Carbohydrate Confusion

Should you avoid carbs at all costs?

Our Planet AT RISK

The Best SPREADS

3 Veggie Dips

Actor Halle Berry "swears by the ketogenic diet," according to Women’s Health magazine.
MEAT THE FUTURE

It’s daunting to think about the damage we’re doing to our planet, and the harm it will do to our own health.

But as our interview with Harvard’s Sam Myers (see p. 7) shows, solutions do exist. Some, like reducing carbon emissions from vehicles and power plants, are well known; others are less recognized. For example, livestock accounted for an estimated 15 percent of human-induced worldwide greenhouse gas emissions in 2005.

Eating less beef could drive down emissions because cattle (even if grass-fed) emit methane, a greenhouse gas that is 25 times more potent than carbon dioxide.

What’s more, it takes tremendous quantities of water, pesticides, and fertilizer to grow the crops that animals eat. Add to that the damage caused by the animal excrement and fertilizer that can pollute our streams, rivers, and air.

That enormous environmental insult has spurred scientists and entrepreneurs to try to produce meat without farming—in a laboratory.

In essence, muscle cells from meat are placed in a petri dish and allowed to divide until enough meat is “grown.” (Companies are still working on creating the texture and mouthfeel of meat.)

It sounds like science fiction, and indeed, man-made “meats” have shown up in everything from Star Trek to Margaret Atwood. Even conventional meat producers Cargill and Tyson have invested in lab-grown meat start-ups.

The product—which is years away from supermarket shelves—is sometimes called “clean meat,” “cultured meat,” or “cell-based meat.” But not if the U.S. Cattlemen’s Association has its way.

In February, the cattlemen petitioned the U.S. Department of Agriculture to limit the words “meat” and “beef” to animals raised the traditional way. (That would also ban those words on plant-based foods like Beyond Meat, even when the products are obviously not meat.)

In May, the Center for Science in the Public Interest, publisher of Nutrition Action, and the Consumer Federation of America urged the USDA to deny the petition, since there is no evidence that consumers are being misled. (Of course, if lab-grown meat isn’t actually meat, as the beef industry insists, the USDA has no legal authority to regulate it. The Food and Drug Administration would.)

In July, CSPI’s Greg Jaffe spoke at a meeting on lab-grown meat held by the FDA. Greg argued that if the FDA regulates lab-grown meat, the agency must review the safety of the technology and the foods well before the burgers and steaks reach supermarket shelves.

Only then will consumers have confidence in these emerging foods. And only then can these foods help us confront the threats facing our beleaguered planet.

Lab-grown meat could help curtail damage from raising livestock, but we have to be sure that it’s safe.

Drug Administration would.)

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

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Interest in the ketogenic diet grows for weight loss and type 2 diabetes,” reported a news article (not a study) in the Journal of the American Medical Association in January. A ketogenic diet—which is very low in carbohydrates and high in fat—may be getting attention, but the evidence to support it is far from solid.

**Weight Loss**

“Low-carb and low-fat diets equally effective for losing weight: Study.”

That headline, which ran in Newsweek in February, was reporting on DIETFITS, a year-long study on 609 people who were assigned to eat healthy diets with as little fat or carbs as possible.1

It’s not just DIETFITS. The Pounds Lost trial tested diets that were higher or lower in carbs, fat, or protein on 811 people. After two years, weight loss was the same.2

“The Pounds Lost results make a very strong case that it doesn’t matter which you cut—fat, carbs, or protein,” says lead author Frank Sacks, professor of cardiovascular disease prevention at the Harvard T.H. Chan School of Public Health.

But those and similar studies didn’t end the debate over low-carb diets and weight loss.

“What is this keto diet you keep hearing about, and is it healthy?” asked Bon Appétit in August. “With celebrities like Halle Berry and Kourtney Kardashian getting on board, we have a feeling that interest won’t be waning any time soon.”

A ketogenic diet is not just low—it’s very low—in carbs: no more than 20 to 50 grams a day. (The average adult consumes about 245 grams of carbs a day.) Without carbs to burn for fuel, the body breaks down fat—from food or the fat in your cells—into ketones (like acetone) that can be burned for fuel instead. When it does, you’re in ketosis.

A strict version of the diet has been used since the 1920s to treat children with drug-resistant epilepsy.

“It’s not an easy diet to follow even for a few months,” says Sacks. “Look at all the carbohydrate-containing foods you can’t eat.”

