

Nutrition Action

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HEALTH LETTER®
CENTER FOR SCIENCE IN THE PUBLIC INTEREST

Sensational Studies?

WOW

BY BONNIE LIEBMAN

Prunes can prevent colon cancer. Junk food and soda don't cause obesity. Cheese is addictive. Sugar is toxic.

Headlines about diet and health are competing with "Child stars: Where are they now?" for your attention. And it's not just the media. News releases from food companies and universities are also to blame.

Here are some of the latest.

Continued on page 3.



MEMO FROM MFJ

Carbonating the World



Whenever I travel overseas, I am amazed by—and aghast at—the ubiquity of the Coca-Cola logo. It's on billboards, restaurant awnings, soda coolers, vending machines, and, of course, in grocery stores.

That's not a surprise, considering that Coke has been marketing its drinks in foreign lands for almost a century. But because per-capita consumption of Coca-Cola has plummeted by more than 33 percent since 1998 in the United States and is sliding in Europe, the company is doubling down on selling its sugar water in highly populated low- and middle-income countries.

Coca-Cola is investing about \$1 billion a year in each of four populous countries: Brazil, China, India, and Mexico...and many millions more in Africa, Southeast Asia, and the Middle East. PepsiCo is investing heavily in many of the same places.

All that money is buying local soda and other beverage companies, building bottling plants, hiring employees, and mounting ad campaigns.

In recent years, the evidence has mounted that sugar drinks cause weight gain, diabetes, and heart disease. One study from Tufts University estimated that sugar drinks have been causing about 184,000 deaths per year (including 25,000 in the United States). The American Heart Association, World Health Organization, and others have made reducing consumption of sugar drinks a top priority.

Yet in 2012, Coke executive Katie Bayne said, "There is no scientific evidence that connects sugary beverages to obesity." And in 2014, Ahmet Bozer, executive vice president and president of Coca-Cola International, exclaimed that "half the world's population has not had a Coke in the last 30 days. There's

600 million teenagers who have not had a Coke in the last week." His point: there's a tremendous growth opportunity in countries where sugar drinks are not yet consumed widely.

Echoing Bozer was Ahmed Nazmy, head of marketing for Coca-Cola's Egypt franchise, who said, "We have young generations who can consume any kind of food and beverage, [they're] not caring about their health yet."

So, sure, take advantage of people around

the world by marshaling teams of sophisticated ad creators, digital marketers, and psychologists to design the most seductive marketing strategy possible to persuade teens and others to drink beverages that increase their risks of deadly chronic diseases.

I find it immoral that a company would use its billion-dollar war chest to carpet-bomb developing countries with propaganda that its executives must know will increase health problems. Those countries don't have robust health-care systems that could cope with new epidemics

of costly, chronic diseases. Higher rates of soda-related diseases could well break their banks.

It is heartening to see Chile and Mexico levying special soda taxes, Chile and Ecuador requiring labeling to highlight the sugar content of soda and other products, and Brazil and other countries limiting advertising.

I hope you'll read "Carbonating the World," a new report from the Center for Science in the Public Interest (publisher of *Nutrition Action*). It illustrates the breathtaking scope of companies' marketing campaigns. You can find it at cspinet.org/carbonatingreport.pdf.

Michael F. Jacobson, Ph.D., President
Center for Science in the Public Interest



Starting them young in Ghana.

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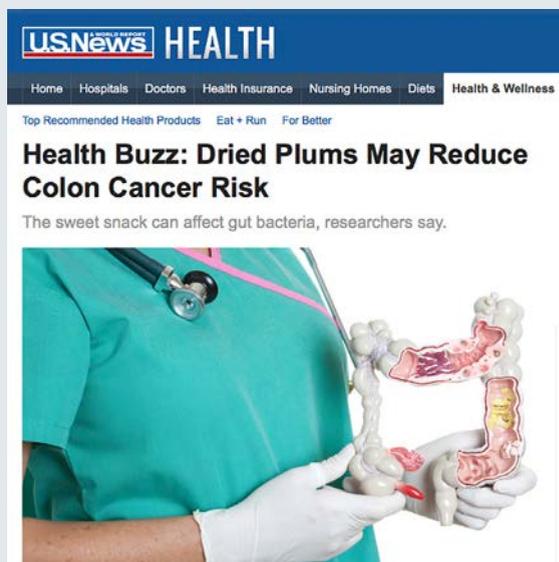
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Sensational Studies?

Omgosh! Rarely a day goes by without shocking news from the latest study. Many reporters churn out a story from a news release...or from another news report. Read the study? Why bother? Here are 10 studies that got blown out of proportion by the media.



“Researchers have announced that people who eat dried plums as part of a regular diet can reduce their risk for developing colon cancer,” reported *U.S. News* in September.

Time to dash out for a bag of prunes (now called dried plums by an image-sensitive industry)?

That may be a tad premature, considering that the researchers never did a study in people and haven’t even published their results in rats.

The source for news about the study: a press release from Texas A&M, where the lead author, Nancy Turner, is a professor of nutrition and food science.

“Through our research, we were able to show that dried plums promote retention of beneficial bacteria throughout the colon, and by doing so they may reduce the risk of colon cancer,” said Turner, according to the press release.

That must have cheered the folks at the California Dried Plum Board, which funded the study.

“The researchers plan to conduct additional research in humans,” reported the last line of the news release. Maybe the headline writer never read that far.



“The study, published in the U.S. National Library of Medicine, examines why certain foods are more addictive than others,” reported the *Los Angeles Times* last October 22. (Memo to the *Times*: Libraries don’t publish studies.)

Researchers identified addictive foods from a survey of about 500 people, the article explained. “Pizza, unsurprisingly, came out on top of the most addictive food list.”

And cheese is the culprit because it contains a milk protein called casein, continued the *Times*. “During digestion, casein releases opiates called casomorphins.”

Memo to readers: The study never mentions casomorphins.¹ It suggested that pizza might be addictive because it’s highly processed and high in fat and refined carbs. Whatever.

“So there you have it,” the article ended. “Your cheese addiction has been validated by science.”

Odds are, someone (an editor,

one hopes) got wind of a problem. About an hour after the story appeared, it was updated.

“This post has been updated to clarify the referenced study alone does not prove cheese is addictive. The study provides proof that certain foods are linked to addictive-like eating.” Proof? That’s a little strong.

Fortunately, it took only a few days before the *Huffington Post* ran a response called “Eating Cheese Isn’t Even A Little Bit Like Smoking Crack Cocaine.” (Not that *LA Times* readers necessarily saw it.)

Casomorphins are broken down before they’re absorbed into the bloodstream and don’t cross the blood-brain barrier, according to the European Food Safety Authority, noted the *HuffPo* piece. And compared to real opioids, casomorphins are not very potent anyway.

Here’s the kicker: On October 26 the *Washington Post* ran a short version of the *LA Times* story.

“According to a study from the University of Michigan, cheese crack is a real thing,” reported the *Post*. “And so is your addiction.”

The *Post* didn’t even report the *Times* update. Sigh.

¹ *PLoS One* 2015. doi:10.1371/journal.pone.0117959.

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HEALTH JAN 1 2016, 12:03 PM ET

Here's How Sugar Might Fuel the Growth of Cancer

by MAGGIE FOX

SHARE

Researchers may be able to explain how sugar might fuel the growth of cancer. They say it boils down to one type of sugar in particular: fructose.

Tests in mice show a possible mechanism for how it happens. The findings, published in the journal *Cancer Research*, support studies that suggest people who consume more sugar have a higher risk of cancer — especially breast cancer.

"A lot of patients are told it doesn't matter what you eat after you are diagnosed with cancer. This preliminary animal research suggests that it does matter," said Lorenzo Cohen of the University of Texas M.D. Anderson Cancer Center, who worked on the study.



