

Nutrition *Action*

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 HEALTH LETTER®
 CENTER FOR SCIENCE IN THE PUBLIC INTEREST

Not So Happy

How Big Soda pushes sugar water

You'd think it might be hard to sell 12 oz. cans filled with carbonated water, 9 teaspoons of sugar, and flavoring. But that's only if you're trying to sell soda. Selling happiness (or family or kindness or love) is a different story.

Here's how soda companies keep us drinking sugar beverages, despite the evidence that they raise the risk of obesity, type 2 diabetes, heart disease, and other health problems.

Ad: The Coca-Cola Company.



#openhappiness

happiness.
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Not So Happy

How Big Soda pushes sugar water



Marion Nestle is the Paulette Goddard Professor in the Department of Nutrition, Food Studies, and Public Health at New York University. She is the author of eight books, including *Soda Politics: Taking on Big Soda*

(and *Winning*) (Oxford, 2015) and *Food Politics: How the Food Industry Influences Nutrition and Health* (Berkeley, 2007). You can read her blog at foodpolitics.com. Nestle spoke to Bonnie Liebman.

Q: What do studies say about the harm caused by soda?

A: The science is clear. Kids and adults who drink sodas tend to be heavier and have a higher prevalence of obesity, type 2 diabetes, heart disease, and tooth decay.

The evidence is overwhelming—study after study after study, meta-analysis after meta-analysis after meta-analysis—except for ones that are funded by Coca-Cola and the American Beverage Association. What a coincidence.

Roughly 85 percent of the studies that are funded by industry find soda to be harmless. And roughly 85 percent of independently funded studies find strong correlations between soda drinking and poor health. Those percentages are too remarkable to be coincidental.

Q: Instead, the industry promotes exercise?

A: The soda industry is following the tobacco industry's playbook. First you discredit the science. Then you discredit the scientists. Then you deflect attention from your product and in-

voke other kinds of issues like physical activity, hydration, personal responsibility, and so forth.

The industry says, "We are not holding a gun up to your head and making you drink sodas. It's up to you to decide what you want to drink. It's your responsibility."

Q: Isn't that true?

A: It completely omits the ways in which sodas are marketed. Much of *Soda Politics*, my new book, covers that behind-the-scenes marketing. It's just part of the normal landscape of urban life. But if you pay attention to it, it's astounding.

The book's big take-home lesson is how comprehensive the strategies are for protecting and marketing a product that is essentially sugar water.

Q: What are the marketing strategies?

A: They start with the advertising that you see—the brilliant commercials on television that cost millions of dollars to run during the Super Bowl



Share honesty? Check out the latest soda videos from the Center for Science in the Public Interest at bit.ly/ShareHonesty and bit.ly/ChangeTheTuneOnSoda.

and appear in every language in every country in which they are marketed. That's the obvious part.

But they don't advertise the product itself. They advertise happiness or family or they invoke other deep emotional connections.

Q: And that works?

A: Absolutely. People have to have this product. Coca-Cola makes millions of tchotchkes that people fight over on eBay. My office is filled with Coca-Cola memorabilia that I have been collecting for years. They're part of America, part of your childhood.

I have three cans of Coca-Cola in my office. One says Love, one says Superstar, and one says Marion. Those cans are brilliant marketing. Everybody loves a Coca-Cola can with their name on it.

Q: What strategies are less obvious?

A: The hardball tactics, like fighting New York City former Mayor Bloomberg's cap on soda sizes, fighting soda taxes and public health measures. Then there's the funding of research to undermine the science, the deliberate marketing to low-income minorities, and the front groups.

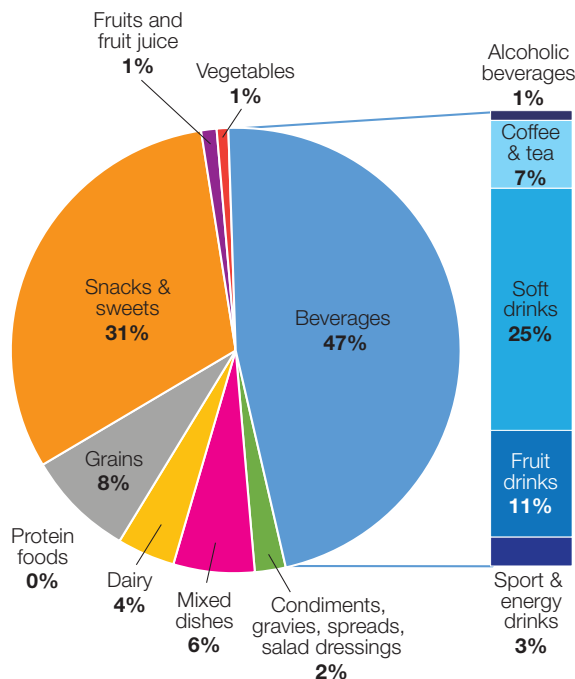
Soda companies also fund health organizations, community organizations, city organizations. When New York State was considering a soda tax, Coke offered to fund a park initiative. When Philadelphia was considering a soda tax, Coke offered to give the Children's Hospital of Philadelphia \$10 million. It's that kind of thing.

Q: That sounds generous.

A: Yes. It's like their other corporate social responsibility efforts. Soda companies actually win prizes from the Environmental Protection Agency and environmental organizations for their



Where Our Added Sugar Comes From



Source: What We Eat in America, NHANES 2009-2010.

attempts to protect the environment. A few months ago, the *New York Times* ran an article about all the fabulous things that Coca-Cola does to preserve water and reduce its water footprint. It read like a Coca-Cola press release.

Q: The reality is different?

A: The reality is that Coca-Cola doesn't count in its water footprint the water it takes to grow the sugar. That makes a huge difference.

And behind the scenes, companies are fighting recycling laws and deposit laws for cans and bottles. What they fund is clean-ups. Because *you* do the work, and it doesn't raise the price of soda. Soda is a price-sensitive product. That's why companies are willing to go to any expense to defeat a soda tax or deposit law, even if it's only a few pennies.

Q: What are the front groups?

A: They're industry-sponsored groups with names like Citizens Against Unfair Taxes. They sound like grassroots groups, but they're actually paid for by Coca-Cola or the American Beverage Association.

We saw them in New York City during the Bloomberg soda-cap fight. This was New Yorkers for Beverage Choices. The members handed out cards saying "Don't let bureaucrats tell you what size beverage to buy." The group's website was maintained by a PR firm recruited by the American Beverage Association to fight soda taxes.

My graduate assistant talked to people collecting signatures on petitions who said they were paid \$30 an hour. That's the best entry-level job in New York!

Q: And they re-framed the soda cap as a ban?

A: Immediately. In fact, it wasn't a ban. You could buy as many 16 oz. sodas as you wanted.

Q: But the soda companies won?

A: Yes. They took the city to court, which ruled that only the City Council, not the Health Department, had the authority to limit soda sizes. While companies talk about how they really care about public health, they're sinking fortunes into defeating public health initiatives.

I'd give anything to know how much money they spent defeating the New York soda cap. There were ads, posters, videos, banners on planes flying overhead, home mailings—I got one—the front groups, the legal fees.

Q: Why do companies use celebrities and athletes to market soda?

A: The athletes link soda with health, and they're role models, especially for young people. They're often minorities, so they're part of soda companies' marketing to young people of color. And these groups have an especially high prevalence of obesity, diabetes, and heart disease. Beyoncé got \$50 million to promote Pepsi. Who'd turn that down?

Q: Do they market to kids?

A: Companies aren't supposed to market to children under the age of 12. But

do kids under the age of 12 ever see programs meant for older kids? Of course they do. Do they see sports? Of course they do. And much of the marketing is electronic now.

