts or protein rather than sugar, “energy” to get you going, veggies no matter how minimal, and more. Here’s a handful of some current misleading ad claims. You don’t have to look too far to find plenty of others.

**Not-Just-Cauliflower Crust**

“Looking for lower carb feasting?” asks the ad for the Cauliflower Crust on California Pizza Kitchen’s website. “No problem...Cauliflower crust (oh so deliciously) plays well with carb-conscious connoisseurs.”

Yes, CPK’s Cauliflower crust is about a third lower in carbs than its Hand-Tossed Original crust. But with 85 grams of carbs in each (individual) crust, it’s anything but low.

And the Cauliflower crust’s 560 calories is just a smidge lower than the Original’s 580. That’s because CPK adds rice flour, tapioca starch, and cheese.

Of course, it’s “no problem” if those carb-conscious connoisseurs think it’s just cauliflower.

**Potassium Pitch**

“This has potassium,” says the TV ad for V8. “The same amount as this” (a banana labeled as small, though the word “small” is small). “It’s a post-workout snack you don’t have to peel.”

Not quite. A 5.5 oz. V8 has 320 milligrams of potassium. A small banana has 360 mg. A medium has 420 mg.

Translation: With a one-month supply priced at $13.99, someone at Olly will be glowing.

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“You bring the egg,” says the TV ad for Ore-Ida Just Crack an Egg. “We bring the Ore-Ida potatoes, chopped veggies, melty cheese, and hearty meat for a hot scramble ready in less than two minutes.”

Yup, you bring the egg (carefully, if you’re heading to work). Ore-Ida goes to the trouble of filling a plastic cup with three tiny plastic bags—with 2 or 3 tablespoons each of ham, cheese, and diced potatoes, green peppers, and onions.

All that plastic, just so you can add something to an egg, which you microwave in the plastic cup? Surely, people can microwave an egg in a glass bowl or Pyrex cookware with their own chopped veggies (or fresh salsa). Who needs the processed meat and white potatoes?

“You bring the egg,” says the TV ad for Carnation Breakfast Essentials High Protein Drink. “It has 21 vitamins and minerals, with 15 grams of protein to help you be your best.”

Yes, get going with a 220-calorie bottle of water, corn syrup, sugar, milk protein concentrate, vegetable oil, cocoa, calcium and sodium caseinates, soy protein isolate, gums, salt, artificial flavor, and more. You call those “essentials”?

Want 15 grams of protein? Try a non-fat plain greek yogurt instead. It’s only 80 calories, so you can add fruit and still come out ahead.

“When your battery is running low, grab a sugar-free, vitamin-packed 5-Hour Energy,” urges the TV ad. “It’ll get you back to 100 percent fast.”

First of all, those vitamins are there just to give your caffeine shot a health halo. They won’t “get you back to 100 percent.”

And there’s no way to read the tiny disclosures at the bottom of the screen: “Not proven to improve physical performance, dexterity or endurance. Limit caffeine products to avoid nervousness, sleeplessness and occasional rapid heartbeat.”

If it’s worth disclosing, shouldn’t a voice-over do it? That would get you back to 100 percent honest.

“The honey sweet, clustery, crunchy taste of Honey Bunches of Oats with Almonds now has more almonds...25% more almonds,” boasts the TV ad.

Yes, but the cereal still has more sugar than almonds...or honey, for that matter. And it’s got more corn than oats or anything else, despite the name. “Sugary Bunches of Corn” just doesn’t have the same ring.
Quick Studies
A snapshot of the latest research on diet and exercise

What Can Vitamin D Do?

What can—or can’t—vitamin D do? Results are in from three new studies testing vitamin D at or above the Recommended Dietary Allowance (RDA)—600 IU a day up to age 70 and 800 IU over 70.

- **Insulin sensitivity.** Researchers randomly assigned 18 people with obesity to a low-calorie diet with either a placebo or a weekly dose of vitamin D equal to 3,570 IU a day. Most had low blood vitamin D levels to start with. After three months, insulin sensitivity improved only in the vitamin D takers.