Sugar © ultimatebild / Getty Images

"Sugar in Western diets increases risk for breast cancer tumors and metastasis," announced the University of Texas MD Anderson Cancer Center news release about a new study in late December.¹

It didn't take long before NBC News and others picked up the story.

"Tests in mice show a possible mechanism for how it happens," explained NBC. The findings "support studies that suggest people who consume more sugar have a higher risk of cancer—especially breast cancer."

Only one problem: Studies haven't found a higher risk of breast cancer in people who consume more sugar.

"There isn't much evidence that sugar increases the risk of breast cancer," says Walter Willett, chair of the nutrition department at the Harvard T.H. Chan School of Public Health.

The study's authors also claim that sugar not only increases the risk of cancer, but its spread.

"These findings help explain what other researchers have seen looking at cancer patients in general: Those who eat more sugary foods are more likely to have advanced cancer," explained NBC.

Really? "We have very little data on whether some foods or diets may make cancer more likely to spread," says Willett.

Note: The study was funded, in part, by Leighton Steward, co-author of the *Sugar Busters* books. (Steward is a former chairman of the U.S. Oil and Gas Association, currently serves as an honorary director of the American Petroleum Institute, and is chairman of the non-profit corporations Plants Need CO₂ and CO₂ Is Green.)

"A lot of patients are told it doesn't matter what you eat after you are diagnosed with cancer," MD Anderson researcher Lorenzo Cohen told NBC News. "This preliminary animal research suggests that it does matter."

Hmm. Perhaps "preliminary animal research" belonged in the news release's headline?

¹ *Cancer Res.* 76: 24, 2016.

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TUESDAY FEB. 2, 2016 SPORTS BREAKING TRENDING BUSINESS SUBURBS ENTERTAINMENT ALL SECTIONS 36°

Junk food, soda aren't to blame for obesity, researchers say



"For 95 percent of the country, there is no relationship between how much fast food and junk food they're eating and their weight," researcher David Just, of the Cornell Center for Behavioral Economics, told the *Chicago Tribune* in November.

The news must have tickled the folks who sell soda and fast food. (Just's co-author is a member of McDonald's Global Advisory Council.)

But the study's conclusion is based on a flawed and simplistic analysis of the data.¹

"The study didn't account for potential confounders like age, smoking, physical activity, or

consumption of alcohol or other foods," says Vasanti Malik, research scientist at the Harvard T.H. Chan School of Public Health.

"And the authors looked only at the frequency, but not the amount, of fast food, sweets, or soda that people consumed. That's a huge limitation."

As for soda, the results are contradicted by scores of studies, including trials that have people consume drinks with or without sugars.

"We now have robust clinical trials showing that sugar-sweetened beverages cause weight gain," notes Malik.

¹ *Obes. Sci. Pract.* 2015. doi:10.1002/osp4.14.

CBS NEWS Video US World Politics Entertainment Health MoneyW

By ASHLEY WELCH CBS NEWS September 24, 2015, 1:49 PM

Fidgeting might be good for your health



"Fidgeting in your chair may counteract the adverse health effects of sitting for long periods of time," proclaimed CBS News in September.

The findings came from the UK Women's Cohort Study.¹

"The researchers found that women who sat for seven or more hours per day were 30 percent more likely to have died from any cause than women who sat for five hours

or less—but the more sedentary women appeared to have an increased risk only if they also reported they rarely fidgeted."

Wait, what? The researchers simply asked women how much they fidgeted? And as long as you fidget, sitting all day is harmless? And non-fidgeters can simply start fidgeting on demand?

"The findings are only suggestive at this point," noted CBS. Finally!

It's best to avoid sitting still for long periods of time, said the study's author, but "even fidgeting may offer enough of a break to make a difference."

Forget that walk. Think I'll just sit here and drum my fingers.

¹ *Am. J. Prev. Med.* 50: 154, 2016.

Want to slash your risk of breast cancer? It's really easy, according to the *LA Times*.

At least *USA Today* didn't over-promise. "Preliminary results suggest Mediterranean diet reduces breast cancer risk," ran its headline in September.

The news came from the five-year PREDIMED study in Spain, where (surprise!) all the participants ate a Mediterranean diet.

Women who averaged about 480 calories a day from extra-virgin olive oil (EVOO) that was supplied by the study (the Mediterranean + EVOO group) had a 62 percent lower risk of breast cancer than women who were assigned to the so-called "low-fat" group.¹ (Despite the advice to eat somewhat less fat, those women got about 320 calo-



ries a day from their own olive oil—only about a tablespoon less than the group that was given olive oil.)

Why are the results preliminary? Small numbers. Only 17 women in the "low-fat" group and eight women in the Mediterranean + EVOO group were diagnosed with breast cancer. "So the whopping drop in breast cancer risk came from just a handful of breast cancers," noted *USA Today*.

What's more, the study—which was designed to look at heart disease—had no data on whether the women had a family history of breast cancer or how often they had gone for mammograms. With so few cancers, those or other differences could have mattered.

Gee, wouldn't it be worth finding that out before women start pouring olive oil on all their food?

¹ *JAMA Intern. Med.* 175: 1752, 2015.



"Research points to mental health risks associated with meatless diet," cautioned CBS Philly in December.

CNBC issued a similar warning: "Eat more meat? Plant-based diets may hike mental health risks: Report."

OMG! Was the report from the Centers for Disease Control? The National Institutes of Health? The *Journal of the American Medical Association*?

Nope. The breaking news came from an article in *Women's Health* magazine.

"Panic attacks. OCD. Depression. *WH* investigates the puzzling blow of going meatless," promised the article.

The "investigation" cited two studies. In one, Australian vegetarians "were 18 percent more likely to report depression and 28 percent more likely to suffer panic attacks and anxiety," reported *Women's Health*.

"A separate German study backs this

up, finding that vegetarians were 15 percent more prone to depressive conditions and twice as likely to suffer anxiety disorders," noted the magazine.

(The German study was small. It compared only 54 vegetarians and 190 "predominantly vegetarian" people to non-vegetarians.)

Somehow, *Women's Health* missed a key point of the study. "The adoption of the vegetarian diet tends to follow the onset of mental disorders," wrote the authors. "We found no evidence for a causal role of vegetarian diet in the etiology of mental disorders."

Gosh. How did the eagle-eyed editors at *Women's Health* overlook those details, which were buried in, oops, the abstract at the very beginning of the study?

At least the German study was...a study. We couldn't find the Australian study in a medical library. That's because it was "based on 50,000 surveys a year conducted by Roy Morgan Research," a polling firm. We found it on Australia's SBS.com (Special Broadcasting Service) under the headline "Vegetarians healthy but unhappy: Study."

You can buy Roy Morgan's survey for a mere \$1,390 Australian dollars (about \$1,000).

On second thought, don't bother. John Lang, who created a "wellness index" used by the Roy Morgan survey, told SBS.com that "the diet isn't the cause but rather the symptom" of the disorders.



"Prostate cancer survivors who eat a typical American diet loaded with red meat, cheese and white bread are far more likely to see their cancer come back and kill them," explained NBCnews.com last June.

"They were more than 2.5 times as likely to die of their prostate cancer than patients eating the healthiest diet."

Yikes.

The problem: There were only 21 deaths among men who reported eating a typical American diet and only nine deaths among those eating the "healthiest" diet.¹

Those small numbers, wrote the study's authors, suggest "caution in the interpretation of the results."

Another cause for caution: "the scarcity of the literature" on whether diet can make prostate cancer more lethal.

Apparently, all that caution could kill an exciting news story.

¹ *Cancer Prev. Res.* 8: 545, 2015.



Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows

Thanks to PRNewswire, the University of Maryland press release quickly showed up on local TV news websites in Providence, San Diego, and elsewhere in December.