Q: Like Facebook ads?

A: Oh my goodness, yes. Coca-Cola's Facebook page has about 93 million likes. And this is about selling "liquid candy," as CSPI president Michael Jacobson brilliantly calls it. You would never let your kid eat candy all day long.

Q: Yet companies claim to be fighting obesity.

A: Yes. They're in a difficult position. Soda sales in the United States are way down, especially in educated, better-off socioeconomic groups. Their most profitable product by far is flavored

sugar water. And the first thing you should do if you want to lose weight is to stop drinking sugary drinks.

For years, they've been scrambling to address the problem. In Securities and Exchange Commission filings for the last 10 years, obesity is listed as the first threat to Coca-Cola profits. So they've worried about obesity for a long time.

Q: Doesn't Coca-Cola also sell water?

A: Yes. Companies can sell healthier drinks like vitamin waters, sports drinks, or just water. But they're not as profitable.

You'd think that bottled water would be the most profitable product in the world, but apparently it's not because it is so competitive. Bottled water is bottled water, so people buy the cheapest one. It's essentially a loss leader.

Q: Are sodas profitable?

A: They're fabulously profitable, especially the fountain drinks, because companies don't have to pay for cans or bottles. A fountain drink basically costs 2 cents an ounce. So if you buy a 20-ounce soda in a movie theater—if they have anything that small—it costs

the theater 40 cents, and you've just paid \$4.50 for it. That's real money both for theaters and soda companies. That's why theaters have concession stands. I thought those calculations were staggering. I had no idea.

Q: Are smaller cans profitable?

A: Yes. These little 7.5 oz. cans with people's names on them are selling like hotcakes. Coca-Cola's profits last year were mostly from the little cans. Smaller cans are a step forward for health.

Q: Is the water in soda cheap?

A: Yes. It comes from taxpayer-supported municipal water systems. It's an absolutely brilliant strategy.

They also use municipal water in their bottled water. They run it through a filter, but it's no cleaner than tap water.



Part of the New York City Health Department's campaign to fight obesity.

Q: Why do companies fight bottle deposit laws?

A: Because they raise prices. In the old days, bottles were precious. Now they are disposable. And companies don't want to clean them.

Q: What is the Global Energy Balance Network?

A: That's a seemingly independent front group funded by Coca-Cola that basically says that exercise, not diet, is the main solution for obesity. Unfortunately, it involves scientists of considerable stature. But it was a huge public

relations disaster.

In August, a *New York Times* reporter discovered that these scientists had taken millions of dollars in research grants from Coca-Cola, and that the company had paid for the group's website. The scientists said that Coca Cola registered the website because the researchers didn't know how to do it. I had to laugh.

Q: Were the scientists talking from Coca-Cola's playbook?

A: Yes. One of the scientists, Steven Blair, said in an online video that everybody is always telling you eat less, eat less, eat less, don't eat junk food, don't drink sodas. You don't have to do any of that. All you have to do is be more active. If only.

Q: If only it were that easy?

A: Yes. As I'm fond of saying, it's 100 calories a mile. That's what it takes to work off this stuff. So if you drink a 300-calorie soda you've got to walk for three miles. Not many people are likely to do that.

Q: What is the Beverage Institute for Health and Wellness?

A: That's a kind of a front group of the American Beverage Association. The ABA includes makers of sugar-sweetened beverages, like Coke, Pepsi, and Dr Pepper Snapple. This group runs continuing education programs for the Academy of Nutrition and Dietetics, the professional association for dietitians.

Q: They hold seminars at meetings?

A: Yes, and some are hilarious. They'll have sessions on sugars and health, and you can bet they'll be saying there's no evidence that links sodas to poor health, and that everybody needs hydration and physical activity.

Q: Do other food companies sponsor similar programs?

A: Yes. And food companies also sponsor the American Society for Nutrition, the most important association of nutrition researchers. And it doesn't look like that's going to change. People are scrambling to figure out how these nu-

trition societies can take money from food companies and get away with it. I think that it introduces enormous conflicts of interest.

Q: And when it comes to the science, all they have to do is instill doubt?

A: Yes. And now industry-funded scientists argue that all researchers, not just those funded by industry, have a bias. The question is: What comes first: public health or industry profits?

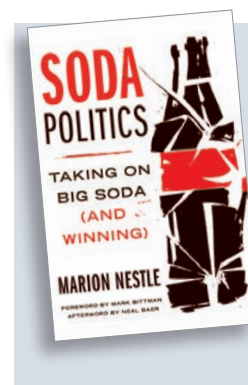
Every time I get five industry-funded studies that come out with results favorable to industry, I post them on my blog. I've been doing this since March, and so far I've posted 60 studies with results favorable to industry. I've asked people to tell me about industry-funded studies with results that are unfavorable to industry. So far I've found three.

Q: But isn't Big Soda losing the battle?

A: The soda companies think that soda sales are down because of obesity and that advocacy is just ruining sales. I'm not going to argue. Like the cigarette companies, the soda companies have moved their marketing overseas.

They're under siege. And not just because of the damage sodas do to our health. They're under siege by those who want to impose soda taxes. They're under siege for using up water from water supplies in India. They're under siege because their empty bottles and cans litter all over the place. It's one thing after another on many fronts.

That's why my book title ends with the words "and Winning." 🍷



Want to know more about the soda industry's shenanigans and how to fight them? Check out Marion Nestle's new book.

IN THE DRINK

How sugary beverages cause harm

BY BONNIE LIEBMAN

Haven't had a Coke in years? You may still be drinking sugars in your iced tea, Frappuccino, smoothie, cranberry juice cocktail, VitaminWater, or margarita. Here's how sugar drinks can raise your risk of obesity, heart disease, diabetes, and more.

"Sugar-sweetened beverages are clearly associated with weight gain, as well as type 2 diabetes and heart disease," says Vasanti Malik, research scientist at the Harvard School of Public Health.¹⁻³

She's talking about evidence from studies that ask a "cohort"—like the 120,000+ women in the Nurses' Health Study—what they typically eat or drink and then wait for years to see who gets which disease.

"It's amazing that the results are so consistent across cohorts, not just here but in Europe and elsewhere," adds Malik.

And it's not just that sugar drinks raise the risk of diabetes and heart disease because they make people heavier.

"In our cohorts, about half of the risk is coming from weight gain," says Malik. "So other pathways beyond weight gain are at work in the relationship between sugar-sweetened beverages and diabetes or heart disease."

OBESITY

To some experts, the nail in the coffin for sugary drinks and obesity came in 2012.

That's when researchers reported the results of the Double-blind, Randomized INtervention study in Kids (DRINK) on 641 Dutch children. Those who were given just one 8 oz. sugar drink a day gained more weight and body fat over 1½ years than those who got a diet drink.⁴

"Shorter studies in adults had shown that replacing sugar-sweetened beverages with diet drinks leads to less weight gain," says Malik. "But the most robust evidence comes from the DRINK study and another trial, because they had the strongest experimental designs."

How do sugar drinks put on pounds?

"People don't compensate for calories consumed in liquid form," says Malik. Eat an apple or yogurt or crackers before lunch, and you're likely to compensate by eating less at lunch. Get the same calories in a beverage before lunch, and you don't eat less. It's as though the liquid calories don't register.⁵

That also applies to fruit juice, even though its sugar is naturally occurring.

"Juice has some vitamins, but it still



Calculate the sugar you get from coffee drinks, tea, etc., at ChooseHealthLA.com.

has a lot of sugar—as much as cola—and it's liquid," says Malik. "We have fewer studies on juices, but the evidence is starting to accumulate that people should limit their juice consumption."³

(Don't worry about the fructose in fruit. It's not liquid, and you can only eat so many blueberries.)

