

Nutrition Action

JUNE 2018 \$2.50

HEALTH LETTER®
CENTER FOR SCIENCE IN THE PUBLIC INTEREST

Fake Fiber?

Good for health...or selling junk?



CANOLA OIL
& ALZHEIMER'S

1,000-calorie
ice cream pints???

RATING
VEGGIES

M E M O

Calories on Menus...Finally



At The Cheesecake Factory, the Louisiana Chicken Pasta has twice the calories of the Four Cheese Pasta (2,330 vs. 1,190). At California Pizza Kitchen, even the Quinoa and Arugula Salad has 1,070 calories.

But before May 7, not all customers would have known that.

Why May 7? By that date, chain restaurant menus and menu boards across the country had to disclose the calories in every menu item.

Getting there wasn't easy. Almost 30 years ago, Congress was debating the Nutrition Labeling and Education Act, the law that requires Nutrition Facts on food labels. One sticking point: What to do about restaurants?

Some legislators wanted to require them to disclose calories and other nutrients. But the restaurant industry vehemently objected. Lawmakers and outside supporters (like CSPI, publisher of *Nutrition Action*) feared that the whole bill might go down the drain, so they decided to deal with restaurants later.

It was a good trade-off. Nutrition Facts labels have helped millions of consumers become smarter shoppers.

But as time went by, restaurant meals—and waistlines—steadily grew. Cheeseburgers became double bacon cheeseburgers. Soft drinks morphed into quart-sized Big Gulps. So, in 2003, we started to push for a law requiring restaurants to post calories on menus.

At first, we focused on cities and states. Luckily, a public health champion—Michael Bloomberg—was the mayor of a city with an

assertive and talent-rich health department. We worked with the department of health to make New York the first city to require calories on menus, in 2006.

We also helped local groups in Philadelphia, Seattle, California, and some 20 other cities and states win menu labeling policies.

Different rules in different jurisdictions was promising to be a huge headache for chains.

Eventually, the restaurant industry came to the table. In 2010, it agreed to support a national bill, which passed that same year.

But movie theaters, pizza chains, and the alcohol industry wanted exemptions.



SHRIMP SCAMPI PASTA
Sautéed jumbo shrimp | spaghetti
sauce | diced tomatoes | garlic | fr
parmesan cheese (cal. 1590) | 18.5

Calories are now on chain restaurant menus and in supermarkets and convenience stores.

So did convenience stores and supermarkets (which offer bakery items, salad bars, sandwiches, and other prepared foods).

For eight years, we successfully fought them off. Kudos to Margo Wootan, CSPI's vice president for nutrition, for getting the original law passed and for fending off attempts to weaken it.

Calories on menus matter. They tell diners what's in their food and encourage chains to slim down their offerings.

And now, when you're at a chain with at least 20 locations, you can also ask for information about sodium, saturated fat, and other nutrients (numbers have to be made available, though not necessarily on the menu).

Up next: using the numbers on menus to urge restaurants to lower calories, offer half portions, and give their customers more healthy options. Stay tuned.

Peter G. Lurie, MD, MPH, President
[Center for Science in the Public Interest](#)

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Fake Fiber?

Good for health...or selling junk?



BY BONNIE LIEBMAN

"Very high in fiber," boasts the bag of Smart Sweets Gummy Bears, which have 100 percent of a day's worth of fiber in each serving. What does the fiber that's added to gummy bears do for you? Maybe nothing at all. Here's the scoop on which kinds of fiber do what.

"Introducing the sweet side of fiber," announces VitaFiber's [online video](#).

The syrupy liquid is an IMO, "short for isomaltooligosaccharide, which is a natural soluble dietary fiber made from tapioca," says the website.

"IMO helps improve digestion, strengthens your immune system, improves mineral absorption, lowers cholesterol, helps with weight control, and reduces the risk of disease."

Really?

And it's not just IMO.

"Fiber fit for all," proclaims Fibersol's [website](#). It offers companies "a full line of low-viscosity soluble dietary fiber ingredients made from cornstarch" that can be used "in a variety of food and beverage applications as well as in dietary supplements."

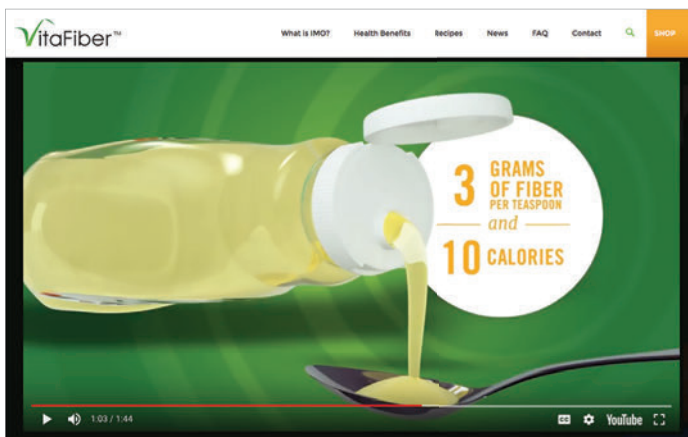
Variety is right. We're talking cakes, pastries, brownies, muffins, doughnuts, croissants, cookies, candy, chocolate centers, gummies, marshmallows, fudge, potato chips, trail mixes, energy bars, cereal bars, coffee whiteners, whipped toppings, gelato, and more, according to the website.

"Reach your desired fiber content/label claims with no effects on taste or viscosity," promises Fibersol, a joint venture that includes Archer Daniels Midland.

Fibersol shows up on labels as "soluble corn fiber," "resistant maltodextrin," or "maltodextrin."

It joins inulin, or chicory root extract (sold by Cargill and others), polydextrose (sold by DuPont and Tate & Lyle), and other processed "fibers" that companies add to food (see pages 4 and 5).

Yikes. Are cookies, cakes, and candy what experts have in mind when they encourage people to eat more fiber?



IMO boosts your immune system, keeps you slim, lowers cholesterol, and "reduces the risk of disease," says [VitaFiber](#).

Fiber 101

What is fiber, anyway?

"It's a group of nondigestible carbohydrates that are not broken down in the upper gut—that is, in the stomach or small intestine," says Nicola McKeown, a scientist in the nutritional epidemiology program at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University.

In 2002, a National Academy of

Sciences report broke down fiber into:

- **intact** fiber in fruits, vegetables, whole grains, and other plants, and
- **processed** fibers that are extracted from plants or made in a lab, but only if they have a benefit for health.

But for now, *any* processed fiber can count as "fiber" on Nutrition Facts labels. That will change in 2020, when most foods must carry the new version of those labels.

By then, says the Food and Drug Administration, Nutrition Facts labels will only count a processed fiber if it curbs food intake or improves regularity, cholesterol, blood sugar, or the body's ability to absorb a mineral like calcium.

"We're in a gray area now because the FDA is reviewing the evidence that has been submitted by the manufacturers of these fibers," says McKeown.

So far, the FDA has approved cellulose for regularity and six fibers—beta-glucan, psyllium, guar gum, pectin, locust bean gum, and hydroxypropylmethylcellulose—for lowering cholesterol levels.

"When the new labels are required, consumers can have confidence that any fiber that's listed on that label has a health benefit," notes McKeown. The

catch: the label won't say which benefit.

Want to stay regular? The fiber in that energy bar might only help you absorb more calcium or other minerals.

Hoping to curb your appetite? The fiber in that breakfast shake may only help lower your cholesterol.