“There is nothing more important than protecting our student-athletes,” the release quoted one school superintendent as saying. The superintendent later announced plans to buy \$25,000 worth of the “new high-protein chocolate milk,” called Fifth Quarter Fresh.

Oh, dear. It didn’t take long before HealthNewsReview.org, the *Baltimore Sun*, and *New York* magazine started asking questions. The upshot:

For starters, it appears that the research-

ers compared students at schools that were given Fifth Quarter Fresh to students at schools that were given, well, nothing.

So it’s not clear if Fifth Quarter Fresh, rather than *any* milk, juice, or water—or just the fact that students knew they were in a study—made a difference.

We say “appears,” because the press release went out before the study had been published...or even submitted to a journal.

Turns out that the study was funded, in part, by Fifth Quarter Fresh. *Awkward.*

In January, the university launched a review of the scandal. No chocolate milk is likely to curb *that* headache.

The Bottom Line

How can you tell which studies are worth your time and which are there to make headlines? Usually, you can’t. But here are a few red flags to watch out for:

- **Industry funding.** It doesn’t mean the results are flawed, but they require stricter scrutiny because they are more likely to (surprise!) favor the funders.

- **Big news breakthroughs.** Editors often ballyhoo shocking (but preliminary) results because they boost readership. And a juicy headline can move a story from page 32 to page 1. Caveats show up in the last paragraph or two... if at all.

- **Animal studies.** The results might not apply to humans.

- **Expert opinions.** Some reporters get outside opinions from “experts” who may not be familiar with other evidence on the topic.



The word “toxic” comes not from the study but from its lead author, Robert Lustig, professor of pediatrics at the University of California, San Francisco, and a leading advocate for cutting sugar intake.

“In a paper published Tuesday, he and his colleagues believe

they have come up with the definitive evidence that sugar, as Lustig says, “is toxic,” explained *Time* on October 27, 2015.

Lustig and his colleagues asked 43 obese children aged 8 to 18 what they typically ate, then sent them home with a similar diet, except that they replaced most of the sugary foods with starchy foods.¹ (There was no control group.)

“We took sweetened yogurt out, and put baked potato chips in,” Lustig told *Time*. “We took pastries out and put bagels in. So there was no change in [the children’s] weight and no change in calories.”

After nine days, blood sugar, blood pressure, LDL (“bad”) cholesterol, and triglycerides had dropped. But so did weight (despite Lustig’s comment), which could account for some of the improvements. To its credit, *Time* reported that, though not until the 11th paragraph.

“Weight loss [causes] good metabolic changes, and although this study tries to attribute its effects to low fructose, in fact it is impossible to do that because of the study design,” Susan Roberts, associate professor of nutrition at Tufts University, told *Time*.

Other studies show that sugar or sugary drinks boost the risk of obesity, heart disease, and type 2 diabetes (see Nov. 2015, p. 6). But “definitely toxic”? How about: definitely an eye-grabbing headline. 🍌

¹ *Obesity* 24: 453, 2016.



APRIL FOOLS!

BY BONNIE LIEBMAN

Food labels fool people year round. Here are a few of our favorites to celebrate April 1st.



"Whole-grain pleasure," promises the **Glutino Gluten Free Multigrain Bread** package. The main ingredients: water, modified tapioca starch, corn starch, and potato starch. There's more oil and egg whites than brown rice flour, which must be the source of that "whole-grain pleasure."



"40% less fat than the leading regular fried potato chips," says the **Ritz Toasted Chips** bag. So what? An ounce of Ritz has 140 calories and 290 mg of sodium. An ounce of potato chips has 150 calories and 150 mg of sodium. Are you better off with Ritz's white flour than potato chips' oil? Nope, not even if it's "wheat grown in the North American heartland."

Why do most **Coffee-mate** and **International Delight** creamers have fewer calories (35) than ordinary half & half (40)? Liquid creamers use a 1-tablespoon serving. Half & half



uses 2 tablespoons. That much creamer has 70 calories...and nearly 2½ teaspoons of added sugar. Your best bet: fat-free half & half, with only 20 calories (and no added sugar) in 2 tablespoons.

Warning: powdered creamers use a level 1-teaspoon serving. Who are they kidding?



Ocean Spray took its dried cranberries and "drenched them in creamy, tangy Greek Yogurt," says the bag of **Greek Yogurt Craisins**. Drenched them in sugar, palm kernel oil, and greek yogurt powder, that is. (Is the powder creamy?) Each serving—just 2 tablespoons—packs 140 calories, a quarter of a day's saturated fat...and, despite all that "Greek yogurt" drenching, less than a gram of protein.



"Hazelnut spread with skim milk & cocoa," says the **Nutella** jar. **Hazelnut?** Nutella has more sugar and palm oil than anything else. In contrast, Justin's Chocolate Hazelnut Butter Blend has more hazelnuts and almonds than anything else. And Justin adds

only 2 teaspoons of sugar per serving. Nutella adds about 5 teaspoons, roughly as much as many cake frostings.



Wanna fool your friends? Ask them how many calories are in a **Sabra Hummus with Pretzels** snack. Sabra puts the barely legible print for the hummus along the rim of the container, with the word "Calories" at the end of one line and "250" at the start of another.

Odds are, most people will think the **pretzels'** 120 calories (which are more visible) apply to the entire pack. Gotcha! 🍌

Not Sweet at All



Sucralose? Aspartame?
Skip both.

The artificial sweetener sucralose (Splenda) caused cancer in a large mouse study, and might pose a risk to humans.

Italian scientists fed mice one of four high doses of sucralose (or none) throughout their lifetimes, starting before birth. The researchers then looked for tumors in more than a dozen organs.

Male (but not female) mice that were fed more sucralose were more likely to have leukemias than males that were fed less (or no) sucralose.

What to do: Don't panic if you've been consuming sucralose. More studies are needed to see if other labs confirm the results.

But don't assume that sucralose is safe if you consume less than the high doses used in the study (what a human would get in 10 to 340 cans a day of sucralose-sweetened Diet Pepsi). Animal studies use high doses to compensate for the relatively small numbers of mice being tested. For example, if high doses weren't used, a chemical that caused cancer in 1 out of 1,000 people might not show up as carcinogenic in a study of 100 mice. When large doses cause cancer, smaller doses typically do, too, though less frequently.

Want a sugar substitute? Switch to stevia or erythritol—the only commonly used low-calorie sweeteners that we consider safe (see chemicalcuisine.org). Thirsty? Try unsweetened water, seltzer, coffee, or tea.

Int. J. Occup. Environ. Health 2016. doi:10.1080/10773525.2015.1106075.

Protein Builds Muscle...Sometimes

Can extra protein build muscle? Maybe only if you're a 20-something guy in weight-loss boot camp.

In one study, Australian researchers assigned roughly 200 women aged 70 to 80 to consume a drink with either 2 grams or 30 grams of protein a day. After two years, the higher-protein group did no better on tests of muscle strength or size.

In a second study, Canadian scientists randomly assigned 40 overweight men in their early 20s (average weight: about 215 pounds) to either a higher- or lower-protein diet. Higher-protein meant about 1 gram of protein (largely from whey) for every pound they weighed. Lower-protein was half that amount.

The catch: all the men were fed only 40 percent of their calorie needs (that's

a huge cut). What's more, they had to report to a lab six days a week for a killer regimen including all-out sprints and high-intensity circuit strength training.

After a month, the higher-protein group lost 10 pounds of fat and gained 2 pounds of muscle, while the lower-protein group lost 8 pounds of fat and gained no muscle. But the higher-protein group did no better on push-ups, sit-ups, leg presses, or any other performance test.

What to do: If you're dieting, cut fat and carbs, not protein. But don't expect extra protein to turn fat into muscle. Strength training is the tried-and-true path to building muscle, whether you're dieting or not (see Nov. 2014, p.1).