Of course, you could stop there. Obesity itself raises the risk of type 2 di-

abetes, heart disease, and several major cancers, including breast and colon. So if sugary drinks "only" caused weight gain, that would be the ball game.

In fact, they may do more.

HEART DISEASE

In 2014, researchers reported that people who consume more added sugar have a higher risk of dying of heart attacks, strokes, and other cardiovascular events, regardless of their weight.⁶ Other studies have found similar links with sugar drinks.⁷

"If you put that evidence together with studies showing that sugars raise risk factors for cardiovascular disease, it's very strong evidence," says Kimber Stanhope, associate researcher at the University of California, Davis.

In her 2015 study, Stanhope gave young healthy adults 0, 10, 17.5, or 25 percent of their daily calorie requirements in a drink sweetened with high-fructose corn syrup.⁸ (On average, adults aged 20 to 60 get 13 percent of their calories from HFCS, table sugar, and other added sugars, but some get far more.)

"We saw an increase in LDL cholesterol and triglycerides after just two weeks," says Stanhope. "And we saw a dose-response effect." In other words, the more sugar the participants drank, the higher their LDL ("bad") cholesterol and triglycerides (a fat found in blood).

"LDL cholesterol is one of the strongest, most valid measures of cardiovascular risk," adds Stanhope.

How does sugar raise LDL cholesterol and triglycerides? It's the fructose—which makes up roughly half of both high-fructose corn syrup and ordinary table sugar—that's to blame.

"The liver turns fructose into triglycerides and sends some of it, along with cholesterol, into the blood," says Stanhope. And all that fat-making in the liver may cause other problems.

DIABETES

One out of two American adults has either diabetes or prediabetes.⁹ And people who drink sugar beverages have a higher risk of diabetes than those who don't.²

But it's neither practical nor ethical to give people sugar drinks long enough to see if they get diabetes. So instead researchers look to see if sugars cause insulin resistance.

Why insulin resistance? "It's clearly a risk factor for diabetes," says Stanhope. "There's no doubt about that."

Insulin is like a key that allows blood sugar to enter cells after you eat. As you become insulin resistant, some of the insulin keys don't work. At first your pancreas compensates by making more and more insulin. When the pancreas can no longer produce enough insulin to keep up, blood sugar levels climb and you've got diabetes.

"A Swiss study reported an increase in insulin resistance in the liver in people who got 80 grams of fructose a day for only three weeks," notes Stanhope.¹⁰ That's about what you'd get in four 12 oz. cans of Coke.

"And the Swiss used the best technique to measure insulin resistance," she adds. "It's the hardest and most expensive to do."

FATTY LIVER DISEASE

An estimated one out of five adults—and one out of ten teens—have non-alcoholic fatty liver disease.^{11,12} And an estimated 10 to 20 percent of those people have inflammation and liver cell injury that can progress to cirrhosis and liver failure.^{13,14}

"Obesity and diabetes clearly increase the risk of fatty liver disease, but there's also some evidence that fructose plays a role," says Stanhope.

In June, Framingham Heart Study researchers reported that people who drank at least one sugar beverage a day had a higher risk of fatty liver disease.¹⁵ But few other studies have looked. And only a few studies have measured what happens

SUGAR DRINKS IN DRAG

Watch out for sugar drinks that may have a "health halo." Ditto for fruit juice. (It has no added sugar, but it's still liquid calories.) Make sure to adjust the serving sizes below if they don't match yours.

	Calories	Added Sugars (tsp.)
Silk Chocolate Soymilk, refrigerated (8 oz.)	120	4*
Starbucks Caffè Latte, soy (16 oz.)	170	4*
Starbucks Caramel Macchiato (16 oz.)	240	4*
Honest Tea Organic Honey Green (16.9 oz.)	70	4.5
Ocean Spray Cranberry Juice Cocktail (8 oz.)	110	4.5*
Starbucks Caffè Mocha (16 oz.)	360	4.5*
Blue Diamond Almond Breeze Chocolate Almondmilk (8 oz.)	120	5
Bacardi Mixers Margarita (8 oz., prepared)	150	5.5
Red Bull (8.4 oz.)	110	6.5
Starbucks Light Java Chip Frappuccino (16 oz.)	210	7*
Glacéau VitaminWater Focus (20 oz.)	120	7.5
Schweppes Tonic Water (12 oz.)	130	7.5
San Pellegrino Limonata (11.15 oz.)	150	7.5*
Starbucks Classic Chai Tea Latte (16 oz.)	240	7.5*
Gatorade Lemon-Lime (20 oz.)	130	8
Snapple Lemon Tea (16 oz.)	150	8.5
Coca-Cola Life (20 oz.)	160	9.5
Simply Lemonade (11.5 oz.)	160	9.5
Starbucks Peppermint Mocha (16 oz.)	440	9.5*
Panera Signature Hot Chocolate (med., 16 oz.)	480	11*
McDonald's Sweet Tea (medium, 21 oz.)	220	13.5
Canada Dry Ginger Ale (20 oz.)	230	14
Starbucks Java Chip Frappuccino (16 oz.)	470	14*
Coca-Cola (20 oz.)	240	15.5
Pepsi (20 oz.)	250	16.5
Jamba Juice Chocolate Moo'd Smoothie (medium, 22 oz.)	570	19.5*

* Estimate. Notes: At Starbucks, 16 oz. is a grande. All oz. are fluid oz.

Source: company information.

Daily limit for added sugars: 25 grams (6 tsp.) for women, 38 grams (9 tsp.) for men. (To convert teaspoons of sugar to grams, multiply by 4.2.)

to the liver when people consume sugars.

"It's amazing to think that we have only two intervention studies that looked at how sugars affect liver fat using current imaging technology," says Stanhope.

One, which was funded by the Corn Refiners Association, had serious flaws.^{8,16} The other study was top-notch.

Danish researchers gave 47 overweight adults one liter a day—about three cans' worth—of Coca-Cola (sweetened with table sugar), lower-fat milk, Diet Coke, or water. After six months,

liver fat increased only in the sugary-Coke drinkers (who also gained more muscle fat and more deep-belly fat).¹⁷

"Before the Danish study, nobody had any data to show that, under reasonable conditions, consuming sugar-sweetened beverages could cause fatty liver," says Stanhope.

Clearly, fructose causes the liver to make fat. "The question is: How much fat does the liver keep and how much does it send out into the blood?" says Stanhope.

If the liver keeps enough fat, that could make it insulin resistant, and that's a vicious cycle.

"As insulin resistance in the liver develops, fat making in the liver gets worse," explains Stanhope.

But we need more studies, she cautions. "We don't have sufficient evidence to definitively conclude that high-fructose corn syrup or sucrose causes fatty liver disease. But my prediction is that someday soon we will."

Should people minimize sugar drinks in the meantime?

"Absolutely," says Stanhope. "If you put together the diet intervention studies with the epidemiological studies, there's a strong suggestion that sugar is not good for our health."

What's more, she adds, "It's a risk-free proposition to reduce added-sugar consumption, but ignoring the data and believing the industry is a health risk." 🍌

¹ *Circulation* 121: 1356, 2010.

² *BMJ* 2015. doi:10.1136/bmj.h3576.

³ *Int. J. Obes.* 37: 1378, 2013.

⁴ *N. Engl. J. Med.* 367: 1397, 2012.

⁵ *Int. J. Obes.* 31: 1688, 2007.