"They don't all do the same thing any more than vitamins and minerals all do the same thing," explains McKeown, who led a team that compiled a database of nearly 1,000 fiber studies.

Gimme Gummies?



“Very high in fiber,” promise Smart Sweets Gummy Bears. “Very” is right. Each 90-calorie bag has 100 percent of a day’s fiber (28 grams). Wow. Labels can say “good source of fiber” with just 2.5 grams per serving, and “high in fiber” with only 5 grams.

Why so much fiber in gummy bears? Their prime ingredient is “prebiotic soluble fiber from tapioca,” or **isomaltooligosaccharides**, aka **IMO**. (They also contain chicory root fiber.)

IMO’s manufacturers mostly cite three key studies as evidence that IMO improves regularity. Two—on a total of 20 constipated elderly nursing home residents in Taiwan who were put on a low-fiber diet—weren’t well controlled.^{1,2}

And the largest (an unpublished industry study) found no increase in bowel movements in 61 people without constipation who were given 36 grams of IMO a day.³

“Kick sugar. Keep candy,” urges Smart Sweets. “3 g of sugar per bag.” (Its sweetness comes largely from stevia.)

But blood sugar may be no lower after consuming IMO than after eating sugar.³ So it’s no freebie for people with diabetes or anyone who wants to keep a lid on their blood sugar.

¹ *J. Am. Coll. Nutr.* 20: 44, 2001.

² *Nutrition* 27: 445, 2011.

³ www.regulations.gov/document?D=FDA-2016-P-4275-0006.

Gas Generator?

“High in fiber,” says Dannon Oikos Triple Zero greek yogurt.

Each tub has 6 grams of **chicory root fiber (inulin)**, which improves the “mouth-feel” or creaminess of low-fat foods and may temper the taste of Triple Zero’s stevia.



Companies extract the inulin in chicory root using hot water. They can then use enzymes to break up inulin’s long chains of sugar units (saccharides) into shorter chains, called **oligofructose**. Or they can make really **short-chain fructooligosaccharides** not from inulin, but simply by treating sugars with enzymes.

What can inulin do? Most studies find no effect on blood sugar, LDL (“bad”) cholesterol, regularity, or food intake.¹

However, a mix of inulin and oligofructose boosted calcium absorption and bone mineral density in a year-long study of adolescents.² It’s not clear if short-chain fructooligosaccharides can do the same, and only a few small studies have looked at inulin or oligofructose and calcium absorption in adults.

A possible downside: If excess calcium increases the risk of prostate cancer, absorbing more is a minus. Another: In many studies, people given inulin report more gas.³

¹ fda.gov/downloads/Food/LabelingNutrition/UCM529049.pdf.

² *Am. J. Clin. Nutr.* 82: 471, 2005.

³ *Food Funct.* 2: 72, 2011.

That’s not a problem with intact fiber. “Fruits, vegetables, beans, and whole grains have a mixture of fibers,” says McKeown. “So if you eat a plant-based diet, you’re getting all of them.”

But processed fibers are a different story. “Some may have no health benefits at all,” says McKeown. “Manufacturers add fibers for a variety of reasons, and that sometimes gives the food a health halo.”

Which fibers do what?

“It depends on the physiological characteristics of the fiber,” says McKeown. That includes whether the fiber is:

- **soluble** (it dissolves in water),
- **viscous** (it thickens or forms a gel when water is added), or
- **fermentable** (it’s broken down by gut

bacteria in the large intestine).

Many processed fibers are soluble, non-viscous, and fermentable. And that makes them the least likely to do much for your health.

Staying Regular

What’s the best fiber to prevent constipation?

“For regularity, we look for fiber that increases stool mass and stool frequency,” says McKeown. “If you’re eating a diet that’s rich in whole grains, legumes, fruits, and vegetables, that will contribute to an increase in stool bulk.”

Two types of fiber fit the bill.¹

“The first is insoluble fiber like wheat bran,” explains McKeown. But not just any wheat bran. “In order for bran to be

effective, it has to be relatively coarse,” she notes.

“It’s the coarseness that irritates the lining of the bowel, which stimulates water to be secreted. And it’s this water that leads to the softening and bulking effect on stool.”

When researchers had people swallow plastic particles that were cut to match the size and shape of coarse wheat bran particles, they boosted “output” like the wheat bran did. But small, smooth plastic particles did not.²

So if your whole-grain bread or cereal is made with finely ground bran, it may not do as much for your regularity as, say, bran flakes.

The second fiber with a laxative effect is “a soluble, gel-forming fiber, like psyllium,

that is able to hold on to moisture in the large bowel and is not fermented,” says McKeown.

Psyllium is the key ingredient in Metamucil. It’s also added to Kellogg’s Bran Buds cereal.

Why don’t fermentable fibers help?

“As they’re being fermented, they’re broken down by the gut microbiota in the large intestine, so they don’t contribute to stool mass,” says McKeown.

“They don’t have that stool-forming property.”

Most added fibers—like inulin, polydextrose, and soluble corn fiber—are fermentable.

Eating Less

Which processed fibers help you feel so full that you eat less at the next meal (even though that might not matter enough to help you lose weight)? So far, none.

“Companies have been piggybacking on satiety claims for added fibers such as inulin for years,” says Barbara Rolls, professor and the Helen A. Guthrie Chair of Nutritional Sciences at Penn State.

“But I don’t know if they have the evidence to substantiate those claims.”

In one study, Rolls fed people a 125-calorie “appetizer” of apple slices, applesauce (made from the same batch of apples), or apple juice either with or

without enough added fiber to match the fiber in the apple slices and applesauce.²

“The apple slices were most satiating,” says Rolls. People ate 190 fewer calories at their next meal after eating them, but only 100 fewer calories after the applesauce, and no fewer calories after either juice.

“What was it about the apples?” asks Rolls. “The chewing, the crunch, the cellular structure, the volume that comes from the intact cells and fiber—they can all have an impact on satiety.”

It’s not just the fiber in fruits and vegetables that makes them so filling.

“You can’t assume that just dumping a powder into a food is as effective as eating fiber in its natural form,” says Rolls.



Hedge Fudge



“5 g fiber,” says the box of Weight Watchers Giant Chocolate Fudge Ice Cream Bars. “No artificial sweeteners.”

Yes, but the bars’ main fiber—**polydextrose**—is artificial. It’s made by chemically altering the bonds between sugars so that our digestive enzymes can’t

break them down. They’re fermented by gut bacteria instead.

What can polydextrose do? Two companies—DuPont and Tate & Lyle—cite six studies as evidence that it leads people to eat less. But in one of the best of the six (funded by Tate & Lyle), people ate no less at lunch a few hours after they got 24 grams of polydextrose than after they got a placebo.¹ A more recent study, which was funded by DuPont, also came up empty.² Oops.

Polydextrose also has a laxative effect, say the companies. But the evidence is inconsistent. For example, about 20 grams a day led to no increase in stool frequency in one study and an increase from 4.4 to 5.5 stools over five days in another.^{3,4} People in both studies reported more gas.

So much for justifying that fudge bar as your tummy aid or hedge against weight gain.

¹ *Appetite* 56: 9, 2011.

² *Appetite* 110: 15, 2017.

³ *Br. J. Nutr.* 106: 1864, 2011.

⁴ *J. Nutr.* 143: 473, 2013.

Goodbye, Guilt?

“5 g of fiber so you can enjoy every bite,” says the Fiber One Salted Caramel Cheesecake Bar label.

Got that?