Am. J. Clin. Nutr. 2016. doi:10.3945/ajcn.115.119339 and *J. Nutr.* 145: 2520, 2015.

Diabetes & Vitamin D

People with low vitamin D levels in their blood have an increased risk of type 2 diabetes. But taking vitamin D may not cut that risk.

Norwegian researchers gave roughly 500 people with prediabetes either a high dose of vitamin D (20,000 IU a week) or a placebo.

After five years, about 40 percent of the participants in both groups were diagnosed with diabetes. However, most of them did not have low vitamin D levels at the outset. So stay tuned for the results of a larger, ongoing trial called D2d.

What to do: Don't count on vitamin D to lower your risk of diabetes. To protect your bones, shoot for the RDA for vitamin D (600 IU a day up to age 70 and 800 IU if you're older) from a supplement or fortified foods.

J. Clin. Endocrinol. Metab. 2016. doi:10.1210/jc.2015-4013.

What's Normal?

What's a normal portion of spaghetti and sauce? It's all relative.

British researchers showed 150 people pictures of either a small or large portion of spaghetti bolognese (along with other pictures, mostly of non-food objects). The participants were then asked what a "normal" serving would look like.

To people who initially saw a large plate of spaghetti, a normal portion meant more spaghetti than it did to those who initially saw a smaller portion.

What to do: Don't let swollen servings of restaurant foods shape your image of a normal portion. 🍝



Appetite 98: 28, 2016.

A Dip in the Gene Pool

What you can—and can't—learn about your DNA

BY DAVID SCHARDT

"Explore what your DNA says about your health, traits and ancestry," read the ads for 23andMe.

"Do you carry a disease? Test yourself and your partner for genetic diseases," says horizonscreen.com.

"Don't waste a day on the wrong diet! The Weight Management Genetic Test may help you lose more weight," promises inherenthealth.com.

Why all the offers to test your DNA?

"Gene tests appeal to people who want to live longer, healthier lives," explains Jehannine Austin, president of the National Society of Genetic Counselors and professor of psychiatry and medical genetics at the University of British Columbia in Canada.

Gene tests also appeal to people who want to know where they come from. That's the main reason I plunked down \$99 and ordered a test kit from 23andMe in December 2010.

Eight weeks after I mailed back the tube containing my saliva sample, I got the results. My heritage is 99 percent European, mostly from Scandinavia and Germany. No surprise there. But a small fraction of my DNA comes from Neanderthals. That turns out to be true of most people in the world except Africans.

(Neanderthals survived for hundreds of thousands of years in a dangerous and sometimes brutal environment. So it's no insult to say that we're related to them.

"It's amazing that we can spit in a tube and drop it in the mailbox and in a few weeks get a huge amount of genetic information about ourselves for very little money," says geneticist Lawrence Brody of the National Institutes of Health.

What to do with that information is another matter. "Nothing about the genetics of the common human conditions is simple," points out Jehannine Austin, president of the National Society of Genetic Counselors.

Here's what you need to know if you're interested in peeking at the secrets in your DNA.

At least that's the story I'm sticking with.)

The report also said that I'm likely to have blue eyes (I do) and slightly curlier hair than average (I did when I was younger), that I have lower than average non-verbal IQ (I don't know about that), I have decreased odds of male pattern

isn't), what kind of earwax you have (mine is wet), or whether you can smell a distinctive odor in your urine after you eat asparagus (I can).

But what about your risk of cancer, dementia, diabetes, or other diseases?

"We like to imagine that if we knew

that we had a genetic vulnerability for something like Alzheimer's or breast cancer, we would do things differently to reduce our risks," says Austin.

But it's not that simple.

DNA & DISEASE

Direct-to-consumer gene-testing companies like 23andMe are no longer allowed to tell people about their own risk of disease, like the results they sent me in 2010 did.

But even if people had those results,

they wouldn't be easy to interpret.

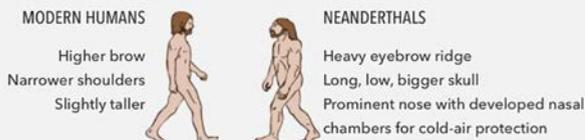
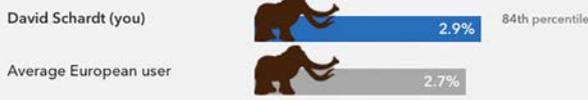
Gene-testing results fall into three categories:

■ **Genes that always cause disease.**
"When many people think of genetics,

CAVE NOT INCLUDED

Got Neanderthal DNA?

An estimated 2.9% of your DNA is from Neanderthals.



I've got a bit more Neanderthal in me than the average person of European descent, according to my 23andMe report. (The name refers to our 23 pairs of chromosomes.)

baldness (true), I'm a fast metabolizer of caffeine (probably true), and that I'm probably shorter than average (I'm 6'3").

That's all good fodder for the water cooler. So is whether your skin is likely to flush when you drink alcohol (mine

they think of the single genes that cause disease every time they're present," says Lawrence Brody, director of the Division of Genomics and Society at NIH's National Human Genome Research Institute.

For example, someone who inherits two of the 1,000 known harmful mutations in the CFTR gene (one from each parent) will, sooner or later, develop cystic fibrosis. The mutations prevent the normal flow of water in and out of cells, which produces a thick and sticky mucus that obstructs airways and glands.

Among the other "single-gene disorders": Tay-Sachs, Huntington's disease, and sickle cell disease.

"Even though collectively a lot of people are affected by these kinds of disorders, these genes are relatively uncommon," notes Brody.

According to 23andMe, I had none.

■ Genes that greatly boost your risk. While a single gene seldom seals your fate, some can greatly boost your risk of cancer, dementia, and more.

"They don't mean that you will develop these diseases," notes the National Society of Genetic Counselors' Austin, "just that you have an increased risk."

Mutations in the BRCA genes are among the best known. About half of women who inherit a harmful BRCA mutation will get breast cancer (see "BRCA & Breast Cancer").

Another standout: the APOE4 gene variant greatly increases the chances of late-onset Alzheimer's.¹

Everyone carries two copies of the APOE gene—one from each parent. The gene makes a protein that transports cholesterol and fat through the blood.

Every APOE comes in one of three versions: E2 lowers the risk of late-onset Alzheimer's, E3 is neutral, and E4 increases the risk.

Roughly 20 percent of Americans



"I carry a 'faulty' gene, BRCA1, which sharply increases my risk of developing breast cancer and ovarian cancer," Angelina Jolie wrote in an op-ed in the *New York Times* in

2013, announcing that she had undergone a preventive double mastectomy at the age of 37. The actress had lost her mother, grandmother, and aunt to breast or ovarian cancer.

Two years later, surgeons removed Jolie's ovaries and fallopian tubes after blood tests hinted at an early cancer in her body.

"It is not possible to remove all risk, and the fact is I remain prone to cancer," she wrote in a 2015 *Times* op-ed. But "I know my children will never have to say, 'Mom died of ovarian cancer.'"

We all carry the BRCA1 and BRCA2 genes, which signal the body to make proteins that repair damaged DNA. But mutations in BRCA genes can disable those repair proteins.

By the age of 70, 45 to 65 percent of women who inherit a harmful BRCA1 or BRCA2 mutation will have breast cancer and 17 to 39 percent will have ovarian cancer.¹

Together, BRCA1 and BRCA2 account for 5 to 10 percent of breast cancers and 15 percent of ovarian cancers. The harmful mutations occur in one in 300 to 500 people overall and one in 40 people of Ashkenazi Jewish descent.

Only women with a family history of breast or ovarian cancer (including breast cancer in men) should get tested for BRCA mutations, says the U.S. Preventive Services Task Force.² But some researchers disagree.

"The Task Force made its recommendation when testing was expensive and the results harder to interpret," says geneticist Harry Ostrer of the Albert Einstein College of Medicine in New York.