- **Artery stiffness.** Researchers randomly assigned 70 overweight or obese African-Americans aged 13 to 45 with low blood vitamin D levels to take either a placebo or monthly doses of vitamin D equal to 600 IU, 2,000 IU, or 4,000 IU a day. After four months, artery stiffness decreased in the groups that got 2,000 IU or 4,000 IU.

- **Diabetes control.** Researchers randomly assigned 127 people aged 25 to 75 (average age: 60) with stable type 2 diabetes to take vitamin D (4,000 IU a day) or a placebo. Only 26 percent had low blood vitamin D levels. After 11 months, insulin secretion, insulin sensitivity, and hemoglobin A1C (a long-term measure of blood sugar) didn’t improve more in the vitamin D takers.

What to do: It’s too early to tell what high doses of vitamin D can do. But since it’s hard to get enough from food or, for most people, from the sun, take a multivitamin or a supplement with the RDA to play it safe. You may need more if your vitamin D blood level is low (under 20 ng/mL). Just keep in mind that some studies find a higher risk of falls at 2,000 IU a day (see Jul./Aug. 2017). And stay tuned. VITAL, a larger study looking at vitamin D and more than a dozen conditions, is in progress.


Stay Soft Hearted

In sedentary seniors, the heart chamber that pumps blood throughout the body can get stiff, which can lead to heart failure. Can exercise in middle age keep the heart muscle supple?

Researchers randomly assigned 52 sedentary people aged 45 to 64 either to moderate and high-intensity exercise or to a control group (balance, yoga, and strength training).

The exercise group took five months to work up to 5 to 6 hours a week of training, including 2 high-intensity interval sessions (4 minutes at 95 percent peak heart rate followed by 3 minutes at 60 to 75 percent peak, repeated 4 times).

After two years, the exercise group had less heart stiffness, more blood pumped per heartbeat, and greater aerobic capacity than the control group.

What to do: Get moving before your heart muscle stiffens. In an earlier study on older people, a year of exercise didn’t make hearts less stiff (though it has other benefits).

Circulation 2018. doi:10.1161/CIRCULATIONAHA.117.030617.

Is Gluten the Problem?

Can eating gluten give you GI symptoms even if you don’t have celiac disease?

Researchers gave 20 people with suspected non-celiac gluten sensitivity (NCGS) two muffins a day made with or without gluten (11 grams) for eight days each. The participants were all on gluten-free diets and didn’t know which muffins they were eating.

Only four of the 20 correctly identified the days on which they had eaten the muffins with gluten. However, they reported no more symptoms on those days. The other participants reported more symptoms on the days they ate the gluten-free muffins.

What to do: Got GI distress? Don’t assume that gluten is to blame.

If the **Diet Fits...**

Low-fat or low-carb?

BY CAITLIN DOW & BONNIE LIEBMAN

“How much do calories count?” asked the *New York Times* headline in February (below a picture of a Nutrition Facts label in flames). Huh? The Times was reporting the results of DIETFITS, a year-long $8 million study on 609 overweight or obese people. But DIETFITS didn’t test whether—never mind how much—calories count.

Want to lose weight? It doesn’t matter if you eat a healthy low-fat or a healthy low-carb diet, reported the DIETFITS study.1

“We told them no crap, no packaged, processed stuff,” says study co-author Christopher Gardner, professor of medicine at Stanford University.

“Everybody was supposed to eat vegetables and nobody was supposed to eat added sugars or refined grains.”

While people lost weight even though they weren’t told to count calories, that doesn’t mean that calories didn’t count. (To test that, Gardner would have had to tell a third group of dieters to count calories.) By cutting fat or carbs, “each group reported a 500-to-600-calorie reduction,” says Gardner. Same drop in calories, same drop in pounds—12 over a year.