The fiber is there to wash away the guilt of eating a 150-calorie cookie made largely of cream cheese, white flour, sugar, and **soluble corn fiber** (aka **resistant maltodextrin**).

Soluble corn fiber is produced by using heat to make some of the chemical bonds in cornstarch indigestible, and by using enzymes to remove the remaining digestible bonds.

What can soluble corn fiber do? In most good studies, it doesn’t lower blood sugar.¹

However, doses of 10 to 20 grams a day increased calcium absorption or retention in three studies on a total of 52 adolescents and 12 postmenopausal women.^{2,3,4} Whether those studies are large and long enough to count as a health benefit is up to the FDA.

But absorbing more calcium may not be a plus for everyone (see “Gas Generator?” p. 4).



¹ *J. Agric. Food Chem.* 60: 11928, 2012.

² *J. Nutr.* 146: 1298, 2016.

³ *Am. J. Clin. Nutr.* 104: 837, 2016.

⁴ *Br. J. Nutr.* 112: 446, 2014.



Fibers with Benefits

Your goal: at least 28 grams a day.

Cereals

	Fiber (g)
Kellogg's All-Bran Buds (½ cup)	13
Kellogg's All-Bran Original (½ cup)	10
Post Shredded Wheat Wheat'n Bran (¼ cups)	8
Kellogg's Raisin Bran (1 cup)	7
Post Bran Flakes (¾ cup)	6
Post Shredded Wheat Original (1 cup)	6
Oats, any brand (1 cup cooked)	4

Legumes (cooked)

Black beans, lentils, pinto beans, or split peas (½ cup)	8
Chickpeas or kidney beans (½ cup)	6

Grains & Pasta (cooked)

Barley (1 cup) or bulgur (¾ cup)	6
Popcorn (4 cups)	5
Whole wheat pasta (1 cup)	5
Quinoa (¾ cup)	4
Brown rice (¾ cup)	3

Bread & Crackers

Wasa Crispbread, Light Rye (3)	5
Nabisco Triscuit Original (6)	3
Whole wheat bread (1 slice, 1.5 oz.)	3

Fruits

Blackberries or raspberries (1 cup)	8
Pear (1)	6
Avocado (½)	5
Apple (1)	4
Blueberries (1 cup)	4
Banana or orange (1)	3
Cherries or strawberries (1 cup)	3
Prunes (4)	3

Vegetables (cooked)

Sweet potato (1)	4
Broccoli (½ cup) or green beans (¾ cup)	3
Baby carrots (8)	2
Brussels sprouts or kale (½ cup)	2
Cauliflower (5 florets)	2
Corn or spinach (½ cup)	2

Nuts (amount closest to 1 oz.)

Almonds (23) or pistachios (49)	4
Peanuts (28) or peanut butter (2 Tbs.)	2

Sources: USDA and company information.

Lowering Cholesterol

Want to lower your LDL (“bad”) cholesterol? Look for soluble, gel-forming fibers like psyllium and beta-glucan (a fiber in oats and barley).¹

“Both have FDA-approved health claims for reducing cardiovascular disease by lowering cholesterol,” notes McKeown.

How do they work?

As the fiber moves down your intestine, it absorbs water from the partly digested food, making the entire mass thicker and more sludge-like. That traps bile acids.

“Our bodies are always making bile acids to break down the fat particles in food, so that they can be absorbed into the body,” says McKeown.

“The thickening mass traps bile acids that would normally be reabsorbed, and then eliminates them through the stool.” Once the bile acids are excreted, the body has to make more to replace them.

“The liver uses cholesterol to make bile acids, so there’s less cholesterol available to be wrapped into LDL particles,” explains McKeown. “That effectively lowers blood levels of LDL cholesterol.”

Keeping a Lid on Blood Sugar

Looking to curb spikes in blood sugar? “You’re back to the soluble, gel-forming fibers like beta-glucan and psyllium,” says McKeown.

“There doesn’t appear to be any effect on blood glucose from fibers that are non-viscous and readily fermented—like inulin, resistant starches, and wheat dextrin, for example.”

The soluble viscous fibers work by thickening the mush of food that travels down the intestine.

“If you’re eating fiber such as beta-glucan, the mush becomes so thick, it slows down the absorption of nutrients and glucose,” says McKeown.

“When we eat a meal, blood sugar increases. Having these types of fibers as part of the meal will blunt the rise in blood sugar. And that blunted response will require less insulin.”

Digesting It All

Could processed fibers have other health benefits? For example, IMO is “a prebiotic, which nourishes the good bacteria already in your gut,” says VitaFiber.



Made from cornstarch, [Fibersol](#) is marketed to companies that make candy, cookies, muffins, ice cream, etc.

Are fermentable fibers good for you simply because they may boost good bacteria? No, says the FDA.

“However, research on fermentable fibers and the gut is ongoing,” says McKeown. So stay tuned.

In the meantime, one result of all that fermenting is fairly reliable: more gas.

And keep in mind that experts set fiber targets based on studies of people who consume fiber-rich fruits, vegetables, whole grains, and beans, not gummy bears or cookies.

“Your first line of defense is to get adequate amounts of dietary fiber from a variety of plant foods,” says McKeown. 🍌

¹ *J. Acad. Nutr. Diet.* 117: 251, 2017.

² *Dig. Dis. Sci.* 44: 744, 1999.

³ *Appetite* 52: 416, 2009.

The BIG Picture

Extra weight—not just obesity—matters

BY BONNIE LIEBMAN

“American adults just keep getting fatter,” proclaimed the [New York Times](#) headline on March 23rd. “[New data](#) shows that nearly 40 percent of them were obese in 2015 and 2016, a sharp increase from a decade earlier, federal health officials reported Friday.” True, but that’s not the whole story.

It’s troubling that almost 40 percent of adults are obese. But most media reports neglected to mention that the rest of us aren’t exactly trim.

If you add the roughly 30 percent of adults who are overweight, now you’re talking 70 percent of Americans who are carrying around extra pounds.

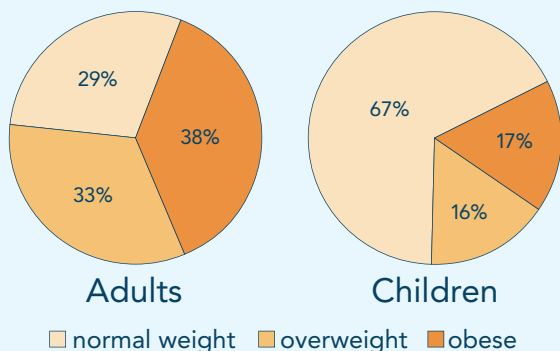
Granted, it’s obesity—not overweight—that has soared since around 1980. And yes, being obese puts you at greater risk of disease than being overweight. But being overweight is far from harmless.

The biggest danger: type 2 diabetes. The risk doubles even in the upper half of the normal weight range.

Likewise, being overweight (or obese) increases your risk of high blood pressure, heart disease, and gallstones, plus more than a dozen cancers—including colon, breast (after menopause), esophagus, gallbladder, pancreas, uterus, ovaries, kidney, and liver.