"Testing is a lot cheaper now, and we've gotten better at understanding the results, so every woman should consider getting tested for these mutations, especially those of Ashkenazi descent."

Why? "About half of the women who inherit mutations in BRCA1 or BRCA2 have no clue that they're carrying these mutations because, unlike Angelina Jolie, there's no history of breast or ovarian cancer in their families."^{3,4}

¹ www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet.

² www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/brca-related-cancer-risk-assessment-genetic-counseling-and-genetic-testing.

³ *JAMA* 312: 1091, 2014.

⁴ *J. Natl. Cancer Inst.* 2015. doi:10.1093/jnci/dju420.

have at least one E4. If your other APOE is an E3 you're three times more likely to develop Alzheimer's than people who have two E3s. People who inherit two E4s are about 15 times more likely.

"The increased risks can be significant enough that some people may want to

carried one or two E4s. But my aunt died of Alzheimer's, so I wanted to know. According to 23andMe, neither of my two APOEs is the risk-raising E4 kind. Phew.

■ Genes that slightly boost your risk.

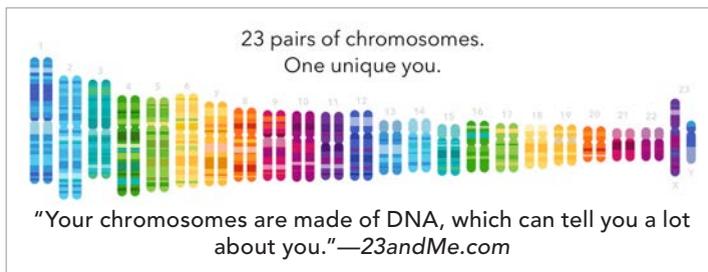
When it comes to diabetes, heart disease, asthma, weight gain, psychiatric illness, or most diseases, no single gene stands out.

"These conditions arise from many different genes acting together in combination with our life experiences, making a really complex picture," says Austin.

Take type 2 diabetes.

"If there were one or a couple of genes that caused most cases of diabetes, we would have seen it by now," says Brody.

"But we've known for a long time that such genes didn't exist, because we see a complex inheritance pattern of diabetes in families."



know whether they have the APOE4 genes, especially if their family history hints that they might," says Brody.

Most people I know don't want to find out if they have APOE4. They say they'd worry too much if they knew that they

So far, researchers have discovered 80 to 100 genes that have some impact on diabetes risk, notes Brody. “Each might affect it only a very tiny amount, so they’re not that useful for figuring out whether a person is going to get diabetes.”

That’s true for most diseases.

“When you look at the genes in the general population, it’s common to find a slew of them that have small effects on health, but that don’t predict whether someone will get a disease,” says Brody.

Or don’t predict it very well. My 23andMe report told me that I have a 43 percent lower genetic risk of prostate cancer than the average person. But several years earlier I had been diagnosed with that cancer. Thankfully, it’s the dormant, slow-growing, very-unlikely-to-ever-matter kind that the National Institutes of Health suggests shouldn’t even be called cancer anymore.

The report also said that I have double the average risk of rheumatoid arthritis and stomach cancer. So far, no sign of either.

ASK A DOC

Genetic testing is standard only for newborns.

“Most states do 30 to 50 genetic tests to pick up metabolic disorders that really need to be discovered at the beginning of life in order to treat them,” explains Brody.

For example, hospitals test for phenylketonuria by looking for a mutation in the PAH gene, which helps metabolize the amino acid phenylalanine. Untreated infants can suffer brain damage.

And an untreated female with a mutation in the GALT gene is likelier to end up with ovaries that don’t work.

“But other than these tests in infants, we don’t do, or even recommend, any kind of genetic testing in the general population,” notes Brody.

“Companies that provide home genetic testing were barred by the Food and Drug Administration a few years ago from providing any information directly to consumers about their own risk of disease,” Austin explains.

(When I had my DNA tested in 2010, the feds hadn’t yet imposed that ban.)

hypertension,” said the GAO.

So today, the FDA only allows home gene-testing companies to reveal your “carrier status.”

“That helps people learn whether they have a genetic variation for a disease that may affect their children if the gene is passed on,” says Austin.

“The tests that 23andMe can now offer let people find out, for example, whether they have a chance of having a child with cystic fibrosis or sickle cell disease.”

Currently, 23andMe is the only gene-testing company that provides FDA-approved information about carrier status directly to consumers. (The test

now costs \$199.)

If you want to learn if you carry a gene that increases your *own* risk of disease, you have to find a physician or other health professional to order the test and help you interpret it.

“Genetic test information is most useful in the context of a really good family health history, if it’s possible to get one,” says Austin.

“If you have a family history of certain cancers such as breast or colon, for example, your health insurance will probably cover the genetic testing,” says Brody. “But if you’re just curious, it won’t.”

And that could cost you.

We found tests for the BRCA1 and BRCA2 mutations online for \$200 to \$250.

I had none of the common BRCA mutations, according to 23andMe.

Did my results lead me to change my diet or my life? No. Was I relieved to know that I don’t have a higher genetic risk of Alzheimer’s? You bet. 🍌

¹ www.alzdiscovery.org/cognitive-vitality/what-apoe-means-for-your-health.

LOSE WEIGHT WITH GENE TESTS?

“Take the Guesswork Out of Losing Weight,” say the ads for Inherent Health’s Weight Management Genetic Test.

Inherent Health has identified five gene variants that it says determine the ideal amount of carbohydrates

that dieters should eat to lose weight. Unfortunately, that’s not what its most recent studies found.

In two company-funded trials—not yet published but described on Inherent Health’s web site—93 overweight or obese premenopausal women were assigned to one of several 1,500-calorie diets with different levels of carbohydrate, fat, and protein, for 12 or 24 weeks.

In one of the trials, those who happened to eat diets “matched” to their genetic profile lost four more pounds of fat (but no more weight) than those who ate diets that weren’t matched. In the other trial, diets matched to genes made no difference in how much fat or weight dieters lost.

Inherent Health’s conclusion: Its gene test helps people shed pounds. Ours: The gene test does little or nothing to reduce the guesswork involved in losing weight.

The FDA’s reasoning: Without “accurate, complete, and understandable information about the limitations of test results,” people might make unwise decisions about their health.

And how accurate are direct-to-consumer tests? In 2010, the Government Accountability Office got inconsistent answers when it sent identical DNA samples to four testing companies.

“One donor was told that he was at below-average, average, and above-average risk for prostate cancer and





Going Bowling

BY KATE SHERWOOD

Dinner in a bowl? Why not? It's quick and satisfying (and there are fewer dishes to wash). Feel free to swap the veggies, whole grains, or protein for things you have on hand. 🍷

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



Mideast Chickpea Bowl

- 1 cup diced cucumber
- ½ cup 2% greek yogurt
- ¼ cup mint and/or cilantro, minced
- ¼ cup flat-leaf parsley and/or dill, minced
- ½ tsp. kosher salt, divided
- 1 large onion, diced
- 2 Tbs. extra-virgin olive oil
- ¼ tsp. ground cumin
- ¼ tsp. ground coriander
- 2 cups chopped cherry tomatoes
- 3 cloves garlic, minced
- 1 15 oz. can no-salt-added chickpeas, drained
- 4 oz. baby spinach

In a small bowl, combine the cucumber, yogurt, and herbs. Season with ¼ tsp. of the salt. • In a large pan, sauté the onion in the oil until lightly browned, 5-7 minutes. Stir in the cumin, coriander, and remaining ¼ tsp. of salt. Stir in the tomatoes and garlic. Cook for 1 minute. Add the chickpeas and spinach and heat through. Divide into 2 bowls. Top with the cucumber yogurt sauce. • Serves 2.