⁶ *JAMA Intern. Med.* 174: 516, 2014.

⁷ *Circulation* 125: 1735, 2012.

⁸ *Am. J. Clin. Nutr.* 101: 1144, 2015.

⁹ *JAMA* 314: 1021, 2015.

¹⁰ *Diabetes Care* 36: 150, 2013.

¹¹ *Am. J. Epidemiol.* 178: 38, 2013.

¹² *J. Pediatr.* 162: 496, 2013.

¹³ *J. Clin. Gastroenterol.* 48: 467, 2014.

¹⁴ *Gut* 59: 969, 2010.

¹⁵ *J. Hepatol.* 63: 462, 2015.

¹⁶ *Appl. Physiol. Nutr. Metab.* 38: 681, 2013.

¹⁷ *Am. J. Clin. Nutr.* 95: 283, 2012.



No Memory Boost

The omega-3 fats DHA and EPA may not curb memory loss, as some studies had suggested. Researchers randomly assigned roughly 3,000 people aged 50 to 85 without memory loss to take either EPA (650 milligrams) plus DHA (350 mg) or a placebo every day. (Because this study was part of AREDS2, a major trial on eye disease, all the participants were at risk for advanced macular degeneration.) After five years, those who took the DHA plus EPA scored no better on tests of memory and other cognitive function than those who got the placebo. Nor did researchers find any benefit from the other supplements tested in the study—zinc and a mix of lutein plus zeaxanthin.

What to do: Don't rely on DHA and EPA to keep your memory sharp. In earlier studies, it didn't help to take B vitamins, antioxidant vitamins (C, E, and beta-carotene), or multivitamins either. Instead, lose (or don't gain) excess weight, keep a lid on your blood pressure and blood sugar levels with a healthy diet (and medication if necessary), and stay mentally, socially, and physically active. A healthy diet is rich in fruits and vegetables, low in added sugars, refined grains, and salt, and contains beans, nuts, fish, and low-fat dairy (see March 2015, cover story).

JAMA 314: 791, 2015.

Low-Carb Diets for Diabetes?

Obese people with type 2 diabetes may be better off cutting way back on carbs, says a new study.

Researchers randomly assigned 115 obese adults to get either 14 percent or 53 percent of their calories from carbs. Both diets cut calories and both were low in saturated fat (less than 10 percent of calories). The low-carb diet was higher in unsaturated fat and protein. Both groups participated in supervised aerobic exercise and strength training.

After one year, both groups averaged the same declines in weight (about 20 pounds), HbA1c (a long-term measure of blood sugar), fasting blood sugar, blood pressure, and LDL ("bad") cholesterol.

However, people in the low-carb group



were more likely to reduce their diabetes medication, had more stable blood sugar, and had high blood sugar less often. They also had lower triglycerides and higher HDL ("good") cholesterol.

What to do: If you have type 2 diabetes and need to lose weight, consider cutting back on carbs. Here's a day's worth of food in the study's 1,400-calorie low-carb diet: high-fiber cereal (1 oz.), Ryvita crispbread (1), lean chicken, fish, or red meat (9 oz.), almonds and pecans (2 oz.), low-starch vegetables (3 cups), fat-free milk (7 oz.), diet yogurt (½ cup), cheese (1 slice), and oil or margarine (6 teaspoons).

Am. J. Clin. Nutr. 2015. doi:10.3945/ajcn.115.112581.

Lower is Better

How low should blood pressure go? In September, the National Institutes of Health halted the landmark Systolic Blood Pressure Intervention Trial (SPRINT) early because the results were clear.

SPRINT randomly assigned more than 9,300 people aged 50 or older with hypertension to take drugs that would lower their systolic blood pressure (the higher number) to either 120 or 140. The average participant needed three drugs to reach the 120 target.

After several years, the researchers found that using 120 as a target cut the risk of heart attack, stroke, heart failure, and other cardiovascular events by almost a third, and the risk of death by a quarter, compared to using 140 as a target.

What to do: Keep your systolic blood pressure at 120 or below using a healthy DASH lower-salt diet (see March 2015, cover story) and, if necessary, medication.

www.nhlbi.nih.gov/news/press-releases/2015/landmark-nih-study-shows-intensive-blood-pressure-management-may-save-lives

B Vitamins & Babies

Women with higher blood levels of folate and vitamin B-12 may be more likely to have successful births with in vitro fertilization or other assisted reproductive technologies.

Researchers at Massachusetts General Hospital studied 100 women being treated for infertility. Those who had higher blood folate levels and higher B-12 levels were twice as likely to have a live birth than those with lower levels.

What to do: This study doesn't prove that B vitamins aid fertility, but any woman who *could* become pregnant should get at least the Daily Value (400 micrograms) of folic acid every day to reduce the risk of spina bifida and similar birth defects that can occur before a woman knows she is pregnant. Most multis have at least that much. Fruits and vegetables are also good sources. It's worth taking a multi with B-12, too. 🍌

Am. J. Clin. Nutr. 2015. doi:10.3945/ajcn.115.112185.

SAVING ANTIBIOTICS

BY DAVID SCHARDT

Imagine a world where antibiotics don't work and a simple infection can kill you. Far-fetched? Hardly. The problem: bacteria are becoming increasingly immune to antibiotics. Part of the solution may lie in the brand of chicken or beef you buy.

Ken Koehler lay curled up on the floor of his bathroom in late November of 2011, waiting for the diarrhea and stomach pain to finally end.

A week earlier, the 53-year-old business consultant had grilled hamburgers from ground beef he bought at a local supermarket near Portland, Maine.

The beef was contaminated with *Salmonella typhimurium*. But this wasn't your everyday *S. typhimurium*. The bacteria that felled Koehler—along with 19 other people in Maine and six other states, including a one-year-old and a 79-year-old—were resistant to nine different antibiotics.

Koehler had become one of at least 440,000 Americans who are sickened each year after eating or handling food that's tainted with antibiotic-resistant bacteria, according to the Centers for Disease Control and Prevention (CDC).

At least 2,000 of them die from their infections.

Resistance Training

Bacteria evolve rapidly. The more they are exposed to an antibiotic, the more likely it is that those that survive the drug (because they have a natural immunity to it) will flourish.

And because bacteria readily exchange genetic material, antibiotic-resistant bacteria can easily spread their resistance to other bugs.

And that's frightening... because if you happen to become infected with a resistant strain of bacteria, the antibiotics you're

prescribed may not work.

"This summer I cared for two patients with diabetes and urinary tract infections caused by a highly resistant strain of *E. coli*," Barbara Murray, then-president of the Infectious Diseases Society of America, told a U.S. House of Representatives committee in 2014.

"Both had to be admitted to the hospital for intravenous therapy because their infections were resistant to all oral antibiotics. Probably every woman by the age of 60 has had at least one UTI, and there is now no reliable oral antibi-

otic for complicated UTIs."

Keiji Fukuda, the World Health Organization's assistant director-general for health security, warns of a "post-antibiotic era, in which common infections and minor injuries which have been treatable for decades can once again kill."

Ken Koehler didn't die. But after a day and a half of misery, a friend drove him to the emergency room, where nurses gave him three liters of fluid and took blood, urine, and stool samples to try to figure out what was making him so sick.

Problem Solved?

Most of the antibiotics sold in the United States aren't used to treat sick people. More than half—some estimates go as high as 80 percent—are routinely given to chickens, turkeys, pigs, and cattle to make them grow faster and to prevent disease.

That exposes more bacteria to more antibiotics, which means that more bugs will become resistant to those drugs.

After years of prodding by health advocates, several large poultry producers and restaurant chains are doing—or promising to do—something about that.