Why not more? It’s tough to lose weight—and keep it off—for a year. What’s more, “that was an average,” says Gardner. While roughly three out of four dieters lost weight, “someone gained 20 pounds.”

What did the low-fat and low-carb diets look like? DIETFITS had 3 stages:

■ **Attack.** For the first 2 to 8 weeks, dieters were told to “kick start” weight loss by cutting either fat or carbs as much as possible—ideally to about 20 grams a day (shown here).

   - **Low-fat group:** got fat only from oil sprays and an occasional egg yolk. Dairy was non-fat, and chicken or seafood was very lean.
   - **Low-carb group:** got carbs only from certain vegetables (no peas, beans, winter squash, or potatoes) and nuts (no cashews or pistachios).

■ **Titrate Up.** For the next 8 to 52 weeks, the low-carb group was allowed to slowly add fruit, yogurt, milk, and beans. The low-fat group slowly added small amounts of oils, meats, nuts, eggs, cheese, and other dairy.

■ **Make It Lifetime.** For “the rest of your life,” both groups were told to add small measured servings of whatever they missed most from their “Titrate Up” stage (or small servings of whole grains for the low-carb group). The idea was to not add back any more than necessary to stick to the diet over the long term,” says Gardner.

The bottom line: A healthy low-fat or healthy low-carb diet can cut calories...and your weight.  

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The Healthy Cook

If you’ve got the tempeh...

BY KATE SHERWOOD

Tempeh is a cultured, fermented, refrigerated cake made from whole soybeans. It has a mild, nutty flavor and a pleasantly chewy texture.

Got a question or suggestion? Write to Kate at healthycook@cspinet.org.

Tempeh Taco Bowl

SERVES 2

1 Tbs. + 1 Tbs. olive oil
1 8 oz. package tempeh, crumbled
1 white onion, finely chopped
2 tsp. chili powder
1 cup chopped tomatoes
½ tsp. kosher salt
2 cups shredded romaine
1 avocado, chopped
a few tortilla chips
2 lime wedges

1. Heat 1 Tbs. of the oil in a large pan over medium heat until shimmering hot. Sauté the tempeh until lightly browned, 2-3 minutes. Remove from the pan.

2. Add the remaining 1 Tbs. of oil to the pan. Sauté the onion until softened, 3-5 minutes. Stir in the chili powder.

3. Add the tomatoes, salt, and ½ cup water. Simmer until the tomatoes break down, about 5 minutes. Stir in the tempeh.

4. Spoon the tempeh into bowls. Top with the romaine, avocado, chips, and a squeeze of lime.

Tempeh in Lettuce Cups with Peanut Sauce

SERVES 2

2 Tbs. peanut butter
1 Tbs. reduced-sodium soy sauce
1 tsp. balsamic vinegar
1 tsp. minced ginger
¼ tsp. ground coriander
¼ tsp. crushed red pepper
¼ tsp. kosher salt
2 Tbs. grapeseed oil
1 8 oz. package tempeh, cut into strips
10 lettuce leaves
1 cup sliced cucumber
1 cup shredded carrot

1. In a medium bowl, whisk together the peanut butter, soy sauce, vinegar, ginger, coriander, crushed red pepper, and salt with 2 Tbs. of hot water.

2. Heat the oil in a large pan over medium heat until shimmering hot. Sauté the tempeh until lightly browned on both sides, 2-3 minutes.

3. Tuck the tempeh into the lettuce leaves. Spoon the peanut sauce over the tempeh. Top with the cucumber and carrot. Serve with extra crushed red pepper.
THE INSIDE SCOOP

Frozen desserts slim down

BY LINDSAY MOYER & JENNIFER URBAN

Halos are now tops. The lower-calorie ice cream reportedly outsells all other pints. That’s why Breyers, Skinny Cow, Talenti, and even Ben & Jerry’s now offer calorie-conscious competitors.

The upside: a pint of some ice creams has the same calories as a half cup of Häagen-Dazs. The downside: many labels imply that you can eat your ice cream by the pint. (Sigh.) Here’s how to find a less-fattening, but still delish, frozen dessert.