It’s not just carrots, oranges, beans, oatmeal, and other healthy carbs. It’s goodbye burgers, fries, sodas, shakes, pizza, burritos, sandwiches, breads, bagels, buns, pasta, rice, cereals, chips, muffins, cakes, cookies, candy, and just about all junk food.

And it’s hello fats—cream, butter, oils, nuts, avocado—along with fatty meats and cheese. You can eat protein, but not too much, because it boosts insulin levels.

“One of the things that’s driving the ketosis is the low levels of insulin,” says Kevin Hall, senior investigator at the National Institute of Diabetes and Digestive and Kidney Diseases.

“Keeping insulin low drives the liver to take up the fatty acids from fat cells and produce ketones.” That doesn’t happen if insulin goes up. But those ketones have a downside.

“People don’t feel so well,” says Sacks. “They have side effects like fatigue, bad breath, bloating, and constipation.” Some diet books call it the “keto flu.” They’re constipated because they can’t eat fiber-rich foods like whole grains, beans, or some fruits and vegetables.

“A fiber supplement is generally recommended because most people don’t get enough fiber to move their bowels efficiently,” says Judith Wylie-Rosett, who heads the division of health promotion and nutrition research at the Albert Einstein College of Medicine in New York.

You can eat some fruit (like berries) and some vegetables in some ketogenic diets. “They tend to focus on low-carb...
A ketogenic diet for diabetes?

**Virta Health Corporation**, one of several high-tech companies that offer online programs to help people manage their type 2 diabetes remotely.

(Virta charges a one-time $500 initiation fee, plus $370 a month for one year and $199 a month subsequently, though some employers and health plans cover the cost, says Virta.)

Virta’s diet typically allows less than 30 grams of carbs a day, but the company doesn’t disclose the details.

“While there are many ways to achieve ketosis, Virta uses its own, proprietary, clinically-tested high fat, moderate protein, low carbohydrate protocol,” says the [website](https://www.virtahealth.com/). Participants get video chats with a physician, a personal health coach, and a Starter Kit with lancets so they can take blood samples to test their blood sugar and blood ketone levels at home.

The catch: Virta’s treatment was “clinically proven” in the company’s own non-randomized study.

Instead of randomly assigning people to either Virta or a control treatment, the researchers—mostly Virta employees who had been offered stock options—compared 262 people with type 2 diabetes who volunteered to try Virta’s program to 87 others who were not interested, so they just kept seeing their own doctors and eating their usual diet.

Not surprisingly, nothing changed in the control group after a year. But among those who got the Virta treatment, the one-year results were impressive:

- **Hemoglobin A1c** (a long-term measure of blood sugar) dropped from an average of 7.6 to 6.3 percent. (An A1c of 6.5 or higher is diabetes. Prediabetes is 5.7 to 6.4.)

- **Weight** dropped an average of 30 pounds (down from an average of 256 pounds).

- **Diabetes medications** dropped. At the outset, 57 percent of the Virta group took drugs other than metformin. After a year, it was only 30 percent.

“The results are very promising,” says Hall. But questions remain:

- **Selection bias?** “Because the trial wasn’t randomized, you can only draw limited conclusions from the data,” says Hall. “You have to worry about selection bias, because the folks who got the Virta treatment were highly motivated to stick to the program.”

So you can’t chalk up their greater success to Virta’s patented knowledge. The latest study offers less reason to doubt it.

**Performance bias?** “If given the option, people may give more attention to Virta.”

“Can a ketogenic diet make new cancer drugs work better?”

When researchers give medications, they don’t know what effect they have until after the fact. But what if they could test new drugs more efficiently? A new approach might.

Cancer is a group of diseases whose cells grow and spread uncontrollably. Unlike other drugs, cancer drugs can’t be given in large amounts because they’re toxic to normal tissues. “But a ketogenic diet may make cancer drugs work a lot better,” says Hall. “It’s a potential breakthrough.”
A ketogenic diet helps a new class of cancer drugs work, at least in mice. But the diet alone made some cancers worse.

Can a ketogenic diet make new cancer drugs work better?


Whoa. It’s a huge leap to go from saying that blood sugar fuels cancer cells to calling sugar a carcinogen.

But a recent study in mice does suggest that very-low-carb diets may make some cancer-fighting drugs more effective.1

“A series of cancer drugs are being developed to inhibit an enzyme called PI3-kinase,” explains Benjamin Hopkins, a postdoctoral associate at the Weill Cornell Medical College.