Overweight or Obese

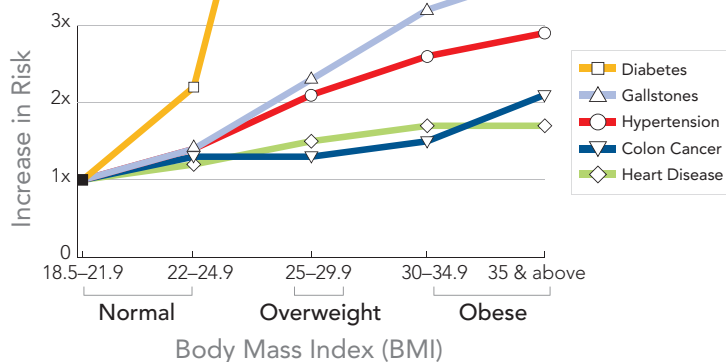
Roughly **70 percent of adults** and **33 percent of children & teens** are now overweight or obese.



Notes: The normal-weight slice includes underweight (1% of adults and 4% of children). Data are for 2013-14 because overweight prevalence data for 2015-16 are not yet available.

Sources: cdc.gov/nchs/data/hestat/obesity_adult_13_14/obesity_adult_13_14.pdf and cdc.gov/nchs/data/hestat/obesity_child_13_14/obesity_child_13_14.htm.

10-Year Risk of Disease



Compared to women at the lean end of the normal weight range, overweight women have a higher risk of type 2 diabetes, gallstones, high blood pressure, and heart disease, according to findings from the Nurses’ Health Study.

Type 2 diabetes is the greatest threat. The 10-year risk is 8 times higher for overweight women, 18 times higher for obese women (a BMI of 30 to 34.9), and 30 times higher for the most obese women (a BMI of 35 & above). Results in men are similar.

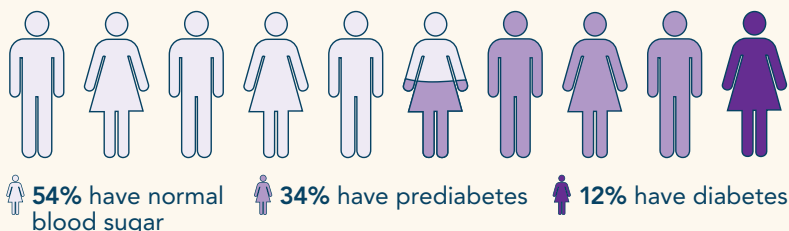
Source: [Arch. Intern. Med. 161: 1581, 2001.](#)

Diabetes or Prediabetes

Roughly 46% of adults now have prediabetes or diabetes (mostly type 2). Of those with diabetes, 26% are overweight and 61% are obese. 🍌

Source: cdc.gov/diabetes/data/statistics/statistics-report.html.

Of All Adults...



Quick Studies

A snapshot of the latest research on diet and exercise

What's a Normal Serving?



Have oversized servings in restaurants distorted our view of what's normal?

Scientists randomly assigned 277 people to be served a lunch with either a larger (440-calorie) or smaller (220-calorie) portion of quiche.

The next day, the participants were told to serve themselves a portion from a full, family-sized quiche. (The researchers pretended that the study had some other purpose.)

People who had gotten the larger serving on day one served themselves a larger portion on day two. What's more, they also chose a larger serving when asked to identify a "normal" portion of quiche that day or a week later.

What to do: Think twice before you eat everything a restaurant serves you. Odds are, you'd feel full with less.

[Am. J. Clin. Nutr. 107: 501, 640, 2018.](#)

Thinking About Fish Oil?

Is it worth taking fish oil to stay sharp?

Researchers randomly assigned roughly 400 people aged 65 to 90 to take a daily dose of either fish oil (with 1,720 milligrams of DHA plus 600 mg of EPA) or a placebo. None had memory loss when the study started.

After 1½ years, the fish oil takers scored no better than the placebo takers on tests of memory (short-term, working, or retrieval), reasoning, reaction time, or other measures of thinking ability.

What to do: Studies are ongoing, but so far, fish oil isn't a brain booster.

[Am. J. Clin. Nutr. 107: 754, 2018.](#)



B Vitamins for Fractures or Fatigue?

Can B vitamins protect bones or fight fatigue, as some people believe?

Scientists randomly assigned 5,442 women to take high daily doses of vitamin B-6 (50 milligrams), vitamin B-12 (1,000 micrograms), and folic acid (2,500 mcg), or a placebo. After seven years, the risk of bone fractures was no lower in the B vitamin takers.

In another study, researchers randomly

assigned 95 people with debilitating fatigue and irritable bowel syndrome or inflammatory bowel disease to take vitamin B-12 (1,000 mcg a day) or a placebo. After eight weeks, fatigue was no lower in the B-12 takers.

What to do: Don't expect B vitamins to work magic for fractures or fatigue. 🍌

[J. Bone Miner. Res. 32:2331, 2017.](#)
[Clin. Nutr. ESPEN 23:48, 2018.](#)

To Live Longer...

Americans live shorter lives than people in most other high-income countries.

What could lengthen lives?

Researchers tracked roughly 123,000 U.S.

men and women for 30 years.

Then they identified five "low-risk lifestyle factors": never smoking, normal body weight, more than 30 minutes of



moderate or vigorous exercise a day, moderate alcohol intake, and a healthy diet (high in vegetables, fruit, nuts, whole grains, polyunsaturated fats, and omega-3 fats and low in red and processed meats, sugar-sweetened beverages, trans fat, and sodium).

At age 50, someone with all five factors could expect to live 43 more years (women) or 38 more years (men). A 50-year-old with none of the factors could expect to live only 29 more years (women) or 26 more years (men).

What to do: Although this kind of study can't prove cause and effect, shoot for a low-risk lifestyle to hedge your bets.

[Circulation 2018. doi:10.1161/CIRCULATIONAHA.117.032047.](#)

From A2 milk to vitamin K2

What to make of the latest claims?

BY CAITLIN DOW

What's the scuttlebutt on what some foods, drinks, or vitamins can do to you or for you? Here are five claims you might have heard or read about.

a2 Milk for a Better Belly?

"I had to cut dairy out of my diet completely because it was causing my discomfort and bloating," says "Jilly" on The a2 Milk Company [website](#). "a2 Milk allows me to eat all my favourite foods again without the bad side effects."

A2 milk?

"Ordinary cows' milk contains a mix of A1 and A2 protein types," explains a2 Milk's label. "a2 Milk comes from cows that naturally produce only the A2 protein and no A1."

The company is targeting people who think they can't digest the lactose in milk.

"Millions of Americans have discomfort after drinking ordinary cows' milk, but in some cases, it is possible their symptoms may be caused by a sensitivity to the A1 protein!" says a2 Milk's [website](#).

The evidence? It's skimpy and (surprise!) largely funded by The a2 Milk Company.

In the largest study, Chinese researchers randomly assigned 600 adults to drink 10 oz. of a2 milk on one day and 10 oz. of ordinary milk on another.¹ All the participants said they had lactose intolerance.

The volunteers reported less severe gas, bloating, and abdominal pain after drink-

ing the a2 milk than after drinking the ordinary milk.

But the differences weren't impressive. For example, on a scale of 0 to 9, the volunteers reported a typical bloating score of 3 three hours after drinking ordinary milk and a score of 2 after drinking a2 milk.

"If 0 is no bloating and 9 is the worst bloating you've ever felt, some people might find that difference meaningful," says Shanti Eswaran, a gastroenterologist and assistant professor of medicine at the University of Michigan Medical Center.

"But, clinically, the difference is probably negligible." That's not all. The study had several irregularities.

For example, only 27 people reported "significant improvement" on any single symptom, but, somehow, 282 reported significant improvement on *all* symptoms.

And the researchers put people who had worse symptoms when they drank the a2 milk into the "no difference in symptoms" category—stacking the deck in favor of a2 milk.