Jolene Mafnas helped compile the information for this article.

**Sizing Up**

On most Nutrition Facts labels, a serving of ice cream is just half a cup. (That’s smaller than a tennis ball.) But on the new labels—the ones with calories in big print and added sugars—a serving is two-thirds of a cup, to reflect our expanding portion sizes.

If you—like many Americans—don’t stop at half (or two-thirds of) a cup, don’t forget to multiply the calories, added sugar, etc.

Tip: Many bowls hold at least two cups. Use a ramekin or teacup instead. Think Dixie cup, not waffle cone.

**What to Look For**

No matter how you scoop it, ice cream is dessert. That’s why we awarded Better (not Bitter) Bites. Our criteria:

- **Calories.** No more than 150 calories in half a cup (or 200 in two-thirds of a cup). Super-premium ice creams like Ben & Jerry’s pack 250 to 350 calories into half a cup, or up to 450 in two-thirds of a cup. May-day!

- **Saturated fat.** No more than 2½ grams per half cup.

- **Added sugars.** We set no limit because too few items bear the new Nutrition Facts label. (We estimate that roughly three-quarters of the sugar in most ice cream is added, not naturally occurring milk sugar.) But our calorie limit effectively puts a lid on added sugar.

- **Low-calorie sweeteners.** No unsafe acesulfame potassium, aspartame, or sucralose. Stevia leaf and monk fruit extract are okay. (Monk fruit extract hasn’t been well tested in animals, but the fruit has been eaten in China for centuries.) So are maltitol, sorbitol, and other sugar alcohols, though they can cause diarrhea or—for erythritol—nausea if you eat too much.

**Health Halos**

“Save the bowl. You’re going to want the whole pint,” urges Halo Top, which proudly displays its “calories per pint” front and center.

Gee, thanks. Just what we needed: a nudge to eat a 280- to 360-calorie pint of ice cream.

That said, Halo Top and its look-alikes—Breyers Delights and Enlightened—do shave roughly a quarter of the calories and half the sugar off a typical light ice cream like Dreyer’s or Edy’s Slow Churned. The three newbies average just 80-or-so calories and 6-or-so grams of sugar per half cup.

What’s more, their protein (5 to 7 grams) doubles light ice cream’s. And some flavors hit 15 to 20 percent of a day’s calcium. All are Better Bites.

How do they do it? Milk protein concentrate or isolate boosts the protein and calcium. And stevia extract, erythritol, and/or monk fruit extract cuts calories and replaces some sugar.

So do sweet-tasting processed fibers like isomaltoligosaccharides and soluble corn fiber.

What about taste? It depends on the flavor and the taster. Overall, Breyers Delights are a safer bet than Halo. Enlightened was our least favorite.

Our advice for Halo Top: start with classics Chocolate, Mint Chip, or Peanut Butter Cup. Be wary of off-the-wall flavors like Pancakes & Waffles, Chocolate Covered Banana, or Mochi Green Tea. All three missed the taste mark.

Gelato fan? Try Talenti Crafted with Less Sugar. Two of the three flavors miss our Better Bite sat fat limit by a gram. But just 120 calories per half cup—about half of Talenti’s regular gelato—they’re a steal.

Tip: Let your pint sit out for 5 to 10 minutes to soften. Lower-sugar, lower-fat ice creams freeze harder.

Photo: 1/2/2018 from stock.adobe.com; Jennifer Urban/CSPI (all others).

Photos: baibaz/stock.adobe.com (top), Jennifer Urban/CSPI (all others).
you’d get 11 to 13 grams of protein in, say, a 5.3 oz. low-fat Greek yogurt, caramel, chocolatey flavors like (coffee yogurt, brownie). Amen! Try So Delicious Dairy-free decadence with amazing flavor and over-the-top creaminess,” says Yasso Yum

“One giant leap for pintkind,” promises new Yasso Frozen Greek Yogurt. And it delivers.