Perdue, for example, has ended the routine use of all antibiotics in raising its chickens. Tyson has reduced the routine use of



Decoding Labels

Meat with a **green** or **blue** claim comes from animals that never got antibiotics, though companies aren't required to get blue claims verified by an independent third party. If a label says "USDA Process Verified," make sure it also says that antibiotics weren't used to prevent illness or to promote growth.

Label Claim	Antibiotic Use			Is claim verified?
	Never	Allowed	Only for sick animals	
USDA Organic	●			Yes
American Grassfed Association	●			Yes
Food Alliance Grassfed	●			Yes
"No antibiotics added"	●			Voluntary
"Raised without antibiotics"	●			Voluntary
Animal Welfare Approved			●	Yes
Certified Humane			●	Yes
Food Alliance			●	Yes
American Humane Association			●	Yes
"100% grass fed"		●		No
"Natural"		●		No
"Humanely raised"		●		No



Detoxing the Flocks



human antibiotics by 80 percent. And Panera and Chipotle now only serve chicken that has been raised without the routine use of antibiotics.

“Routine” is the key.

“We need to look closely at what these companies say they are doing, because some of them are making strong, meaningful promises while others are offering weaker intentions,” says Lance Price, professor of environmental and occupational health at the George Washington University School of Public Health.

Take multinational food giant Cargill. “Cargill Turkey says ‘NO’ to growth-promoting antibiotics,” trumpeted the headline of its July 2014 press release.

People who read the release may have missed the words in parentheses in a list of steps the company is taking: “Antibiotics only used for treatment of illness and disease prevention.”

That kind of halfway change isn’t good enough.

“Using antibiotics to prevent disease means that the drugs could routinely be given to the animals,” says Price. “Companies should say that they will not use any antibiotics that are important for human health except to treat sick animals under the care of a veterinarian.”

(The Food and Drug Administration acknowledged the potential harm from antibiotic resistance some 40 years ago, but its guidelines for meat and poultry producers are voluntary, have loopholes, and are hard to police.)

Which antibiotics producers use also matters.

“The list of the off-limits antibiotics should be based on the recommendations of the World Health Organization or at least the CDC, so that companies don’t have wiggle room,” says Price.

For example, tylosin is on the WHO’s list, even though it’s not an important human antibiotic. It’s there because tylosin is a chemical cousin of erythromycin, which *is* used to treat people.

“If a bacterium becomes resistant

Reducing antibiotics in a farming system that’s dependent on them “is not something that you can simply turn a switch on to implement,” says Perdue veterinarian Bruce Stewart-Brown.

It took Perdue a decade of trial and error before the company could raise 95 percent of its chickens without using any antibiotics. (Birds that are given antibiotics for illness aren’t sold under the Perdue brand.) One of the ways Perdue sidesteps the need for the drugs: it prepares vaccines in “clean rooms” at the hatcheries. And it has eliminated animal byproducts from its feed. “All vegetable protein makes a more consistent diet that helps eliminate the need for antibiotics,” notes Stewart-Brown.

Chickens raised without antibiotics take a few more days to grow to market weight, which is one reason why they typically command a higher price.

to tylosin, it also becomes resistant to erythromycin,” explains Price. “That’s the kind of loophole we need to avoid.”

Companies should also be willing to let a third party—preferably the U.S. Department of Agriculture—verify that they’re not using antibiotics, adds Price.

It’s not just poultry. Antibiotics are also given to cows and pigs. “And stopping the routine use of antibiotics in those animals is going to be much harder,” says Price.

Why? Cattle and pigs are more valuable per head, he notes, “so there’s more risk—or at least perceived risk—in elim-



Ken Koehler: An antibiotic-resistant infection from ground beef “changed my life.”

inating non-therapeutic antibiotics.”

And since cows and pigs live much longer than chickens, farmers need to keep the animals healthy for a longer time.

One of the Lucky Ones

Ken Koehler was lucky. He was a victim of a multi-state food poisoning outbreak, rather than a lone victim of a random bug. But the morning after Koehler’s ER visit, when a doctor from the hospital called, he didn’t know that.

“I was instructed to take this five-day course of Cipro,” he remembers. “I came later to find out that I was one of the last people infected from the outbreak, and that they had already figured out that no other antibiotic worked.”

Luckily, Koehler wasn’t allergic to Cipro. “A guy in New York who was allergic was in the hospital for eight months,” Koehler says he was told.

Chicken Surprise

In the summer of 2013, *Consumer Reports* magazine bought raw chicken breasts from stores in 26 states.¹ Of the 316 samples it tested, 80 percent were conventional (presumably they were raised with antibiotics) and the rest either had “raised without antibiotics” labels or were certified organic.

(Organic chickens can’t be treated with antibiotics except on the day before the eggs hatch, when hatcheries can use an antibiotic on the needle that pierces the shell and injects the chicks with vaccines against a host of diseases.)

Consumer Reports’ results: roughly half of the samples tested positive for at least one multidrug-resistant bacterium. (“Multidrug” means that a bug is resistant to at least three different classes of antibiotics.)

Here’s the puzzler: the no-antibiotics and organic chickens were only slightly less likely to have multidrug-resistant bacteria than the conventional chickens.

And when Price analyzed *E. coli* in samples of raw chicken from 15 New York City stores, “the results surprised us.” Organic and raised-without-antibiotics chickens were no more free of antibiotic-resistant bacteria than con-

At the Supermarket

Producers of beef, pork, or chicken that are raised without routinely using antibiotics include:

Applegate
Bell & Evans
Coleman
Estancia Beef
Murray's
Niman Ranch
Perdue

Private-label brands of chicken or beef that are raised without routinely using antibiotics include:

Food Lion (*Nature's Place*)
Kroger (*Simple Truth*)
Safeway (*O Organics, Open Nature*)
Trader Joe's (*All Natural, Organic*)
Whole Foods (*all meat & poultry*)

Source: Companies.

ventionally raised chickens.² And kosher chickens were twice as likely to carry antibiotic-resistant bacteria. (Kosher rules don't prohibit routine use of antibiotics.)

The results of Price's new, still-unpublished study of chicken bought in Arizona are consistent with the New York results, he adds.

Why are so many chickens that are raised without antibiotics turning up with antibiotic-resistant bacteria?

"We're concerned that some companies are trying to cash in on the raised-without-antibiotics market without changing over to dedicated housing and slaughter facilities," says Price.

"If you're using the same environment where there's been a history of routine antibiotic use, animals are going to pick up drug-resistant bacteria. You need to be clean through the whole process, including the slaughtering facilities."

Some companies appear to be doing that. The *Consumer Reports* study found that Perdue chickens—and Price's study found that Tyson chickens—were less likely to contain antibiotic-resistant bacteria than other brands.

Ground beef is a somewhat differ-

ent story. In 2015, *Consumer Reports* analyzed 300 packages of ground beef from 26 cities.³

Eighteen percent of the conventional samples had bacteria that were resistant to three or more classes of antibiotics, compared with just 6 percent of the samples of grass-fed beef that were raised without antibiotics.

"When it comes to ground beef, grass-fed means less resistance," says Price.

Slow Recovery

Even after Ken Koehler finished his Ci-pro, "I was pretty much bedridden for a few weeks," he remembers.

"It took me a month before I could even eat a meal. I was just living on fluids. To be able to eat three squares a day, it was probably three months."

Koehler, who lost 23 pounds, later learned that he likely didn't become ill from eating the tainted ground beef, but from shaping the raw meat into patties.