Could the A1 protein cause the GI distress that many people blame on lactose?

"Maybe that's the case for a subset of people, but probably not the majority who complain of lactose intolerance," says Eswaran. "Most can't handle milk

or ice cream, but do fine with yogurt and cheese, which are very low in lactose but high in milk protein."

Eswaran says that she is "intrigued" by a2 milk, but far from sold on it yet.

"We need a study in a North American population," she says. "The Chinese drink far less milk than we do, yet most a2 studies have been done in China. So it's not clear how the results apply to Americans."

And we need studies that aren't funded by The a2 Milk Company.

The Bottom Line: Can a2 milk prevent "digestive discomfort"? Not based on the evidence so far.



A2 milk, now in many supermarkets, may not help your gut.

Canola Oil Causes Alzheimer's?

"Alzheimer's symptoms worsened by canola oil—and it could cause onset of dementia, scientists warn," ran [Newsweek's](#) headline in December.

Yikes. Time to toss your canola oil?

"I don't know how that study was ever published," says James Roede, a neurodegenerative disease researcher and assistant professor of toxicology in the department of pharmaceutical sciences at the University of Colorado, Denver.

The study [Newsweek](#) was describing used six-month-old mice that were genetically engineered to have Alzheimer's-like plaques in their brains. For six months, the mice got either a control or a "canola oil-enriched" diet—the equivalent of about a teaspoon of canola oil added to every 200 pounds of food.² (That's *enriched*?)

"Every part of the study design is flawed," says Roede.

First, what happens in the brains of

mice may not happen to people who get Alzheimer's disease.

"Normal mice won't develop plaques on their own, so this mouse model pushes the brain to produce amyloid with multiple copies of genes," explains Roede. "It's totally artificial."

And while people with Alzheimer's have plaques made of beta-amyloid protein, "amyloid may be a marker, not a cause, of the disease," notes Roede. "Studies that have targeted amyloid have failed to reverse symptoms."

Second, the researchers didn't report how much food the mice ate or what was in the control diet. Worse yet, "if you look at the data, barely anything was statistically significant," says Roede.

In 35 of the roughly 40 markers and tests of brain health that the researchers looked at, canola oil had no impact at all.

One, the Morris water maze, "is a great test for assessing learning and memory," says Roede. "And they saw no difference with canola oil."

As for the five statistically significant differences: they could have been due to chance.

The Bottom Line: The evidence that canola oil causes Alzheimer's? Zilch.

Sparkling Water Harms Your Teeth?

Sparkling water has all the bubbly and none of the sugar of soda. But is there a downside?

"Sparkling water is made by pumping carbon dioxide into water," explains John Ruby, a retired professor of pediatric dentistry at the University of Alabama, Birmingham. "The CO₂ turns into carbonic acid, and the pH drops."

A lower pH means that the liquid has become more acidic. (Pure water has a neutral pH of 7 on the 0-to-14 pH scale.)

Acids can erode tooth enamel. And "once you lose enamel, you never get it back,"



There's no evidence that canola oil causes Alzheimer's.

says Ruby. That can lead to sensitivity, discoloration, and loss of tooth structure.

"Erosion doesn't occur above pH 4," Ruby explains. "A pH of 3 to 4 is erosive, and 2 to 3 is extremely erosive." (Colas are around 2.4.)³

Seltzer or sparkling water with nothing added has a pH between 3 and 4, so either may damage your enamel.⁴ But drinking them with food raises the pH of what's in your mouth.

"So it's largely a problem if you're drinking them alone," says Ruby.

How much of a problem? No long-term studies have looked at enamel erosion in the teeth of sparkling-water drinkers.

And club soda and carbonated mineral water (like plain San Pellegrino or Perrier) have added or naturally occurring minerals, which raise the pH to about 5, well outside the erosion zone.³

One question mark: flavorings.

"When companies start adding citric acid to carbonated water or citric or phosphoric acid to soft drinks, we're in a different ballpark," says Ruby, "because that drops the pH."

Many flavored waters have two ingredients: carbonated water and natural flavors. Citric acid could be a component of one of those "flavors," but labels don't have to list it separately, so consumers would never know.

"There are naturally occurring citric acids in many citrus flavors," LaCroix told us. "However, the levels in the finished product are extremely low," and LaCroix is "less acidic than traditional soft drinks." (The company wouldn't give us pH levels for its waters.)

Tips for sparkling-water fans:

■ **Don't brush your teeth for at least 30 minutes after drinking.** "The acid in the

How Low Can You Go?

Beverages with a pH of 4 or less are acidic enough to erode tooth enamel if you drink them without food. Here's the pH of a sampling of drinks that researchers have tested.

Beverage	pH
Tap water	6.5–8.5
Milk	6.6–6.8
Perrier Sparkling Mineral Water	5.3
Canada Dry Club Soda	5.2
Starbucks Medium Roast Coffee	5.1
Unsweetened black tea	4.9
Beer (ale or lager)	3.8–4.2
Sparkling water	3.0–4.0
Wine (red or white)	2.9–3.9
Tropicana Orange Juice	3.8
Tropicana Apple Juice	3.5
Mountain Dew or Sprite	3.2
Coca-Cola	2.4

Sources: [US EPA, Modern Food Microbiology \(7th Ed.\)](#), [Agric. Food Chem.](#) 2016. doi:10.1021/acs.jafc.6b03013, [J. Am. Dent. Assoc.](#) 2016. doi:10.1016/j.adaj.2015.10.019, [Br. Dent. J.](#) 190: 374, 2001.

sparkling water softens up the surface of the tooth," Ruby explains. "That makes your teeth more sensitive to abrasion. The last thing you want to do is brush them."

■ **Don't sip all day without food.** The longer acids are in contact with your teeth, the more damage they do.

■ **Beware if you have dry mouth.** Saliva helps neutralize acid, so think twice about the bubbly if you have dry mouth.

The Bottom Line: Sparkling water is less acidic—and less sugary—than soda. It's not clear how much sparkling water is enough to erode your enamel, but if you're worried, don't overdo it.

Kava Cures Anxiety?

"Kava root has a long history of use in Polynesia for its mild sedative effects," says Craig Hopp, an expert on medicinal plants at the National Center for Complementary and Integrative Health.

"But that's very different from how people are using it today. Kava bars serving



Sparkling waters could reach the enamel-erosion zone.

kava drinks have sprung up, and you can get kava as a dietary supplement.”

Researchers are testing kava as a treatment for anxiety.

In the best study, which was funded by a kava distributor, 58 Australian adults with generalized anxiety disorder were randomly given a placebo or 120 milligrams a day of kavalactones (kava’s active ingredient) for six weeks. They each got a double dose if their anxiety didn’t drop after the first three weeks.⁵

At the end of the study, anxiety scores dropped by half or more in 37 percent of the kava takers, versus in 23 percent of the placebo takers.

That difference is about what researchers see in studies of some anti-anxiety prescription drugs, though the drugs have been tested in far more people.

“There hasn’t been a large, definitive clinical study that can say for sure that kava effectively treats anxiety,” says Hopp.

What’s more, he adds, “you can’t recommend kava without reservation.”

No kidding.

Roughly 20 years ago, scattered reports that kava could cause liver toxicity led to bans in Canada and some European countries. Most have since been lifted.

While “those cases were low relative to the number of people taking kava,” Hopp notes, scientists don’t know if something in the concentrated kava extracts in supplements could harm the liver or if kava could magnify the impact on the liver of alcohol or some medications.

So it’s best to proceed with caution.