Mutations in the PI3K pathway are found in more than a third of all tumors in the breast, uterus, prostate, colon, and other organs.2 So drugs that turn off the enzyme hold promise.

“People were excited about the PI3K inhibitors because PI3K is a fundamentally important pathway in that tumors need nutrients to grow,” notes Hopkins.

PI3-kinase is activated by insulin. “Researchers thought that by turning off insulin signaling, you’re telling tumor cells that they don’t have the resources to continue to divide,” says Hopkins.

But trials testing the drugs have been disappointing. So far, the FDA has approved only one, Aliqopa, and only for treating relapsed follicular lymphoma.

“For almost a decade now, clinical trials on PI3K inhibitors have never quite had the impact on cancer that clinicians thought they should,” notes Hopkins.

So he and his colleagues, including lab director Lewis Cantley and author and oncologist Siddhartha Mukherjee, tried to figure out why.

“We and others observed that when patients received these compounds, their blood sugar spiked,” says Hopkins. “That’s because when the drugs blocked insulin, which allows blood sugar to enter cells, the cells ran short on fuel. That prompted the liver to break down its carbohydrate (glycogen) stores, sending a burst of sugar into the bloodstream. But the rise in blood sugar didn’t last.”

“If your glucose goes high, insulin is released by your pancreas to lower it,” says Hopkins. “That’s a sign that your body is reactivating the very insulin-signaling pathway that the drugs are targeting. It’s undercutting the drugs before they start working.”

But that didn’t happen when Hopkins put mice on a ketogenic diet.

“If you’re eating very, very low levels of carbohydrates, your body no longer has glycogen stores to release when blood sugar is too low,” he explains. “There’s no sugar to release so you don’t undercut the drugs.”

Of course, it’s too early to know if the drugs would work in people who eat a very-low-carb diet. Trials are under way.

But these promising results don’t show that a very-low-carb diet alone can fight cancer.

“There are tumor types where the ketogenic diet alone does seem to help, there are tumors that don’t seem to care, and there are even some tumors that grow faster on a ketogenic diet,” says Hopkins.

“So the study definitely does not show that a ketogenic diet is a good idea for all cancer patients. And it absolutely does not show that sugar causes cancer.” However, “it doesn’t argue in favor of sugar, either.”

References


2 JAMA Oncol. 2:1565, 2016.

“Performance bias? When researchers give one group more attention than others, that can create a bias.

“These motivated, self-selected folks underwent intensive coaching and monitoring as part of this remote delivery system,” says Hall. The control group got no intervention.

“What’s unclear is whether an equally intensive intervention with a different diet could have led to similar effects,” notes Hall.
many calories they eat each day, but they can tell whether they ate too many carbs or too much protein to knock them out of ketosis. That’s a real advantage.”

Safety? What with the cream, butter, meat, and cheese in the ketogenic diet, it’s no surprise that LDL (“bad”) cholesterol rose in the Virta group (from an average of 103 to 113 mg/dL).

Odds are, LDL didn’t exceed what used to be called the “near optimal” range (100 to 129) because half of the participants were taking statins, and most lost weight over the year. However, triglyceride (fat) levels after meals—which weren’t measured—could have risen.

“The high-fat, low-carb diet improves fasting triglyceride levels,” says Hall.

“But it’s likely to increase post-meal triglyceride levels, which predict cardiovascular risk more than fasting triglycerides. So we just don’t know what the net effect on risk is.”

The Long Haul

The catch with any diet is whether you can stay on it.

That’s why Hall is encouraged by the Virta results.

“The frequent interaction with participants and the ability to track their adherence are wonderful factors that may help people stick to the diet over time,” he says.

Not many studies have kept people on ketogenic diets for more than six months. And most studies that test lower-carb diets—ketogenic or not—haven’t had much long-term success.

“People often get off to a good start with a low-carbohydrate diet,” says Wylie-Rosett. “The question is, will they stick with it.”

Her study randomly assigned 105 people with type 2 diabetes to either a low-fat or low-carb (though not low enough to be ketogenic) diet. The low-carb group lost more weight after the first three months, but by one year there was no difference in weight or A1c. Other studies find similar results.

“People who are big advocates for low-carb diets make the results sound impressive,” says Wylie-Rosett. “But they tend to have a study without a control group or a study of only completers. If you ignore the dropouts, the low-carb diets tend to look better.”