Per serving (3 cups): calories 490 | total fat 18 g
sat fat 3.5 g | carbs 60 g | fiber 13 g | protein 25 g
sodium 620 mg



Tex-Mex Chicken Bowl

- ½ avocado
- 10 sprigs cilantro
- 1 Tbs. fresh lime juice
- ¼ tsp. kosher salt
- 1 cup diced onion
- 1 cup diced bell pepper
- 1 Tbs. extra-virgin olive oil
- 2 cups corn kernels
- ¼ cup jarred red salsa
- 1 cup chopped or shredded cooked chicken
- 2 cups shredded romaine

Combine the avocado, cilantro, lime juice, salt, and 2 Tbs. of water in a small food processor. Process until smooth. • In a large pan, sauté the onions and peppers in the oil over medium-high heat until they start to brown, 3-5 minutes. Stir in the corn and heat through. Divide into two bowls. • In the same pan, heat the salsa, then stir in the chicken and heat through. Add half to each bowl. • Add 1 cup of lettuce and half the avocado to each bowl. • Serves 2.

Per serving (3 cups): calories 440 | total fat 17 g
sat fat 3 g | carbs 47 g | fiber 9 g | protein 30 g
sodium 480 mg



Teriyaki Salmon Bowl

- 1 tsp. minced ginger root
- 1 clove garlic, minced
- 3 tsp. canola oil, divided
- 1 Tbs. brown sugar
- 2 Tbs. dry sherry
- 1 Tbs. + 2 tsp. reduced-sodium soy sauce
- 1 tsp. cornstarch
- 2 cups chopped broccoli
- 1 cup chopped carrots
- 1 cup cooked brown rice
- 4 scallions, chopped
- 2 6 oz. skinless salmon fillets

Make the teriyaki sauce: In a small pan, sauté the ginger and garlic in 1 tsp. of the oil for 1 minute. Stir in the sugar, sherry, and soy sauce. Mix the cornstarch with ¼ cup of water. Stir into the pan and cook until thickened, 2-3 minutes.

Make the fried rice: In a large non-stick skillet, stir-fry the broccoli in 1 tsp. of the oil over high heat for 1-2 minutes. Stir in the carrots, rice, and scallions. Stir-fry until hot, 1-2 minutes. Divide into 2 bowls.

In the same skillet, sauté the salmon in the remaining 1 tsp. of oil until browned on one side, 2-3 minutes. Turn the salmon over, pour the teriyaki sauce over the fish, and cook for 1 minute. Divide into the bowls of fried rice. • Serves 2.

Per serving (3 cups): calories 570 | total fat 21 g
sat fat 2.5 g | carbs 48 g | fiber 7 g | protein 46 g
sodium 650 mg



ON THE MOVE

Yogurt ventures beyond greek

BY JAYNE HURLEY & BONNIE LIEBMAN

Way back in 2007, greek yogurt accounted for roughly 1 percent of the U.S. yogurt market. Now it makes up more than half.

Chobani, Dannon, Yoplait, and their smaller competitors are still vying to corner the next big thing in yogurt. Will it be less sugar, all natural ingredients, savory flavors, yogurt-as-a-meal, yogurt for men, or something else? Here's the latest.

The information for this article was compiled by Camilla Peterson.



A perennial Best Bite.

Attention Shoppers!

Want to get through the yogurt aisle without squinting at dozens of tiny labels? Our Best Bites and Honorable Mentions make it simple (see p. 15).

Here's what to look for in a 5-to-6 oz. container:

- **Added sugars: None.** All dairy yogurts have some naturally occurring milk sugar. But our Best Bites have no *added* sugars. That includes healthier-sounding sugars like evaporated cane juice, maple syrup, agave, and honey. We couldn't set an added-sugar limit for Honorable Mentions because labels only list total (milk+added) sugars. But our calorie limit knocks out the most sugar-laden yogurts.
- **Questionable or unsafe sweeteners: None.** The only low-calorie sweeteners we consider safe are stevia and sugar alcohols like erythritol. Monk fruit (probably safe, but poorly tested), sucralose, aspartame, and acesulfame potassium are out.
- **Calories: 160 or less.** This one's a two-fer. It protects your waistline *and* keeps a lid on added sugars.
- **Protein: at least 8 grams.** That's what you'd get in an 8 oz. cup of milk, less than what's in a typical (5-6 oz.) serving of most greek yogurts, but more than what most non-greeks supply.
- **Saturated fat: 2 grams or less.** Yogurts made from whole milk may be showing up on store shelves, but you don't want them showing up in your artery walls (see "Wholely Cow").
- **Calcium: at least 15 percent of the Daily Value.** You'll typically find more calcium in non-greeks. (Tip: an 8 oz. glass of milk has 30 percent of a day's calcium.)

Here's what we didn't count:

- **Vitamin D.** Even fortified yogurts typically supply only 20 percent of the Daily Value. That's just 80 IU. The Recommended Dietary Allowance is 600 IU for adults up to age 70 and 800 IU for anyone older.

Not Too Sweet

If you like plain yogurt, you're all set. Just stir in some fresh or frozen blueberries, strawberries, peaches, etc., and some toasted almond slices.

Not a fan of plain? Try these:

■ Dannon Oikos Triple Zero.

"0 added sugar. 0 artificial sweeteners. 0 fat. 15 g protein," says the label. Not too shabby. The downside: some people might not like the slight aftertaste of the natural sweetener stevia leaf extract. Also, the chicory root fiber might cause, ahem, gas in some people.

■ Chobani Simply 100.

It's sweetened with stevia and monk fruit, and it has chicory root fiber.

■ Elli Quark.

It tastes like (less sour) greek yogurt, with just 80 to 90 calories. Elli ads erythritol and stevia for sweetness.

■ Siggi's 0% or 2%.

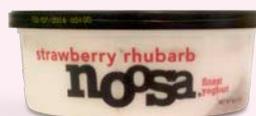
This yummy Icelandic-style low-fat yogurt uses "at least 25% less sugar than top three leading flavored yogurts." Icelandic yogurt (like greek) is strained, so it's thicker and supplies more protein than regular yogurt.

■ Wallaby Purely Unsweetened.

You can mix in the tablespoon or so of unsweetened fruit from the "sidecar." Nice. Too bad it's full-fat yogurt, with 3½ grams of sat fat.



Just 100 calories...and less sugar than most flavored yogurts.



Sweetened whole-milk yogurt means a whole lotta calories.

Wholely Cow

Fat is making a comeback.

"Whole-milk yogurts tend to have more protein and less sugar than their leaner versions," says "Eat This, Not That!" on Yahoo! Health's website.

Wrong. Leaner versions have as much or more protein...and the same sugar.

And you get more calories (130) in a plain whole-milk 5.3 oz. Chobani, for example, than in its rich and satisfying fat-free cousin (90). (Bonus: the whole milk has 4 grams of saturated fat your arteries don't need.) Worse yet, 8 oz. whole-milk sweetened yogurts like Noosa and Trader Joe's Greek can hit 300 calories plus 6 to 10 grams of sat fat.

What about cream-top yogurts? They're whole-milk yogurts that aren't homogenized, so the cream stays at the top. Ooh, that's so natural! But healthy? Sorry, no.





Not bad, but not exactly breakfast.

Breakfast?

“With 10g of protein, up to 10g of whole grains and as much dietary fiber as a packet of instant oatmeal, there’s a hearty gluten-free breakfast in every cup,” says Chobani’s website about its Mighty Oats and its Ancient Grains Greek Yogurts.

Well, not exactly. Some of Chobani’s fiber is processed oat fiber. And your “breakfast” has less than a serving of fruit. (It also has less than a serving of whole grains, though most people eat too much grain, so that may be a plus.)

What’s more, the whole grains displace some yogurt, so you get a tad less protein and calcium than in grain-free Chobani yogurts. Still, the oats are chewy and satisfying.