“Traditionally, kava wasn’t consumed as a supplement, and it wasn’t consumed every day,” notes Hopp. “Polynesians

didn’t have their religious ceremonies at 5 o’clock on their way home from work.”

The Bottom

Line: There’s not enough evidence to know whether kava curbs anxiety.

K2 Strengthens Bones?

“Vitamin K2 is crucial for osteoporosis prevention,” claims Mercola.com (which will be happy to sell you a 30-day supply of K2 for \$28). Hold on.

“There are 11 forms of vitamin K,” says Sarah Booth, director of the Vitamin K Laboratory and of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University.

Leafy greens are good sources of K1. The other 10 forms, collectively called K2, are made by bacteria.

“We like to refer to a K2-rich diet as the Oktoberfest Diet,” says Booth. “Cheese, cured meat, sauerkraut. And natto”—fermented soybeans—“is also loaded with K2.”

Is K2 essential for healthy bones?

“Multiple proteins in bone require vitamin K,” Booth explains.

“For example, osteocalcin is a marker for bone formation, and it can’t bind to the calcium in bone unless it has vitamin K. And some data suggest a fairly strong association between blood markers of vitamin K intake and bone mineral density in older adults.”⁶

But when researchers randomly assigned



Cheese has vitamin K2. It’s too early to know if K2 strengthens bones.

people to take vitamin K1 or a placebo, most saw nothing.

“Multiple trials, including at our center, came up empty,” says Booth.⁷

Is vitamin K2 different?

Roughly 15 years ago, several Japanese studies reported a lower fracture risk in people given huge doses of K2—45,000 micrograms a day.⁸ The recommended daily intake is 120 micrograms (for all forms of vitamin K combined).

Newer trials testing lower doses of K2 have found either small or no benefits.⁹

For example, in one company-funded study, researchers assigned roughly 220 postmenopausal Dutch women to take a placebo or 180 micrograms a day of K2.¹⁰

After three years, the placebo takers had lost more bone mineral (3 percent) than the K2 takers (2 percent) at the site where most hip fractures occur. (The study didn’t measure hip fractures.)

While the difference was statistically significant, “I wouldn’t get too excited about it until other teams replicate those findings,” says Booth.

The same research team also reported less bone loss with vitamin K1 supplements, but other researchers later tried—and failed—to replicate that result.

The Bottom Line: “Right now, there is no evidence to support anyone taking vitamin K supplements for bone health,” says Booth. “You can easily get all forms of vitamin K from a healthy diet.” 🍌

¹ *Nutr. J.* 16: 72, 2017.

² *Sci. Rep.* 7: 17134, 2017.

³ *J. Am. Dent. Assoc.* 147: 255, 2016.

⁴ James M. Jay, Martin J. Loessner, and David A. Golden, *Modern Food Microbiology, 7th Edition* (New York: Springer, 2005), 210.

⁵ *J. Clin. Psychopharmacol.* 33: 643, 2013.

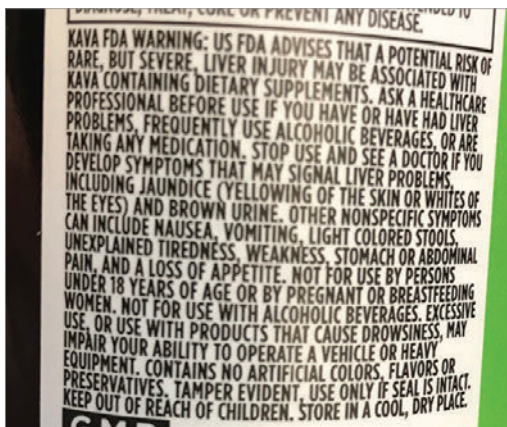
⁶ *J. Clin. Endocrinol. Metab.* 89: 4904, 2004.

⁷ *J. Clin. Endocrinol. Metab.* 93: 1217, 2008.

⁸ *Arch. Intern. Med.* 166: 1256, 2006.

⁹ *Osteoporos. Int.* 21: 1731, 2010.

¹⁰ *Osteoporos. Int.* 24: 2499, 2013.



Whole Foods voluntarily puts a warning on its kava supplement based on a 2002 FDA advisory.

The Healthy Cook

Get Sauced!

BY KATE SHERWOOD




I've left out pungent ingredients (like cheese, onion, and garlic) in these two super-fresh herb sauces, so they're flexible enough to brighten up almost any dish. Spoon either sauce over fish or chicken. Or toss with vegetables, beans, lentils, or whole grains. 🍋

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

Pistachio Lemon Pesto

- 2 cups basil leaves
- 1 cup flat-leaf parsley
- ¼ cup roasted salted pistachios
- ¼ cup extra-virgin olive oil
- 1½ Tbs. fresh lemon juice
- ½ tsp. lemon zest
- ¼ tsp. kosher salt

PER SERVING (2 Tbs.): calories 170 | total fat 17 g
sat fat 2.5 g | sodium 160 mg

 MAKES 8 TBS.

Chimichurri

- 2 cups flat-leaf parsley
- 1 cup cilantro
- ¼ cup mint leaves
- ½ serrano pepper, seeded
- ¼ cup extra-virgin olive oil
- 1½ Tbs. red wine vinegar
- ¼ tsp. kosher salt

PER SERVING (2 Tbs.): calories 130 | total fat 14 g
sat fat 2 g | sodium 140 mg

 MAKES 8 TBS.

Instructions: Put all ingredients into a small food processor. Pulse until uniformly minced, scraping down the sides as needed.

Veggies

Who knew?

BY BONNIE LIEBMAN & LINDSAY MOYER

Vegetables are superstars. Nearly every diet—from Mediterranean to Paleo to Weight Watchers to DASH—wants a piece of them. Think you know your veggies? Some of these 10 things may surprise you.

The information for this article was compiled by Jennifer Urban and Jolene Mafnas.

1. You probably don't eat enough.

Nine out of 10 Americans fall short. A good target: at least 2½ to 3 cups a day.

Better yet, forget the cups. Cover *half* your plate—and not just at dinner—with vegetables (and/or fruit).

TOP 5 FOLATE



Frisée
Asparagus
Romaine lettuce
Spinach
Turnip greens

And don't forget snacks. What better way to tide you over to your next meal without ruining your appetite or gobbling up your calorie budget?

2. Veggies help you slash calories.

You don't find many foods with just 10 to 50 calories per serving. Talk about an almost-free lunch. Vegetables are mostly water, so unless you smother them with dressing, sauce, butter, or sauté oils, they're a steal.

And now you can replace boring white rice with "rice" made of cauliflower, or trade your pasta for zucchini spirals.

TOP 5 FIBER



Artichoke
Peas
Avocado
Lima beans
Jicama

The calories drop from 200 to 20 per cup. Or swap your white flour wrap for one made of lettuce.

And there's no better swap for chips or pretzels or crackers. Walking in the door famished? Grab a handful of carrots or grape tomatoes or sugar snap peas to munch on as you cook dinner.

3. The evidence is strongest that veggies protect your heart and brain.

You may think of vegetables as cancer fighters, but there's more evidence that they protect your blood vessels.

In a recent meta-analysis of up to 20 studies on up to a million people, those who ate 18 ounces of vegetables (about 3 cups) a day had roughly a 30 percent lower risk of heart disease and stroke than those who ate little or none.¹

Something else about vegetable eaters could partly explain the results from those and other studies that track what people eat and their health for years.