However, she adds, “the American Diabetes Association now recognizes that people can lower their blood sugar with a variety of approaches, so there’s no one diet for people with diabetes.”

And patients may be more likely to stick to a diet if they choose it.

“The person with diabetes makes the decision and is guided by the healthcare team,” says Wylie-Rosett. “The patient is in the driver’s seat.”

However, she adds, people with type 2 diabetes shouldn’t cut way back on carbs without a doctor’s supervision.

“If you dramatically reduce carbs on your own and don’t adjust medications that raise blood insulin, you could have a real crisis” if your blood sugar drops too low.
Humans are damaging the natural systems of the only planet we’ve got. Here’s how that puts our health—and our children’s health—at risk.

Holocene—the current geologic period that has lasted for roughly the past 12,000 years—have been extraordinarily stable. And suddenly, in the last 60 years or so, we are turning every dial, throwing every switch, pushing every button. We’re completely changing the biophysical conditions that we have adapted to. It’s not surprising that the impact is going to be deleterious.

Q: What’s driving these changes?
A: First, there’s the almost exponential growth of the human population since the 1950s, when the population was about two billion. Now, it’s well over seven billion and rising very rapidly. Projections are on the order of 10 to 12 billion by the end of the century. But it’s also because of even steeper growth in the amount of resources each person consumes. To feed ourselves, we use about 40 percent of the ice-free, desert-free land as pastures and croplands, and about half of the planet’s accessible water, largely to irrigate crops. And we exploit 90 percent of the world’s fisheries at or beyond their maximum sustainable limits.

Q: How will those changes harm our health?
A: Left unchecked, they will alter the quality of the air we breathe, the water we have access to, and the food we can produce. They will expose us to infectious diseases and natural hazards like heat waves, droughts, floods, fires, and tropical storms. We’re already seeing statistical increases in the incidence of those extreme weather events. And if drought, rising sea levels, or extreme heat leads people to flee their homes and become refugees, that puts them at risk for malnutrition, infectious disease, and physical, sexual, and psychological trauma.

The civil war in Syria that has displaced millions of people, for example, was due in part to the worst three-year drought on record. Ultimately, those changes will affect every dimension of our health.
**Q: How will the changes cause more infectious disease?**

**A:** Warming temperatures and changes in precipitation and soil moisture may change the habitats, life cycles, and biting rates of insects that carry diseases like malaria, dengue fever, and Lyme disease.

**Q: Will non-infectious diseases also increase?**

**A:** Yes. For example, air pollution increases the risk of heart disease, stroke, lung cancer, and chronic obstructive pulmonary disease.

In Bangladesh, people are consuming excess salt loads because rising sea levels are moving saltwater into freshwater aquifers. The excess salt means high blood pressure in some people. And pregnant women are showing higher rates of pre-eclampsia, a high blood pressure disorder that can kill both the mother and the fetus.

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**The Planet at Risk**

*Worldwide, humans are healthier than ever. Life expectancy is up. Poverty and child mortality are down. But to get there, we’ve exploited the planet.*

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**Q: How will changes in natural systems affect the food supply?**

**A:** Obviously, extreme weather events have local effects. If your crops flood or are burned in a fire or wither in a heat wave, that affects yield. And rising sea levels will put low-lying fertile coastal areas at risk of flooding.

**Q: What about the seafood supply?**

**A:** We’re overfishing. Fish catch peaked in the 1990s and has been falling by 1 percent—about 1.2 million metric tons—per year since then, because overfishing has led to the collapse of fisheries.

Now, with warming ocean temperatures, we anticipate smaller fish and smaller fish populations. And we expect a dramatic redistribution of fisheries away from the tropics and toward the poles.

**Q: Do those reductions matter?**

**A:** Yes. About two and a half billion people get 70 percent of their protein from crops that are expected to become nutritionally de/ficient.

By mid-century, around 150 million people will be living in areas that are outside of rings of carbon dioxide-emitting jets. We’re also seeing ocean warming and acidification, which lead to massive coral bleaching events. We anticipate that most of our coral reefs will be destroyed within the century. Widespread declines in insect pollinators could reduce yields of fruits, vegetables, nuts, and seeds. Globally, that means that many people depend on food supplies that are vulnerable to climate change, but it can’t hurt. Here’s how many pounds of greenhouse gases are released to produce each serving of some popular foods.