Yoplait’s Plenti line (“plentiful Greek yogurt with whole grain oats, flax & pumpkin seeds”) and Plenti Oatmeal line (oatmeal “meets Greek yogurt”) are similar. The Yoplait and Chobanis have too little calcium to be Honorable Mentions.

Got 30 seconds? Add a tablespoon or two of unsweetened muesli to your plain yogurt. Or do “overnight oats.” Toss some uncooked oats into your yogurt and chill overnight. Add fruit and nuts when you wake up. Yum.

What’s New

Companies are tripping over each other to shake up the yogurt aisle. Here are three of the latest wrinkles:

■ **Savory.** Two Chobani Flip flavors are for people who like their salsa hot: Chipotle Pineapple (with granola, smoked almonds, and pumpkin seeds) and Sriracha Mango (with rice crisps, sesame sticks, and cashews). Interesting.

■ **Veggie.** Beets, butternut squash, carrots, sweet potato, parsnip, tomato. Blue Hill adds them to its whole-milk yogurts. That pushes the vitamin A past a day’s worth (for the carrot and sweet potato). And the company cuts the sugar down to 2 teaspoons. Too bad the protein is low (4 grams).

■ **Dessert.** With whole milk and dark chocolate flakes, Chobani’s Indulgent line takes aim at ice cream. Mercifully, it comes in 3.5 oz. cups, so the calories (140) and saturated fat (4 grams) are no worse than ice cream.



Savory flavors—like carrot, beet, and tomato—mean less sugar.

Dairy-Free Dream?

You’ll find some new kids on the non-dairy block. None are Best Bites or Honorable Mentions, but some come close.

■ **Almond.** Almond Dream may be “made from Real Almonds,” but it’s not made from many. Each 6 oz. cup has just 1 gram of protein—what you’d get in four almonds. The rest is water, sugar, and “stabilizer blend.” The 3 grams of fiber come from tapioca.

In contrast, Kite Hill “artisan almond milk yogurt” (found at Whole Foods) has 5 or 6 grams of protein from almonds (and you can taste them). Tip: Kite Hill Plain has less sugar (1 teaspoon) than Almond Dream Plain (3½ teaspoons). Too bad it’s got no calcium.

■ **Coconut.** So Delicious Greek Style Coconut Milk and non-greek Coconut Milk are low in protein (1 or 2 grams) and high in saturated fat (about 4 grams). Most of the 8 grams of fiber in the “fiber rich” Greek Style comes from chicory root extract. Why bother.

Daiya Greek Yogurt is in the same sat-fat ballpark. At least it pushes the protein up to 8 grams (thanks to added pea protein).

■ **Soy.** Silk soy yogurts have “6 g plant-based protein” and 20 percent of a day’s worth of calcium and vitamin D. With 3 to 4 teaspoons of total sugar, they beat Stonyfield O’Soy (5 to 6 teaspoons).



No calcium, but more protein than other almond yogurts.

Offsides?

Mix-ins are still mainly chocolate, candy, cookies, or granola. The good news: some companies now add some almonds, pistachios, or hazelnuts to the mix.

■ **Chobani Simply 100 Crunch.** It keeps the calories at 100 by swapping some sugar for stevia and monk fruit and by shrinking the container (to 4.2 oz.). The “natural goodies on the side”—like Blueberry Cookie Crumble and Mango Cone Crisp—add some white flour, but up against other desserts, it’s a steal.

■ **Chobani Flip.** “From pistachios and chocolate chunks to almonds and toasted coconut flakes, our delicious, crunchy and satisfying ingredients take snacking to the next level,” says Chobani’s website.

Just don’t kid yourself into thinking that the 240 calories, 5 teaspoons of sugar, and 5 grams of saturated fat in the Almond Coco Loco—a bestseller—make it the “perfect snack when afternoon cravings hit.” An apple it ain’t.

■ **Dannon Light & Fit Greek Crunch.** The crunch comes from mix-ins like chocolate, pretzels, fudge, and graham crackers. Calories hover around 130 because sucralose and acesulfame potassium replace some of the sugar.

■ **Oikos Crunch.** You’re talking greek yogurt with nearly 5 teaspoons of total sugar. And most of the mix-ins are chocolate, graham crackers, and peanut-flavored chips. You can do better. 🍌



Beats other desserts hands down.

Cultured Pearls

Best Bites (✓✓) have no added sugar, no unsafe or questionable low-calorie sweeteners, no more than 160 calories and 2 grams of saturated fat, and at least 8 grams of protein and 15 percent of a day's worth of calcium. **Honorable Mentions (✓)** have the same criteria, but can have added sugar. Products are ranked from least to most calories, then least to most saturated fat, most to least protein, and most to least calcium.

Plain (5-6 oz. unless noted)

	Calories	Saturated Fat (g)	Protein (g)	Calcium (% DV)	Total Sugars (tsp.)
✓✓ Regular nonfat—Dannon All Natural or Stonyfield Smooth & Creamy ¹	80	0	8	30	3
✓✓ Elli Quark	90	0	17	20	1.5
✓✓ Greek or Icelandic 0%—Brown Cow, Chobani, Dannon Oikos, Fage Total, Siggis, Skyr, Smári, Stonyfield, or Wallaby ¹	90	0	16	20	1
✓✓ The Greek Gods Nonfat Greek Style	100	0	9	35	3.5
✓✓ Dannon All Natural Lowfat	100	1.5	8	30	3
Siggis 4% (4.4 oz.)	100	3	11	15	0.5
Stonyfield Greek Whole Milk	120	3.5	14	20	1
Stonyfield 100% Grassfed	120	4	5	20	1.5
✓✓ Wallaby Greek Lowfat	130	2	17	20	1
Maple Hill Creamery Greek	130	3.5	12	10	1
Chobani Whole Milk	130	4	13	15	1
Brown Cow Cream Top	130	4.5	6	25	2
Maple Hill Creamery Creamline	130	5	6	20	2
Fage Total 2% (7 oz.)	150	3	20	20	2
Fage Total (7 oz.)	190	7	18	20	2

Flavored (5-6 oz. unless noted)

✓✓ Elli Quark ¹	80	0	14	20	1.5
Dannon Light & Fit Greek ^{1,5}	80	0	12	15	1.5
Dannon Light & Fit Greek Mousse (4 oz.) ^{1,5}	80	0	9	10	2.5
Dannon Light & Fit ^{1,5}	80	0	5	20	2.5
Yoplait Light ^{1,5}	90	0	5	15	2.5
✓ Siggis 0% ¹	100	0	14	20	2.5
Chobani Simply 100 ^{1,5}	100	0	12	15	1.5
Yoplait Greek 100 ^{1,5}	100	0	12	10	2
Yoplait Greek 100 Whips! (4 oz.) ^{1,5}	100	0	9	8	3
Chobani Simply 100 Crunch (4.2 oz.) ^{1,5}	100	0.5	10	10	1.5
Blue Hill ¹	100	2.5	4	15	2
✓ Smári Nonfat ¹	110	0	15	15	3
Dannon Activia—regular or Fiber (4 oz.) ¹	110	1	4	15	4
✓✓ Dannon Oikos Triple Zero ¹	120	0	15	15	1.5
✓ Fage Total 0%—except Honey ¹	120	0	13	15	4
✓ Chobani 0% Fruit on the Bottom ¹	120	0	12	15	3.5
✓ Simply Balanced (Target) Greek Fruit on the Bottom ¹	120	0	12	15	3.5
✓ Wallaby Greek 0% ¹	120	0	12	15	3.5
Stonyfield Fruit on the Bottom ¹	120	0	6	25	5
Siggis 4% (4.4 oz.) ¹	120	3	10	15	2
Wallaby Purely Unsweetened ¹	120	3.5	10	15	1
✓ Chobani 0% Blended ¹	130	0	13	15	3.5
✓ Brown Cow 0% Greek ¹	130	0	12	15	4.5
✓ Dannon Activia Greek ¹	130	0	12	15	4.5
✓ Dannon Oikos 0% ¹	130	0	12	15	4.5
✓ Stonyfield Greek 0% ¹	130	0	12	15	4.5
✓ Stonyfield Greek and Chia ¹	130	0	12	15	4