But in the DASH (Dietary Approaches to Stop Hypertension) study, systolic blood pressure (the higher number) dropped by 8 to 14 points when people were fed a diet rich in vegetables and fruit. (The diet was also low in added sugars, saturated fat, refined grains, and salt.) That's about the same drop you'd get from some drugs that lower blood pressure.

4. Veggies may lower the risk of breast cancer. Cancers vary. Vegetables may help prevent some but not others.

For example, in a pooled analysis of 20 studies on nearly a million women, vegetables were not linked to the most common breast tumors, which are fueled by estrogen (estrogen-positive). However, women who ate the most vegetables (at least 14 oz. a day) had a 15 percent lower risk of estrogen-negative breast cancer

TOP 5 BETA-CAROTENE



Sweet potato
Pumpkin
Carrots
Mustard greens
Spinach

than those who ate about 5 oz.² And estrogen-negative tumors have lower survival rates, so preventing them is crucial.

5. Veggies may protect your eyes.

Many vegetables, especially leafy greens, are rich in lutein and its twin, zeaxanthin. Although the evidence isn't sewn up, both clearly matter for eyes.

They are the only carotenoids in the lens and the retina, where they absorb damaging light and protect against oxidation. And levels are 100-fold higher in the mac-

TOP 5 LUTEIN



Spinach
Swiss chard
Mustard greens
Turnip greens
Radicchio

ula (the center of the retina)—which lets us see the finest detail and is exposed to the most light—than elsewhere in the eye.

In a study that tracked some 100,000

men and women for roughly 25 years, those who consumed the most lutein plus zeaxanthin had a 40 percent lower risk of advanced macular degeneration than those who consumed the least.³

TOP 5 VITAMIN C



Red bell pepper
Broccoli
Green bell pepper
Green chili pepper
Brussels sprouts

A similar study found an 18 percent lower risk of cataracts in women who reported eating the most lutein.⁴ Go greens!

6. Veggies pile on the potassium. Potassium helps lower blood pressure, and it may also make blood vessels less stiff. That could explain why people who eat more have a lower risk of stroke.⁵

But getting enough potassium—4,700 milligrams a day—is a tall order.

TOP 5 POTASSIUM



Sweet potato
Lima beans
Swiss chard
Spinach
Portobello mushrooms

That is, unless you cover half your plate with vegetables (or fruit), which pour on the potassium without a load of calories.

(We left white potatoes out of our Top 5 potassium list because Americans already eat too many fries and potato chips.)

7. Leafy greens may lower your risk of diabetes. In some studies, people who eat more leafy greens have a lower risk of type 2 diabetes. Magnesium may explain why.⁶

Half the population gets less magnesium than experts recommend. Although more studies are needed, magnesium may help keep a lid on blood sugar.

Magnesium is at the heart of the chlorophyll molecule that makes leaves green, so bring on the spinach, etc.

TOP 5 MAGNESIUM



Spinach
Swiss chard
Lima beans
Artichoke
Peas

8. Veggies may preserve your bones. When researchers pooled data on roughly 142,000 European and U.S. residents aged 60 or older, those who ate no more than one serving of vegetables a day had a 12 percent higher risk of hip fracture than those who ate about two to three servings.⁷

It's too early to tell how—or if—veggies help keep bones strong. Stay tuned.

9. All veggies are good veggies. Some, though, are richer in nutrients than others. We've ranked them from most to least nutrient packed on p. 15.

Want even higher scores? Double—or triple—the serving size. (Who stops at a half cup of bok choy or broccoli, anyway?)

And who cares if a vegetable like mushrooms brings up the rear? They boost your potassium for hardly any calories. As for shiitakes and portobellos: Who could live without 'em?

One more thing: our scores give no credit for phytochemicals that may eventually turn out to matter.

TOP 5 VITAMIN K



Mustard greens
Spinach
Kale
Collard greens
Turnip greens

10. Veggies are delicious. Mushroom ragù. Braised greens. Roasted parsnips, radishes, and carrots. Grilled cauliflower steaks.

Want more? We got a million. 🍴

¹ *Int. J. Epidemiol.* 46: 1029, 2017.
² *J. Natl. Cancer Inst.* 105: 219, 2013.
³ *JAMA Ophthalmol.* 133: 1415, 2015.
⁴ *Arch. Ophthalmol.* 126: 102, 2008.
⁵ *Stroke* 45: 2874, 2014.
⁶ *Eur. J. Clin. Nutr.* 66: 1082, 2012.
⁷ *J. Bone Miner. Res.* 31: 1743, 2016.



The Greens Party

A serving of vegetables is typically only ½ cup, so you can easily run up the score by eating two or three servings at a single sitting. (The servings in our chart are cooked, unless noted.)

How We Got Our Scores

We calculated a score for each vegetable by adding up its percentage of the recommended daily intake for eight nutrients, lutein (plus zeaxanthin), and carotenoids other than lutein. We used the Daily Value (DV) for all but three. For calcium, we used the Recommended Dietary Allowance (RDA) for women over 50 and men over 70. And for lutein (plus zeaxanthin) and other carotenoids, we devised our own recommended intakes from available research.

For example, half a cup of cooked spinach has 320 percent of our target for lutein and 178 percent of our target for other carotenoids, 10 percent of the RDA for calcium, and 350 percent of the DV for vitamin K, 31 percent for folate, 18 percent for magnesium, 17 percent for iron, 9 percent for vitamin C, 8 percent for potassium, and 7 percent for fiber. That gives it a score of 948 points.

We counted calcium, iron, folate, and magnesium in our scores but they're not in the chart. Ditto for carotenoids other than lutein, which include alpha-carotene, beta-carotene, beta-cryptoxanthin, and lycopene.

Vegetables are ranked by highest to lowest score, then least to most calories.

Superstars 150+

	Score	Calories	Vitamin K	Lutein	Vitamin C	Potassium	Fiber
Mustard greens (½ cup)	976	20	+	+	+	+	+
Spinach (½ cup)	948	20	+	+	+	+	+
Swiss chard (½ cup)	716	15	+	+	+	+	+
Turnip greens (½ cup)	714	15	+	+	+	+	+
Spinach, raw (2 cups)	683	15	+	+	+	+	+
Collard greens (½ cup)	649	30	+	+	+	+	+
Canned pumpkin (½ cup)	576	45	+	+	+	+	+
Kale (¾ cup)	553	30	+	+	+	+	+
Sweet potato (1)	509	100	+	+	+	+	+
Radicchio, raw (2 cups)	439	20	+	+	+	+	+
Carrots (½ cup)	397	30	+	+	+	+	+
Broccoli rabe (½ cup)	390	20	+	+	+	+	+
Romaine lettuce, raw (2 cups)	375	15	+	+	+	+	+
Baby carrots, raw (8)	315	30	+	+	+	+	+
Frisée, raw (2 cups)	310	15	+	+	+	+	+
Butternut squash (½ cup)	296	35	+	+	+	+	+
Broccoli, raw (3 spears)	270	30	+	+	+	+	+
Broccoli (½ cup)	266	30	+	+	+	+	+
Bibb or Boston lettuce, raw (2 cups)	261	15	+	+	+	+	+
Green leaf lettuce, raw (2 cups)	252	10	+	+	+	+	+
Brussels sprouts (½ cup)	248	30	+	+	+	+	+
Red bell pepper (¾ cup)	239	25	+	+	+	+	+
Red bell pepper, raw (½ large)	203	25	+	+	+	+	+
Red leaf lettuce, raw (2 cups)	200	5	+	+	+	+	+
Peas (½ cup)	171	70	+	+	+	+	+
Bok choy (½ cup)	155	10	+	+	+	+	+