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**Turn Down the Heat**

Changing your own diet isn’t enough to reverse climate change, but it can’t hurt. Here’s how many pounds of greenhouse gases are released to produce each serving of some popular foods.

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*Source: Adapted from The Rockefeller Foundation–Lancet Commission on Planetary Health.*
Human Health at Risk

Here are some of the harms that scientists are predicting by 2050.

Wealthier nations are not immune to the health effects of planetary changes like more frequent natural disasters, changes in the quality of food, declines of fisheries and pollinators, and rising sea levels. But the wealthy are better insulated from the effects.

What to Do

Q: What can we do to protect our children and grandchildren?
A: We need to expand the realm of public health to include how we manage our planet’s natural systems: how we feed ourselves, how we produce energy, the types of cities we construct, and how well we protect our biodiversity.

Then we need to exert pressure to change policies, despite powerful vested interests like fossil fuel companies and Big Agriculture. It will take time. It’s like steering a supertanker.

Q: What can individuals do?
A: It feels good to say “I’m a vegetarian and I bike to work, so that’s my contribution to solve the problem.” And those are good things to do. But they’re nowhere near enough.

We need to find each other, organize, and pressure our elected leaders to acknowledge that climate change is a grave threat to humanity and to take aggressive action to curb it.

For example, we can insist on a rapid transition away from fossil fuels and toward renewables to meet our energy needs.

There’s every reason to believe that we can rise to these challenges. We have extraordinary capacity for innovation. But we need to get to work.
The Healthy Cook

Take a Dip

BY KATE SHERWOOD

Here are three zippy dips for raw or roasted veggies. The curry yogurt and spicy pepper are also great on chicken or fish.

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

Caramelized Onion-Curry Yogurt

1. Sauté the onion in the oil over medium heat, stirring often, until golden brown, 8-10 minutes.
2. Stir in the curry powder and cook for 30 seconds.
3. Remove to a bowl and stir in the salt and yogurt.

PER SERVING (2 Tbs.): calories 60 | total fat 5 g | sat fat 0.5 g | carbs 3 g | fiber 1 g | total sugar 2 g | added sugar 0 g | protein 1 g | sodium 120 mg

MAKES 1 CUP

Spicy Roasted Pepper

1. Cut the bell and chile peppers in half and lay them on a baking sheet, cut side down. Broil until the skin is browned in spots, 5-10 minutes. Let cool, then remove the skin and seeds.
2. Blend all the ingredients in a small food processor.

PER SERVING (2 Tbs.): calories 50 | total fat 4 g | sat fat 0.5 g | carbs 4 g | fiber 1 g | total sugar 3 g | added sugar 0 g | protein 2 g | sodium 130 mg

MAKES 1 CUP

Avocado Hummus

1. Blend all the ingredients in a small food processor until smooth.

PER SERVING (2 Tbs.): calories 80 | total fat 6 g | sat fat 1 g | carbs 6 g | fiber 2 g | total sugar 0 g | added sugar 0 g | protein 2 g | sodium 125 mg

MAKES 1 CUP
Type 2 diabetes need not mean a higher risk of a heart attack or stroke.

Swedish researchers compared five risk factors for heart attack or stroke in 271,000 people with diabetes and 1,356,000 without the disease:

- blood sugar: hemoglobin A1c of at least 7 percent,
- LDL (“bad”) cholesterol: 100 or more,
- blood pressure: at least 140 systolic or 80 diastolic,
- albumin in the urine (a marker of kidney disease), and
- whether the person smokes.

During the 5½-year study, people who had diabetes but none of those risk factors were no more likely to die or have a heart attack or stroke than those without diabetes. However, they still had a 45 percent higher risk of heart failure. Smoking had the most impact on the risk of dying. High blood sugar had the most impact on the risk of heart attacks and strokes.

What to do: Get rid of your risk factors with diet or, if necessary, drugs.


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Low Risk Despite Diabetes

Vitamin D & New Knees

Can a high dose of vitamin D help people recover from knee replacement surgery?

Researchers randomly assigned 273 people who just had a knee replacement because of osteoarthritis to take a daily high dose (2,000 IU) or typical dose (800 IU) of vitamin D (plus 500 milligrams of calcium). After two years, there was no difference in falls, pain, or knee function between the groups.

What to do: New knee? Stick with the recommended 800 IU of D a day.


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Move & Lose?