	Calories	Saturated Fat (g)	Protein (g)	Calcium (% DV)	Total Sugars (tsp.)
Yoplait Greek ¹	130	0	11	10	4
Stonyfield Smooth & Creamy Lowfat ¹	130	1	7	25	5
✓ Siggis 2% Pumpkin & Spice	130	1.5	14	20	2.5
Dannon Light & Fit Greek Crunch ^{1,5}	130	1.5	11	10	3
✓ Kirkland Signature (Costco) Greek ¹	140	0	13	15	4
✓ Fage Total 2% Blood Orange	140	1.5	12	15	4
✓ Wallaby Greek Lowfat fruit ¹	140	1.5	12	15	3.5
Fage Total 2%—except Blood Orange and Honey ¹	140	1.5	12	10	4
✓ Trader Joe's European Style Low Fat—Chocolate or Mocha ¹	140	1.5	8	25	4.5
✓ Chobani 2% Fruit on the Bottom ¹	140	2	11	15	3.5
Yoplait Whips! (4 oz.) ¹	140	2	5	15	5
Stonyfield 100% Grassfed ¹	140	3.5	4	15	3.5
Chobani Indulgent (3.5 oz.) ¹	140	4	7	8	3
✓ Whole Foods Greek 0% ¹	150	0	14	20	5
Dannon Fruit on the Bottom ¹	150	1	6	20	5.5
Yoplait Original ¹	150	1	6	20	4.5
✓ Chobani 2% Blended—Coffee, Key Lime, or Mixed Berry ¹	150	1.5	12	15	4
Dannon Vanilla	150	1.5	7	25	6
Stonyfield Greek Whole Milk ¹	150	2.5	12	15	4
Maple Hill Creamery Greek ¹	150	3.5	11	10	3
Maple Hill Creamery Creamline ¹	150	4.5	6	20	3.5
Yoplait—Plenti or Plenti Oatmeal ¹	160	0	12	10	3
✓ Dannon Coffee	160	1.5	8	25	6
Dannon Oikos ¹	160	3	11	15	4.5
Dannon Oikos Crunch ¹	170	1	12	15	4.5
Chobani—Mighty Oats or Ancient Grains ¹	170	1	10	10	4
Wallaby Greek Whole Milk ¹	170	3.5	10	15	4
Brown Cow Cream Top ¹	170	3.5	5	20	5.5
Fage Total Honey—0% or 2% ¹	180	1	13	15	7
YoCrunch ¹	180	1.5	5	20	6
Stonyfield Oh My Yog! ¹	180	3	7	25	6
Fage Total ¹	180	4.5	11	10	4.5
Chobani Flip ¹	210	3.5	12	15	4.5
The Greek Gods Greek Style ¹	210	6.5	6	25	6
Liberté ¹	260	7.5	8	30	6
Noosa (8 oz.) ¹	290	6.5	12	40	7.5
Trader Joe's Greek (8 oz.) ¹	310	10	9	25	6

Non-dairy (5-6 oz.)

So Delicious Coconut Milk ¹	130	3.5	1	30	3.5
Silk soy ¹	140	0.5	6	20	4
Almond Dream ¹	150	0	1	20	4
Daiya Greek coconut ¹	150	4	8	20	3.5
Kite Hill Almond Plain	160	2	6	0	1
Stonyfield O'Soy ¹	170	0	7	15	6
Kite Hill Almond—except Plain ¹	180	1.5	5	0	3.5

✓✓ Best Bite. ✓ Honorable Mention. ¹Average. ⁵ Contains unsafe or questionable sweeteners.

Note: To convert teaspoons of sugar to grams, multiply by 4.2.

Daily Limit: Saturated Fat: 20 grams. **Daily Target: Protein:** 75 grams.

Daily Value (DV): Calcium: 1,000 mg.

Source: company information. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.



RIGHT STUFF

Modern Artichokes



If you've ever wrestled with fresh artichokes, are you going to love **frozen artichoke hearts**.

Your days of washing, cutting off the sharp leaf tips, boiling, and plucking the leaves to get at the tender heart are over. (Okay, so

the leaves are the fun part for some. But not when you really want to get to that heart.)

You buy your artichoke hearts in jars or cans? Then say goodbye to the salty marinade or brine. With frozen, you get (drum roll) only around 50 mg of sodium per $\frac{3}{4}$ -cup serving...and all of it occurs naturally. Ditto for the 4 grams of fiber.

Pick up a bag of frozen artichoke hearts at **Trader Joe's** or **Whole Foods** (its **365 Everyday Value** house brand). Or try a small box from **Birds Eye** or **C&W**.

What to do with them? If you're making artichoke soup, just plop them into the pot. Here are some other ideas from Kate Sherwood, our Healthy Cook:

- Sauté in olive oil with chicken or chickpeas and season with lemon juice, black pepper, and parmesan.
 - Roast until golden brown and drizzle with vinaigrette salad dressing (try sesame, citrus, or dijon).
 - Sauté with garlic and season with a drizzle of balsamic vinegar.
 - Chop, sauté, then toss with cooked bulgur, lemon juice, parsley, and mint.
- No muss. No fuss. No wrestling.

traderjoes.com—(626) 599-3817

FOOD PORN



Shroom for Improvement

"Mushrooms are good, but these marinated mushrooms are a whole other level of awesome."

Uno Pizzeria & Grill's new single-serve **Shroom Pizza** is a whole other level, all right. There's the deep-dish bottom level of white-flour crust. Then comes the thick upper level of mozzarella and romano cheese with some spinach and mushrooms



tossed in.

Add it all up, and your compact, 7-inch pie packs in 1,900 calories—enough for the next 24 hours. And don't forget the 33 grams of saturated fat and 2,540 milligrams of sodium— $1\frac{1}{2}$ days' worth of each.

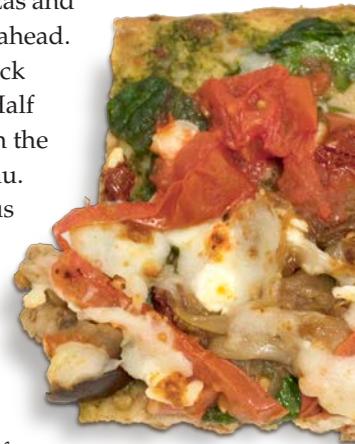
You could waddle over to Pizza Hut and eat *three* Veggie Lovers Personal Pan Pizzas and still come out ahead.

If you're stuck at Uno, try a Half Flatbread from the appetizer menu.

The delicious **Roasted Eggplant, Spinach & Feta** (detail at right) has 440 calories, 6 grams of sat fat, and 580 mg of sodium. Get it with the five-grain crust, which is mostly whole grain.

Next to the Shroom Pizza, that's *awesome*.

unos.com—(617) 323-9200



DISH of the month



Tahini Roasted Broccoli

In a large bowl, whisk together 2 Tbs. tahini, 1 Tbs. olive oil, $1\frac{1}{2}$ Tbs. lemon juice, 1 Tbs. reduced-sodium soy sauce, and 1 minced clove garlic. Toss with 5 cups of broccoli spears. Roast on a lined baking sheet at 450° F for 10 minutes. Serves 4.

quick tip

Looking for a meat substitute? Skip Quorn. The vat-grown fungus is a known allergen, and more than 2,000 people have told us that they became ill after eating it. Among the complaints: nausea, projectile vomiting, and diarrhea. No thanks.