"The CDC told me that I probably got sick by handling the meat, not ingesting it. Cooking it thoroughly on the grill would have killed the bacteria." That might explain why his

At Chain Restaurants

Which restaurants are curbing the use of important human antibiotics in animals? Six nonprofit organizations put 25 of the largest fast-food and fast casual chains under the microscope. Here's their report card.

A	 
B	
C	 
F	                   

To read the full report, go to nrdc.org/food/files/restaurants-antibiotic-use-report.pdf.

girlfriend's daughter, who also ate one of the burgers, didn't get sick.

As it turned out, some uncooked ground beef that Koehler had stored in his freezer was "the smoking gun" that eventually led the supermarket where he bought the meat—Hannaford Bros.—to issue a recall.

What happened "changed my life forever," says Koehler. "I'm much more careful now about how I approach food."

He still buys hamburger meat, but only from local farms. "And when I see people pick up a package of ground beef in a supermarket, I tell them my story." 🍗

The Bottom Line

- Whenever possible, choose meat and poultry that was raised without antibiotics.
- Wash your hands and all surfaces thoroughly after handling raw meat or poultry, and always cook it thoroughly.

¹ consumerreports.org/cro/magazine/2014/02/the-high-cost-of-cheap-chicken.

² *F1000Research* 2: 155, 2013.

³ consumerreports.org/cro/food/how-safe-is-your-ground-beef.



1-2-3 Fish

BY KATE SHERWOOD

1. Pick a sustainable fish at seafoodwatch.org. **2. For white fish (like tilapia or striped bass): steam or poach** until it flakes easily but is still moist, about 3 minutes per ½ inch of thickness. **For salmon: broil** on high in an oven pre-heated to 400° F until it's just opaque throughout, about 10 minutes. **3. Top** with one of these three sauces. Each takes 15 minutes, max, and makes enough for 1 lb. of fish (4 servings). 🍴

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

MUSTARD-CHIVE ▶

- 2 Tbs. whole-grain mustard
- 1 Tbs. mayonnaise
- 1 Tbs. fresh lemon juice
- 1 Tbs. extra-virgin olive oil
- 1 Tbs. minced chives

In a small bowl, whisk together all the ingredients.

Per serving: calories 180 | carbs 2 g | total fat 9 g | sat fat 1.5 g
sodium 230 mg | fiber 0 g | protein 23 g



◀ ALMOND-PARSLEY-LEMON

- ¼ cup toasted, slivered almonds
- ¼ cup flat-leaf parsley leaves
- 2 Tbs. fresh lemon juice
- 2 Tbs. extra-virgin olive oil
- 1 Tbs. water
- ¼ tsp. kosher salt

Combine all the ingredients in a small food processor and pulse until uniformly minced.

Per serving: calories 220 | carbs 2 g | total fat 13 g | sat fat 2 g
sodium 180 mg | fiber 1 g | protein 25 g

TOMATO-ROASTED PEPPER-CAPER ▶

- 1 cup finely chopped cherry tomatoes
- 1 clove garlic, minced
- 2 Tbs. extra-virgin olive oil
- ¼ cup finely chopped roasted red pepper
- 1 Tbs. capers
- ¼ tsp. kosher salt

In a small pan, sauté the tomatoes and garlic in the oil for 2 minutes. Stir in the peppers, capers, and salt.

Per serving: calories 190 | carbs 4 g | total fat 9 g | sat fat 1.5 g
sodium 250 mg | fiber 1 g | protein 24 g



Hot Pursuit

Chasing down the best hot cereals

BY JAYNE HURLEY & BONNIE LIEBMAN

For decades, the hot cereal aisle was a snooze. You had your oatmeal, your Wheatena, your farina, your grits, and a few other grains. Oatmeal came in flavors like apples & cinnamon or maple & brown sugar. Zzzzzzz.

But that sleepy backwater has gotten a shot of espresso. “Ancient” or “superfood” grains and seeds like amaranth, quinoa, chia, flax, and hemp are everywhere. Cereals promise to help you “stay full longer” or “jump-start your day.” And they come in jazzy flavors like blueberry hazelnut and mango almond. Here’s how to sort through them.

Information compiled by Lindsay Moyer.

1. Make it whole. Relax. The grains in most hot cereals are whole. Exceptions: Cream of Wheat (or farina), Cream of Rice, grits, and (sometimes) barley. All oats are whole grain, but steel cut oats are less processed than old-fashioned or instant oatmeal.

Tip: Bran isn’t a whole grain, but we counted it as whole in picking our Best Bites (see p. 15) because it’s loaded with unprocessed fiber that may help lower your risk of heart disease and diabetes.

We didn’t disqualify cereals with brown rice, but if you’re worried about arsenic in rice, pick another grain. You’re probably not missing much; brown rice cereals aren’t nutritional powerhouses.

2. Skip added sugars. A single-serve Quaker Real Medleys SuperGrains Ba-

nana Walnut Flavor Oatmeal+ cup has 4½ teaspoons (19 grams) of (mostly added) sugars. That’s half a day’s worth for men (limit: 9 teaspoons) and more than that for women (limit: 6 teaspoons).

Want some sweetness? That’s what fresh fruit is for. Or look for Best Bites that add dried fruit, like Bob’s Red Mill Old Country Style Muesli and most Dr. McDougall’s cups (skip the sugar packet) and Earnest Eats Hot & Fit Cereal in bags (the cup versions are sweetened).

Looking for sweeter? Quaker 50% Less Sugar Instant Oatmeal cups are sweetened with (safe) stevia leaf extract and only about a teaspoon of sugar.

They beat BetterOats OatFit Instant Oatmeal with Flax and Quaker Weight Control Instant Oatmeal. Both are

sweetened with acesulfame-potassium and sucralose (either of which would disqualify them from a Best Bite). Quaker Lower Sugar and High Fiber Instant Oatmeals add sugar and sucralose.

3. Minimize salt. For the most part, only packets of *instant* hot cereals have added salt (though some, like Whole Foods 365 Organic Original, have none).

But who needs instant, when Quaker makes Quick 1-Minute Oats? Or try Quaker Quick 3-Minute Steel Cut Oats in the canister (the packets have added salt). Bob’s Red Mill, Country Choice Organic, and McCann’s also sell steel cut oats that cook in 4 to 6 minutes.

4. Check ingredients. You may not be getting the nuts or fruit you’re expecting.

Take Cocomama Almond Cookie Quinoa Cereal, which has no almonds (guess that’s what the “hint of almond” on the package means). Its 8 grams of saturated fat, though, are anything *but* stingy.

Then there’s Quaker Weight Control Banana Bread Instant Oatmeal, with no banana, and Quaker Bananas & Cream Instant Oatmeal, with more “creaming agent” than banana flake powder.



Darn close to real steel cut texture in just 3 minutes.



Cranberries, almonds, and seeds galore.



The trifecta: nutty, fruity, and hearty. A must-try.



The only flavored oats that mix (less) sugar and (safe) stevia.



Hot or cold, it's delicious.



Want protein? Cook your plain oats with milk.

spoons of (mostly added) sugars.

In contrast, a half cup of dry oats (5 grams of protein) cooked in a cup of low-fat milk (8 grams) delivers 13 grams of protein and no added sugars for 250 calories.

Some extra protein can help turn oatmeal into a meal. But companies don't stop there.

"GoLean products are designed to promote a feeling of fullness by increasing daily intake of protein and fiber," says Kashi GoLean Truly Vanilla Instant Hot Cereal. And ThinkThin Protein & Fiber Hot Oatmeal sure sounds like it helps you to *be* thin. Other brands promise to "satisfy your cravings" or "help you stay full longer."