Exercise plus weight loss may make your insulin more effective.

Scientists randomly assigned 163 sedentary overweight or obese people to do aerobic exercise at high or moderate intensity. (They used a treadmill, StairMaster, elliptical trainer, or stationary bike.) The people weren’t told to change their diets.

After eight months, insulin sensitivity improved more in those who lost at least 3 percent of their starting weight than in those who lost less. Nearly one out of four participants lost at least that much weight.

Insulin sensitivity improved the most in the group that did moderate-intensity exercise: the equivalent of walking about 12 miles a week at a brisk pace.

What to do: Get moving.


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White Bread & Cholesterol

People who eat more refined grains have a higher risk of heart disease in some studies. Could white bread, rice, and pasta raise LDL (“bad”) cholesterol?

Researchers fed 11 older adults diets that were high in refined grains, whole grains, or added sugars for 4½ weeks each.

LDL cholesterol levels were 10 percent higher after the volunteers ate the refined-grain diet than after they ate the whole-grain diet. LDL was slightly, but not significantly, higher after they ate the diet rich in added sugars than after they ate the whole-grain diet.

What to do: It’s too early to know whether larger studies will confirm these results. But they’re one more reason to replace refined grains with whole grains. And cut back on added sugars. Other studies suggest that they raise the risk of heart disease, type 2 diabetes, and weight gain.


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Photos: stock.adobe.com: Monkey Business (top), thodonal (right), Wordley Calvo Stock (middle), Halfpoint (bottom).
YES, YOU MAYO

BY LINDSAY MOYER & JENNIFER URBAN

1 Take your pick. Mayonnaise looks creamy, but it has no cream. It’s mostly oil and water, with a touch of egg, vinegar, and salt. That’s why a one-tablespoon serving has only 1½ grams of saturated fat. Sodium is low, too. Mayos typically range from 70 to 130 milligrams per tablespoon. And most mayos that add sugar contain so little (less than half a gram per tablespoon) that it shows up as zero on the Nutrition Facts label.

That’s why we don’t have a mayo chart. Nearly all would get a Best Bite.

2 Don’t break the bank for fancy oils. The new kid on the block: avocado oil mayo. Chosen Foods, Primal Kitchen, and Sir Kensington’s sell mayos made with avocado oil. But a 12 oz. jar will set you back $7 to $10. (Hellmann’s and Kraft’s “avocado oil” mayos are cheaper because they’re blended with canola and soy oil.)

Avocado oil is “better for you than the oils used in most mayos,” says Chosen Foods. Not really. Most mayos are made with soy, olive, and/or canola oil. Like avocado oil, they’re largely unsaturated. But soy oil is richer in polyunsaturated fats, which can lower LDL (“bad”) cholesterol more than the monounsaturated fats in avocado, olive, and canola oil.

3 Go vegan...or not. Vegan mayos are in. They keep their oil emulsified by replacing mayo’s egg with pea protein (JUST and Earth Balance) or chickpea cooking water (the “aquafaba” in Sir Kensington’s Fabanaise). But if you’re not vegan, there’s no need to go eggless for your health’s sake. Regular mayo has a trivial 5 to 15 milligrams of cholesterol per tablespoon. A large egg yolk has 185 mg—about 60 percent of a day’s worth.

4 Cage free? Read closely. “Made with cage free whole eggs,” says Kraft Olive Oil Mayo. The label’s fine print: “Contains at least 65% cage free whole eggs.” The back story: In 2016, Kraft pledged to go 100% cage free...by 2025. But Hellmann’s beat Kraft to the punch. It has used 100% cage-free eggs since 2017.

5 Consider calories. Regular mayo has 90 to 100 calories per tablespoon. If you want to go lower, try a “light” or “reduced fat” variety. Most have 40 to 60 calories. So do some non-lights, like JUST (60 calories). But not every lower-cal mayo wowed our taste buds. A good bet: Hellmann’s Light.

6 Think beyond sandwiches. Whisking a touch of mayo into your homemade salad dressing can keep the oil and vinegar from separating. And the inventive new crop of flavored mayos can stand in for sauces and more. See the photos below for our favorites and how to use them.

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Photos: EuToch/stock.adobe.com (top), Hellmann’s (bottom center), Jennifer Urban/CSPI (all others).

Vegan or with cage-free eggs? Avocado or olive oil? Sriracha or curry? The mayo aisle is booming. Here’s how to find a good one.