Yasso’s taste eclipsed all other frozen yogurt Better Bites. Most are full of inventive mix-ins in flavors like Loco Coco Caramel (coconut yogurt, caramel, chocolate chips) and Coffee Brownie Break (coffee yogurt, brownie chunks, crushed cookies)…all for 100 to 150 calories, max.

Just don’t think you’re eating straight greek yogurt. Yasso has 5 to 7 grams of protein per half cup. That’s about a gram or two more than non-greek frozen yogurts. But you’d get 11 to 13 grams of protein in, say, a 5.3 oz. low-fat Chobani refrigerated greek (with the same calories).

No Dairy? No Problem

Dairy-free? Your timing is perfect. Even Ben & Jerry’s, Häagen-Dazs, and Breyers have something for you. But without dairy, don’t expect much calcium. And the competitors are not all created equal:

Cashew milk. “Our Cashewmilk frozen desserts deliver dairy-free decadence with amazing flavor and over-the-top creaminess,” says So Delicious. Amen! Try Creamy Chocolate, Creamy Cashew, Cappuccino, or Very Vanilla. All four Better Bites taste more like real ice cream than any other brand.

Almond milk. Thanks to coconut oil, So Delicious Almondmilk delivers 4 or 5 grams of saturated fat, while Ben & Jerry’s Non-Dairy hits 6 to 9 grams, plus around 250 calories (in a measly half cup). That’s nuts!

Frozen sugar water? Häagen-Dazs’ Non-Dairy line ditches “milks” altogether. The main ingredients: water, sugar, corn syrup, and (sometimes) coconut cream. They deliver about 250 to 300 calories and 5 to 7 teaspoons of added sugar per half cup. Sheesh.

Lighten Up

Don’t like the taste or texture of Halo Top and its cousins? If you’re willing to spend up to 100 to 150 calories per half cup (still a bargain), try one of our favorite light ice creams:

Ben & Jerry’s Moo-phoria. One spoonful and you’ll wonder why anyone would waste 300 calories on the company’s originals.

Moo-phoria has half the calories and a fraction of the sugar and saturated fat of most Ben & Jerry’s flavors. But it keeps all the “funky chunks and whirly swirls” in jam-packed Better Bites Chocolate Milk & Cookies and Coffee Brownie Break.

Arctic Zero Light Ice Cream. Don’t confuse Arctic Zero’s new creamy Light Ice Cream with its icy, low-cal Fit Frozen Desserts that have been around for years. Arctic Zero’s latest—seven Better Bites with just 70 to 90 calories per half cup—are the real deal.

Dreyer’s or Edy’s Slow Churned. Nearly all of the old standby’s three dozen delicious flavors are Better Bites. And about a quarter of them are “Simple Recipes,” with shorter ingredient lists and fewer additives (like food dyes and carrageenan).

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Sure Bet

We didn’t award Better Bites to sorbets or sherbets that list sugar before fruit or fruit juice in their ingredients list. You can do better.

“Because we add so little else to this sorbetto, every spoonful is just like taking a bite out of the most delicious mango, over and over again,” gushes Ciao Bella Mango Sorbetto.

And it comes darn close. The first ingredient: mango purée. (There’s also sugar, water, lemon juice, and locust bean gum.) The company snagged five Better Bites.

While you’re at it, try silky-smooth Talenti Sorbetto in Alphonso Mango or Roman Raspberry. M-m-m.

Soy milk. You can find some Better Bites—like So Delicious Chocolate Velvet or Creamy Vanilla—but they didn’t wow us.

Coconut milk. Luna & Larry’s Organic may be creamy, but they pack roughly 200 to 250 calories and 10 to 15 grams of saturated fat. (That puts them in Häagen-Dazs ice cream territory.) Halo Top cuts most of the sat fat, making 11 of its 14 dairy-frees Better Bites. Too bad our tasters found them a little chalky.