Can extra protein help you lose weight? The impact, if any, is small (see Nov. 2014, cover story).¹ And in most studies, extra processed fiber didn't make people eat less at the next meal.²

More Protein, Less Weight?

"10g of protein," boast cups of Nature Valley Protein Oatmeal.

Protein is all the rage these days.

You do get some extra protein from Nature Valley's added whey and soy protein isolates. But you also get 260 to 290 calories and 3 to 4½ tea-

ThinkThin, GoLean, and some other companies add chicory root fiber (inulin), maltodextrin, or other processed fibers. But even oatmeal's stick-to-your-ribs *unprocessed* fiber may not matter.

In a study funded by Quaker, overweight people assigned to eat oatmeal with whole milk for breakfast for a month were less hungry than those assigned to consume only water or frosted corn flakes with low-fat milk each morning. Yet the water drinkers lost an average of 2½ pounds, while those who ate the corn flakes with low-fat milk lost a quarter pound and those who ate the oatmeal and whole milk gained half a pound (though the weight difference between the cereal-eating groups wasn't statistically significant).³



The evidence that oats help you lose weight is slim.

¹ *Am. J. Clin. Nutr.* 96: 1281, 2012.

² *J. Am. Coll. Nutr.* 32: 200, 2013.

³ *J. Nutr. Sci.* 2014. doi:10.1017/jns.2014.51.



Creamy and delish. The soluble fiber is a bonus.

The Heart Truth

"Heart Healthy." You can see that claim on just about any oatmeal package.

And while oatmeal can help lower cholesterol, it's not magic. You'd need to eat 5 to 10 grams of soluble fiber from oats (or any other source) every day to lower your LDL ("bad") cholesterol by 5 percent. (A cup of cooked oatmeal has 2 grams of soluble fiber; oat bran hot cereal has 3 grams.)

Here's the catch: plenty of low-fat foods—with or without oats—can call themselves "heart healthy." And most foods that are low in saturated fat and cholesterol or are at least 51 percent whole grain can claim to help reduce the risk of heart disease.

Bottom line: Oatmeal is a healthy whole grain that's worth eating if you enjoy it. Just don't expect it to slash your cholesterol.

And don't get carried away by ALA omega-3 claims. ALA, the omega-3 found largely in vegetable oils, seeds, and nuts, is less likely to protect your heart than EPA and DHA, the omega-3s in fish oil. (And even *they* may not matter—see "Fishing for Answers," Jul./Aug. 2013.) Anyway, you'd get more ALA in just half a teaspoon of canola oil than in, say, a serving of any flavor of BetterOats OatFit Instant Oatmeal with Flax.

Energy Crisis?

"Energy to help get you going," says the box of Quaker Maple & Brown Sugar Instant Oatmeal.

Quaker wants to "give you the good energy you want to make the most of the moments that matter," adds

quakerup.com, part of the company's PR effort to solve the "Human Energy Crisis."

Don't fall for it. When the word "energy" appears on a food label, it just means "calories." And if there's a crisis, it's that we get too *many* calories, not too few.

Will oatmeal make you feel more energetic than other foods? Why should companies look for proof when they can make "energy" claims without it? 🍌



"Energy" just means "calories."

Some Like It Hot

Best Bites (✓✓) are all—or nearly all—whole grain (we counted bran as whole), contain no—or very little—added sugar, have no more than 100 mg of sodium and 3 grams of saturated fat per serving, and are free of acesulfame-potassium and sucralose. (The chart lists *total* sugars because labels don't break down how much sugar is added and how much occurs naturally in the cereals' fruit.) *Cereals are ranked from least to most total sugars, then most to least fiber, most to least protein, and least to most calories.*

Multi-Serve Hot Cereal

(about ½ to 1 cup cooked)

	Calories	Total Sugars (tsp.)	Fiber (g)	Protein (g)
✓✓ Bob's Red Mill Organic High Fiber (45 g)	150	0	10	8
✓✓ Bob's Red Mill Organic Cracked Rye (32 g)	110	0	7	4
✓✓ Oat bran, any brand (40 g)	150	0	6	7
✓✓ Bob's Red Mill 7 Grain (41 g)	140	0	6	6
✓✓ Hodgson Mill Multi Grain (40 g)	140	0	6	6
✓✓ Bob's Red Mill Rolled Barley Flakes (44 g)	160	0	6	6
✓✓ Bob's Red Mill Triticale Cereal/M meal (35 g)	120	0	6	5
✓✓ Love Grown Super Oats (40 g) ^{1,G}	160	0	5	7
✓✓ Purely Elizabeth Organic Ancient Grain —6-Grain or Original Oatmeal (43 g) ^{1,G}	170	0	5	7
✓✓ Bob's Red Mill—Cracked Wheat, Organic 6 Grain, Organic Cracked Wheat, or Rolled Wheat (40 g) ¹	140	0	5	6
✓✓ Bob's Red Mill Grains & Nuts (44 g)	150	0	5	6
✓✓ Earnest Eats Hot & Fit (42 g) ¹	180	0	5	6
✓✓ Hodgson Mill Cracked Wheat (40 g)	110	0	5	5
✓✓ Country Choice Organic Multigrain (40 g)	140	0	5	5
✓✓ Trader Joe's Organic Multigrain (40 g)	140	0	5	5
✓✓ Wheatena (40 g)	160	0	5	5
✓✓ Bob's Red Mill Organic Kamut (40 g)	120	0	4	5
✓✓ Oats, any brand or type (40 g)	150	0	4	5
✓✓ Bob's Red Mill Whole Wheat Farina—regular or Organic (45 g) ¹	160	0	4	5
✓✓ Bob's Red Mill Millet Grits (47 g) ^G	170	0	4	5
✓✓ Bob's Red Mill—Creamy Rye Flakes, Peppy Kernels, or Rolled Triticale (29 g) ¹	100	0	4	4
✓✓ Cream of Wheat Whole Grain 2½ Minute (33 g)	100	0	4	4
✓✓ Bob's Red Mill Rolled Spelt (40 g)	130	0	3	5
✓✓ Arrowhead Mills Organic Rice & Shine —Quinoa or regular (42 g) ^{1,G}	150	0	2	4
✓✓ Quaker Quick 5-Minute Grits (37 g)	130	0	2	3
✓✓ Bob's Red Mill—Brown Rice Farina or Organic Creamy Rice (41 g) ^{1,G}	150	0	2	3
✓✓ Cream of Wheat 2½ Minute (33 g)	120	0	1	4
✓✓ Bob's Red Mill Organic Creamy Buckwheat (41 g) ^G	140	0	1	3
✓✓ Cream of Rice (45 g) ^G	160	0	0	3
✓✓ Purely Elizabeth Organic Ancient Grain Oatmeal—Apple Cinnamon Pecan or Cranberry Pumpkin Seed (40 g) ^{1,G}	160	½	5	7
✓✓ Bob's Red Mill Apple, Cinnamon & Grains (45 g)	160	½	4	6
✓✓ Bob's Red Mill Spice N' Nice (44 g)	190	½	4	5
✓✓ Ancient Harvest Organic Quinoa Flakes (34 g) ^G	130	½	2	4
✓✓ Purely Elizabeth Ancient Grain Muesli (60 g) ^{1,G}	240	1	6	10
✓✓ Hodgson Mill Apples & More Muesli (35 g)	150	1	4	5
✓✓ Seven Sundays Bircher Muesli (57 g)	240	1½	7	8
✓✓ Kellogg's Origins Muesli (51 g) ¹	180	2	6	6
✓✓ Bob's Red Mill Old Country Style Muesli (64 g)	220	2½	8	8
✓✓ Bob's Red Mill Muesli (58 g) ^G	220	2½	4	6