Zoe Rosner helped compile the information for this article.
Want a spread that’s better than butter? The good news: Your days of worrying about trans fat are over. And some new spreads are healthy and delish.

The bad news: To find the best spreads, you have to wade through misleading claims about coconut, butter, ghee, and more.

Here’s what to look for. Turn the page for some claims to ignore.

Zoe Rosner helped compile the information for this article.

WHAT TO LOOK FOR

Almost any spread beats butter because spreads deliver more healthy unsaturated fat. But to find the best, check:

- Saturated fat. Our Best Bites have no more than 1½ grams per tablespoon. Honorable Mentions can have 2 grams.
- Added sugar. We didn’t give Best Bites or Honorable Mentions to sweetened spreads like Land O Lakes Honey or Country Crock Honey, which are nearly one-third added sugar.
- Calories. We set no limit because in the best spreads, more calories means more unsaturated fat. But if you’re trying to lose (or not gain) weight, look for “light” spreads. Most have 35 to 50 calories per tablespoon.
- Sodium. We set no limit because most spreads don’t top 100-or-so milligrams per tablespoon. But you can go lower with Smart Balance Low Sodium (30 mg) or with Finlandia 25% Reduced Fat Spreadable Butter (50 mg).

Artificial Trans Fat: Sayonara!

“0g trans fat per serving,” proclaim many spread labels. Got that right. Partially hydrogenated oils—the source of artificial trans fat—gave spreads a bad name for decades. But on June 18th, the federal ban on using those oils kicked in. (Don’t worry about “hydrogenated” or “fully hydrogenated” oils. They have no trans fat.)

Note: A tablespoon of butter contains nearly half a gram of naturally occurring trans, which may be no less harmful.

BUTTER...OR BETTER

A tablespoon of regular butter has 7 grams of saturated fat (and 100 calories). “Extra creamy” or “European style” butters tack on an extra gram.

Why go there. We found some better butters and not-butters that taste darn close to the real thing. Your best options, from least to most sat fat:

- Oil & water. Most regular tubs blend largely unsaturated soy and canola oils with largely saturated palm and palm kernel oils (to keep the spreads solid), plus water (and sometimes buttermilk).

  The result: 50 to 100 calories and 1 to 3 grams of saturated fat per tablespoon, unless you’re talking coconut oil spreads (see p. 14).

  Miss that buttery taste? Best Bite Brummel & Brown Made with Real Yogurt will knock your taste buds off for only 45 calories and 1½ grams of sat fat.

  If you’re done with dairy, Honorable Mention I Can’t Believe It’s Not Butter! It’s Vegan (60 calories and 2 grams of sat fat) is a good bet.

- Butter & oil. If you’re stuck on butter, at least get it mixed with oil. Sat fat ranges from 3 grams (ones with more oil) to 6 grams (ones with less).

  Our hands-down favorite: Finlandia 25% Reduced Fat Spreadable Butter, a near miss with 70 calories and 3 grams of sat fat. “Light” spreadable butters—they have more water—cut the calories to 50 and the sat fat to 2 grams. But no lights come close to the flavor of Brummel & Brown Made with Real Yogurt.

- Whipped butter. Less butter and more air means you get less sat fat (5 grams) and calories (70) per tablespoon. Land O Lakes whipped butters lead the pack, with just 3½ grams of sat fat and 50 calories.

- Artificial Trans Fat: Sayonara!
Photos: Jennifer Urban/CSPI.

NUTRITION ACTION HEALTHLETTER | OCTOBER 2018

**Coco-Nuts**

“At last, good fat!” declares Melt Rich & Creamy, which blends coconut oil with palm, canola, sunflower, and flaxseed oils to get 3½ grams of sat fat per tablespoon. Coconut oil is on a roll. But there’s no solid evidence that it’s a “good fat.” While some of its shorter-chain saturated fats don’t raise LDL. (“bad”) cholesterol levels, its longer-chain saturated fats do (see November 2017, p. 3). And it’s missing the unsaturated fats that lower LDL.

The upside: Like Melt, some coconut oil spreads mix in other oils. So instead of the 13 grams of sat fat in a tablespoon of, say, Nutiva Organic Butter Flavor Coconut Oil, you get only the 2½ grams of sat fat in, say, I Can’t Believe It’s Not Butter! with Coconut Oil. That’s not nearly as bad.