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Cream of the Crop

Better Bites (✓) have no more than 150 calories and 2.5 grams of saturated fat per half cup, and are free of aspartame, acesulfame potassium, and sucralose. They can contain added sugar (the calorie limit effectively caps the amount). We disqualified sorbets and sherbets if sugar came before fruit or fruit juice in their ingredients list. Products are ranked from least to most saturated fat, then calories, then total sugars, then most to least protein.

Ice Cream & Frozen Desserts (½ cup)

- Arctic Zero Fit Frozen Desserts—Creamy
- Arctic Zero Fit Frozen Desserts—Chunky
- Halo Top
- Breyers Delights
- Arctic Zero Light
- Enlightened
- Skinny Cow
- Breyers Peach
- Breyers No Sugar Added
- Dreyer’s or Edy’s Slow Churned No Sugar Added
- Dreyer’s or Edy’s Slow Churned
- Breyers Extra Creamy Vanilla
- Breyers Lactose Free
- Turkey Hill Light Recipe
- Breyers—Butterscotch Blondie, Cherry Vanilla, or Vanilla Fudge Twirl
- Dreyer’s or Edy’s Slow Churned Triple-Filled—except Rich Caramel Cores
- Breyers—Butter Almond or Salted Caramel
- Breyers Extra Creamy Chocolate
- Ben & Jerry’s Moo-phoria Chocolate Milk & Cookies
- Breyers—Butter Pecan, Cinnamon Swirl, or Cookies & Cream
- Ben & Jerry’s Moo-phoria Caramel Cookie Fix
- Ben & Jerry’s Moo-phoria P.B. Dough
- Breyers Natural Strawberry
- Dreyer’s or Edy’s Slow Churned Triple-Filled Rich Caramel Cores
- Breyers Natural Vanilla
- Breyers Chocolate
- Dreyer’s or Edy’s
- Breyers Chocolate Peanut Butter
- Breyers Mint Chocolate Chip
- Breyers Chocolate Truffle
- Ben & Jerry’s
- Häagen-Dazs Decadent Collection
- Häagen-Dazs
- Gelato (½ cup)
  - Talenti Less Sugar Vanilla Cinnamon
  - Talenti Less Sugar Chocolate Fudge Swirl
  - Talenti Less Sugar Mint Cookie Crunch
  - Talenti
  - Ciao Bella
  - So Delicious Chocolate Velvet
  - So Delicious Almondmilk
  - So Delicious Coconutmilk
  - So Delicious Soymilk Creamy Vanilla
  - So Delicious Soymilk Chocolate Velvet
  - So Delicious Cashewmilk—Cappuccino
  - Halo Top—except Candy Bar, Chocolate Chip Cookie Dough, or Toasted Coconut
  - Halo Top
  - So Delicious Cashewmilk Snickerdoodle
  - So Delicious Cashewmilk No Sugar Added
  - Halo Top Chocolate Chip Cookie Dough
  - Halo Top Toasted Coconut
  - So Delicious Almondmilk
  - Breyers Vanilla Peanut Butter
  - Breyers Oreo Cookies & Cream
  - NadaMoo!
  - Häagen-Dazs
  - Ben & Jerry’s
  - Luna & Larry’s Organic

Frozen Yogurt (½ cup)

- Turkey Hill
- Lifeway Frozen Kefir
- Stonyfield Organic
- Yasso
- Dreyer’s or Edy’s Caramel Praline Perfection
- Dreyer’s or Edy’s Cake & Cookie Fantasy
- Ben & Jerry’s FroYo
- Outshine Yogurt & Granola
- Dreyer’s or Edy’s Salted Caramel Pretzel
- Dreyer’s or Edy’s Peanut Butter Overload

Sorbet & Sherbet (½ cup)