Single-Serve Hot Cereal

(1 package, oatmeal, unless noted)

	Calories	Total Sugars (tsp.)	Fiber (g)	Protein (g)
✓✓ Nature's Path Organic Original (50 g)	190	0	6	8
✓✓ Bakery on Main Traditional Instant (50 g) ^G	200	0	6	8
✓✓ Quaker Weight Control Instant (45 g) ¹	160	0 ^S	6 ^F	7
✓✓ Love Grown Original Super Oats Packets (43 g) ^G	170	0	5	7
✓✓ Nature's Path Organic Qi'a Cinnamon Pumpkin Seed (38 g) ^G	150	0	5 ^F	6
✓✓ Ancient Harvest Organic Ancient Grains Traditional (50 g) ^G	180	0	4	7
✓✓ 365 Organic (Whole Foods) Original Instant (40 g)	150	0	4	6
✓✓ Nature's Path Organic Qi'a Superseeds & Grains (38 g) ^G	150	0	4	6
✓✓ Nature's Path Organic Homestyle (40 g) ^G	170	0	4	6
✓✓ Country Choice Organic Original Steel Cut (40 g)	150	0	4	5
✓✓ Good Food Made Simple 100% Steel Cut Original Unsweetened, frozen (227 g)	150	0	4	5
✓✓ BetterOats Organic Raw Bare Instant Multigrain with Flax (42 g)	160	0	3	6
✓✓ Chex Original (35 g) ^G	130	0	3	5
✓✓ McCann's Regular Instant Irish (28 g)	100	0	3	4
✓✓ Quaker Original Instant—regular or Organic (28 g) ¹	100	0	3	4
✓✓ Arrowhead Mills Instant—Quinoa & Oat ^G or Organic Original (28 g) ¹	110	0	3	4
✓✓ BetterOats OatFit Instant with Flax (28 g) ¹	100	0 ^S	3	3
✓✓ Umpqua Oats Not Guilty (62 g)	250	½	8	9
✓✓ Trader Joe's Oatmeal Complete (40 g)	170	½	4	7
✓✓ Dr. McDougall's cups, without sugar packet (NA) ¹	210	1	8	7
✓✓ Quaker Lower Sugar Instant (34 g) ¹	120	1 ^S	3	4
✓✓ Quaker High Fiber Instant (45 g) ¹	160	1½ ^S	10 ^F	4
✓✓ Kashi GoLean Instant (40 g) ¹	150	1½	6 ^F	8
✓✓ Quaker 50% Less Sugar Instant cups (39 g) ¹	160	1½	3	4
✓✓ ThinkThin Protein & Fiber (51 g) ¹	190	2	5 ^F	10
✓✓ Kashi Heart to Heart Instant (43 g) ¹	150	2½	5 ^F	5
✓✓ 365 Organic (Whole Foods) Oats & Flax Instant (40 g)	150	2½	3	4
✓✓ Quaker Instant—except Original or Organic Original (40 g) ¹	150	2½	3	4
✓✓ Quaker Steel Cut Quick 3-Minute (47 g) ¹	180	2½	3	4
✓✓ Earnest Eats Hot & Fit Asia Blend cup (67 g)	280	3	7	8
✓✓ Quaker Protein Instant (62 g) ¹	240	3	5	10
✓✓ Kellogg's Special K Multi-Grain cups (52 g) ¹	190	3	5 ^F	8
✓✓ Love Grown Hot Oats cups (63 g) ^{1,G}	240	3	5	7
✓✓ Quaker Instant cups (48 g) ¹	180	3	4	6
✓✓ Chex—except Original (45 g) ^{1,G}	170	3	4	4
✓✓ Cocomama Quinoa (142 g, prepared) ^{1,G}	240	3	3	5
✓✓ Nature Valley Protein cups (73 g) ¹	280	3½	5	10
✓✓ Quaker Real Medleys Oatmeal+ cups (72 g) ¹	280	4	6	7

✓✓ Best Bite. ¹Average. ^GGluten-free. ^FIncludes added processed fiber. ^SContains acesulfame-potassium and/or sucralose. ¹Contains more than 100 mg of sodium.

Daily Limits (for a 2,000-calorie diet): **Sodium:** 1,500 milligrams. **Added Sugars:** 25 grams (6 tsp.) for women, 38 grams (9 tsp.) for men. (To convert teaspoons of sugar to grams, multiply by 4.2.) **Daily Targets: Fiber:** 28 grams. **Protein:** 75 grams.

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

RIGHT STUFF

CAULIFABULOUS



It's a wallflower no more. Cauliflower is hot.

The cruciferous vegetable that seemed to always take a backseat to broccoli is trending. One reason: the white veggie is a perfect stand-in for white rice, potatoes, and other carbs that many people overdo.

The trick is to chop (or grate) your head of cauliflower so finely that the pieces look almost as small as rice. Or just pick up a bag of **Green Giant Fresh Cauliflower Crumbles** from the supermarket's refrigerator case.

"These time-saving, washed and chopped nuggets are recipe-ready for roasting, baking, sautéing, mashing or steaming right in their package," says the Green Giant Fresh website. It doesn't get any easier.

The simplest way to prepare the crumbles: sauté in olive oil for a few minutes, until they start to brown slightly. Then season with a squeeze of fresh lemon and, if necessary, a pinch of salt. (Or check out our Dish of the Month.)

Straight from the bag, each serving—about a half cup cooked—has just 20 calories, yet delivers 2 grams of fiber, 70 percent of a day's vitamin C, 15 percent of a day's vitamin K, 10 percent of a day's folate, and 7 percent of a day's potassium.

Odds are, you won't stop at a half cup. But hey! It's cauliflower, so you don't have to.

greengiantfresh.com—(800) 998-9996

FOOD PORN

POT BELLY PIE

"Tender White Meat Chicken," says the label of **Marie Callender's Cheesy Chicken & Bacon Pot Pie**. "Just Like Home: Golden Flaky Crust Made From Scratch."

As opposed to recycled old crusts?

And there's nothing like tender white meat chicken made from chicken plus water, "isolated soy protein product" (soy protein, modified potato starch, corn starch, carrageenan, and soy lecithin), sugar, salt, and flavoring. Mmm.



Marie is so concerned about our health that she puts the calories (510), saturated fat (14 grams), and sodium (720 milligrams) smack on the front of the box. Nothing like full disclosure.

So what if people miss the "per 1 cup serving" in smaller print?

Folks can just whip out their calculators and figure out that each pie contains 2¼ cups, so it supplies 1,160 calories and 32 grams of sat fat (1½ days' worth). That's what you'd get in a 20 oz. Porterhouse from LongHorn Steakhouse. There's also the day's worth of sodium (1,630 mg) and the load of white flour.

"Pot Pies Just Like Mom Used to Make," says Marie's website. Who knew that *her* parent, food giant ConAgra, had such a strong maternal instinct?

mariecallendersmeals.com—(800) 595-7010

dish OF THE MONTH



Cauliflower "Rice" Pilaf

Sauté 1 diced onion in 1 Tbs. olive oil until lightly browned, 5-7 min. Stir in ¼ tsp. paprika, ¼ cup water, and 4 cups (1 lb.) finely chopped or grated cauliflower. Cover and cook until tender, 2-3 min. Stir in ¼ cup toasted almonds, 2 Tbs. dried currants, and ¼ tsp. salt. Serves 8.

quick tip

Your favorite fruits or veggies out of season? Check the supermarket's freezer case. Produce is typically flash frozen at the peak of ripeness, when it tends to be most nutrient packed. And you may be surprised at how good it tastes.