Veggie Good 50–149

Asparagus (6 spears)	142	20	+	+	+	+	+
Red cabbage, raw (1 cup)	140	30	+	+	+	+	+
Arugula, raw (2 cups)	137	10	+	+	+	+	+
Tomato (½ cup)	136	15	+	+	+	+	+
Cabbage, raw (1 cup)	124	20	+	+	+	+	+
Savoy cabbage, raw (1 cup)	114	20	+	+	+	+	+
Green bell pepper (¾ cup)	113	25	+	+	+	+	+
Green beans (¾ cup)	102	30	+	+	+	+	+
Scallions, raw (½ cup)	101	10	+	+	+	+	+
Red cabbage (½ cup)	95	25	+	+	+	+	+
Cauliflower, raw (7 florets)	93	25	+	+	+	+	+
Okra (½ cup)	91	20	+	+	+	+	+
Zucchini (½ cup)	88	15	+	+	+	+	+
Artichoke hearts (½ cup)	86	45	+	+	+	+	+
Green chili pepper, raw (½)	82	10	+	+	+	+	+

	Score	Calories	Vitamin K	Lutein	Vitamin C	Potassium	Fiber
Leeks (¾ cup)	82	25	+	+	+	+	+
Cauliflower (5 florets)	81	20	+	+	+	+	+
Lima beans (½ cup)	80	110	+	+	+	+	+
Avocado, raw (½)	74	110	+	+	+	+	+
Potato with skin (1 small)	74	130	+	+	+	+	+
Iceberg lettuce, raw (2 cups)	73	15	+	+	+	+	+
Kohlrabi (½ cup)	72	25	+	+	+	+	+
Jalapeño pepper, raw (2)	63	10	+	+	+	+	+
Yellow corn (½ cup)	61	80	+	+	+	+	+
Celery, raw (2 stalks)	60	15	+	+	+	+	+
Parsnips (½ cup)	55	60	+	+	+	+	+

Gotta Love 'em 0–49

Jicama, raw (¾ cup)	46	35	+	+	+	+	+
Beets (½ cup)	43	35	+	+	+	+	+
Cucumber with peel, raw (½)	34	15	+	+	+	+	+
Rutabaga (½ cup)	34	25	+	+	+	+	+
White corn (½ cup)	33	80	+	+	+	+	+
White (button) mushrooms (½ cup)	31	25	+	+	+	+	+
Turnips (½ cup)	27	20	+	+	+	+	+
Portobello mushrooms (¾ cup)	24	25	+	+	+	+	+
White (button) mushrooms, raw (5)	20	20	+	+	+	+	+
Spaghetti squash (½ cup)	20	25	+	+	+	+	+
Onion (½ cup)	20	35	+	+	+	+	+
Eggplant (¾ cup)	19	25	+	+	+	+	+
Shiitake mushrooms (½ cup)	18	50	+	+	+	+	+
Radishes, raw (3 large)	11	5	+	+	+	+	+

Source: U.S. Department of Agriculture National Nutrient Database (ndb.nal.usda.gov).

Key

Percentage of the recommended daily intake:

- ⊕ More than 100%
- ⊕ 76%–100%
- ⊕ 51%–75%
- ⊕ 26%–50%
- ⊕ 1%–25%
- ⊕ Less than 1%

All numbers have been rounded to the nearest whole percent.

Recommended Daily Intakes

Calcium: 1,200 mg¹
 Carotenoids other than lutein: 3,000 mcg²
 Fiber: 28 g
 Folate: 400 mcg
 Iron: 18 mg

Lutein: 3,000 mcg²
 Magnesium: 420 mg
 Potassium: 4,700 mg
 Vitamin C: 90 mg
 Vitamin K: 120 mcg

¹ RDA for women over 50 and men over 70.

² NAH daily target based on available research.

All other numbers are DVs.



RIGHT STUFF

You Go, Girl



These days, clamshells or bags of fresh—even organic—greens are just about everywhere.

Ever muse about having something *other* than baby spinach or baby kale or spring mix?

Organicgirl to the rescue. Her pre-washed **Good Clean Greens** offer a handful of new twists to supercharge your salads. Our faves:

The **Mâche Rosettes** are sweet, mild, crisp, and extraordinarily delicate. (Mâche—pronounced “mosh”—is an “heirloom green prized for centuries by Europeans for its fresh, nutty flavor.”) Dress the leaves lightly with a vinaigrette, toss them by hand, and eat them quickly.

Ditto for the **Mâche Blend** (baby chard, mâche rosettes, tango lettuce) and the sublime **Sweet Pea** (sweet pea shoots, baby bok choy, plus romaine, lolita rosa, and three other kinds of lettuce).

The more robust **Super Spinach!** (baby spinach, bok choy, kale) and **Super-greens!** (baby chard, tat soi, spinach, arugula) can handle richer, creamier dressings like ranch and caesar. And they don't wilt as quickly.

For an OMG moment, stir-fry either for one to two minutes with minced garlic and a splash of reduced-sodium soy sauce.

Since we're talking leafy greens, any of the blends will give you a serious dose of vitamins and minerals for just a handful of calories (see p. 13).

That makes them kind of...organicgreat.

iloveorganicgirl.com—(866) 486-4939

Photos: CSPI (Jolene Mahas—top left, Jennifer Urban—top right, Kate Sherwood & Jennifer Urban—center), Dmitry Golbay/stock.adobe.com (bottom).

FOOD PORN



Unwise Crack

“Magnum **Tubs** offer a new, multisensory way to enjoy Magnum Ice Cream that is unlike anything available in the category today,” said Unilever (Magnum's parent company) in a January [press release](#).

“The sides of the Magnum Tub are encased in a shell of chocolate, which preserves the iconic chocolate crack that ice cream lovers hear upon biting into a Magnum Ice Cream bar.”

Translation: You experience the excitement of squeezing the container to crack the chocolate casing before digging in. Isn't it amazing what flagging sales—and a little competition from low-cal upstart Halo Top—can do to a company's creative juices?

Multisensory? Does that mean you'll be able to feel your insulin surging from the sugar and your arteries choking from the saturated fat?



Thanks to the new Nutrition Facts label—kudos to Magnum for rolling it out before the 2020 deadline—you don't need a calculator to know what's in a serving (2/3 cup)...or in the entire pint. (Yes, Virginia, that's a serving for some.)

A pint of the **Milk Chocolate Hazelnut** delivers 1,020 calories, 39 grams (a two-day supply) of saturated fat, and 69 grams (16 teaspoons) of added sugar.

The **Milk** or **White Chocolate Vanilla** and **Dark Chocolate Raspberry** are in the same ballpark.

It's like eating half a *tub* (three cups) of Breyers Chocolate Ice Cream topped with five pats of butter. Of course, you'd have to get your crack somewhere else.

magnumicecream.com—(800) 634-7532



DISH

of the month

Simple Summer Salad

Top 4 cups salad greens with 1 sliced plum or nectarine, ½ sliced avocado, and 2 Tbs. sunflower seeds. Whisk 1 Tbs. extra-virgin olive oil, 1 tsp. balsamic vinegar, and ¼ tsp. salt with a grind of black pepper. Drizzle over the salad. Serves 2.

quick tip

The more you chop an onion or garlic, the more cell walls you break and the stronger the flavor. The most pungent: minced, grated, or food-processed. The mildest: sliced with a sharp knife.