- Outshine Non-Dairy—Berry Blend, Strawberry Banana, or Sunrise Blend
- Ciao Bella Raspberry
- Ciao Bella Blackberry Cabernet
- Ciao Bella Peach Sangria
- Ciao Bella Blood Orange
- Talenti Roman Raspberry
- Ciao Bella Mango
- Talenti Alphonso Mango
- Dreyer’s or Edy’s Sherbet
- Talenti Chocolate
- Ciao Bella Chocolate
- Talenti Peanut Butter Fudge
- Outshine Non-Dairy Tropical Blend
- Ciao Bella Coconut
- Talenti Cold Brew Coffee

Non-Dairy (½ cup)

- So Delicious Soymilk Creamy Vanilla
- So Delicious Soymilk Chocolate Velvet
- So Delicious Cashewmilk—Creamy Cashew, Creamy Chocolate, or Very Vanilla
- Halo Top—except Candy Bar, Chocolate Chip Cookie Dough, or Toasted Coconut
- So Delicious Cashewmilk Snickerdoodle
- Halo Top Candy Bar
- Halo Top Chocolate Chip Cookie Dough
- Halo Top Toasted Coconut
- So Delicious Almondmilk
- Breyers Vanilla Peanut Butter
- Breyers Oreo Cookies & Cream
- NadaMoo!
- Häagen-Dazs
- Ben & Jerry’s
- Luna & Larry’s Organic

Better Bite: 1 Average of the entire line or of the varieties listed. 2 Contains aspartame, acesulfame potassium, or sucralose.


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Call it the yogurt dilemma: For some people, plain is too tart, and blended or fruit on the bottom is too sweet.

What to do? “Consumers who are sugar conscious now tend to eat plain yogurt and add their own toppings,” Chobani’s chief marketing officer told Food Navigator in November.

Or they add some plain yogurt to a tub of fruit yogurt.

What they’re looking for, noted the yogurt exec, is “a low sugar, high-protein option with flavor.”

Enter Chobani A Hint of. It combines 2% milk, just enough sugar to add (spoiler alert) a hint of sweetness, and some fruit purée. The result: a delicious lower-sugar greek yogurt with no questionable sweeteners or stevia (which leaves an aftertaste for some people).

Whether you get the Madagascar Vanilla & Cinnamon, the Gili Cherry, or the Alphonso Mango (our favorites), or the Monterey Strawberry or Wild Blueberry, you’re talking 110 to 120 calories, 12 grams of protein, and 10 percent of a day’s calcium in a 5.3 oz. tub. Not too shabby.

And the teaspoon (we estimate) of added sugar is about half what you’d get in a Chobani Fruit on the Bottom or Blended tub.

Tastewise, it’s as advertised: a little sweet, a little tart, and perfectly creamy.

If you live on the West or East Coast, you can pick some up today. Elsewhere, you’ll have to wait until July.

So go ahead. Take a Hint.

chobani.com—(877) 847-6181

You’ve never been to a cookie dough parlor? How 2017!

“‘There’s an emotional connection that you can’t manufacture. It’s inherent in the product and unique to cookie dough,’” the owner of DÔ, New York’s hottest cookie dough emporium, told the New York Times last June.

Brilliant. Who doesn’t get the warm and fuzzies thinking about sneaking a spoonful of cookie dough out of Mom’s batter? Why not a shop that scoops out the stuff to ladies and gentlemen, boys and girls, and children of all ages?


It’s eggless, and its flour has been heat-treated, so you needn’t worry about picking up any nasty bugs, says the company. In fact, you needn’t worry about picking up much of anything other than white flour, butter, sugar, and more sugar.

Because cookie dough is so dense, the Café manages to squeeze some 370 calories, 7 grams of saturated fat (a third of a day’s worth), and 9½ teaspoons of added sugar into each tiny tub (they’re just shy of a half cup).

It’s like polishing off two McDonald’s vanilla ice cream cones.

Mom would be so proud.

thecookiedoughcafe.com—(309) 539-4585

Honeydew melons are at their peak from May to September; cantaloupes from June to August. Picked an underripe melon? Slice it for a salad or dice it for a gazpacho or salsa (see Dish of the Month).