**Ghee Whiz**

“Ghee is much better for you than butter,” says 4th & Heart. “Paleo Friendly,” says Kelapo Ghee. The trendy Whole30

Kelapo Ghee. “Paleo Friendly,” says the fine print. The upside: Like Melt, some coconut oil spreads mix in other oils. So instead of the 13 grams of sat fat in a tablespoon of, say, Nutiva Organic Butter Flavor Coconut Oil, you get only the 2½ grams of sat fat in, say, I Can’t Believe It’s Not Butter! with Coconut Oil. That’s not nearly as bad.

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Ghee is butter that has been clarified, which removes milk solids and water. Unfortunately, that also concentrates its dairy fat.

So instead of butter’s usual 7 grams of saturated fat and 100 calories per tablespoon, you get roughly 8 to 10 grams of sat fat (half a day’s worth) and 120 to 140 calories.

To make matters worse, many ghee labels (like Organic Valley’s and 4th & Heart’s) use a one-teaspoon serving instead of the required one tablespoon. That makes the numbers look lower. Trying to trick your customers, ghee guys?

**Cholesterol Smarts**

“Supports healthy cholesterol levels,” boasts Smart Balance. But that only goes for levels “already in the normal range,” says the fine print. In other words, Smart Balance can’t lower your cholesterol like an unsaturated oil would.

Hidden on the bottom of the tub is another disclaimer: “Clinical research has shown that the right blend of fats may improve your cholesterol ratio when at least ½ of your fat intake comes from this product or a properly balanced diet.”

No spread is likely to supply two-thirds of your fat intake. And a tablespoon of many Smart Balance spreads has 2½ to 3½ grams of saturated fat. You can do better with our Best Bites.

On the other hand, Promise Activ Light and Benecol can reduce cholesterol levels. Promise adds a gram of plant sterols—and Benecol adds ½ gram of stanols—per tablespoon. Two grams per day can lower LDL (“bad”) cholesterol by around 8 percent (see Jan./Feb. 2016, p. 10).

**Greener Pastures?**


Olivio is unsaturated enough for a Best Bite, but don’t let its name or its claims fool you. You’re getting more canola and palm oils than pricier olive oil.

The same goes for Smart Balance Made with Extra Virgin Olive Oil and Earth Balance Made with Olive Oil. Buyer beware: “made with” may mean “made with very little.”

**The Olive Caper**

“Supports healthy cholesterol levels,” boasts Spread the Love from our Healthy Cook, Kate Sherwood:

- **Toast.** Spread with mashed avocado, peanut or almond butter, mayo and sliced tomatoes, or chopped tomatoes mixed with olive oil and salt (think bruschetta).
- **Vegetables.** Drizzle with olive oil, fresh lemon juice, and salt.
- **Grains or pasta.** Top with a dollop of pesto, or toss with roasted vegetables.

Want to branch out beyond buttery spreads? Try these tips from our Healthy Cook, Kate Sherwood:

- **Toast.** Spread with mashed avocado, peanut or almond butter, mayo and sliced tomatoes, or chopped tomatoes mixed with olive oil and salt (think bruschetta).
- **Vegetables.** Drizzle with olive oil, fresh lemon juice, and salt.
- **Grains or pasta.** Top with a dollop of pesto, or toss with roasted vegetables.
Covering the Spreads

**Best Bites** (✔✔) have no more than 1.5 grams of saturated fat per tablespoon. **Honorable Mentions** (✔) have 2 grams. We disqualified spreads with added sugar. Products are ranked from least to most saturated fat, then calories, then sodium.

### Spreads (1 Tbs., tub)

<table>
<thead>
<tr>
<th>Name</th>
<th>Calories</th>
<th>Sat Fat (g)</th>
<th>Sodium (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔✔ Promise Activ Light</td>
<td>45</td>
<td>0.5</td>
<td>85</td>
</tr>
<tr>
<td>✔✔ I Can’t Believe It’s Not Butter! the Light One</td>
<td>35</td>
<td>1</td>
<td>85</td>
</tr>
<tr>
<td>✔✔ Country Crock Light</td>
<td>35</td>
<td>1</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Imperial</td>
<td>35</td>
<td>1</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Blue Bonnet Light</td>
<td>40</td>
<td>1</td>
<td>95</td>
</tr>
<tr>
<td>✔✔ Promise Light</td>
<td>45</td>
<td>1</td>
<td>85</td>
</tr>
<tr>
<td>✔✔ Olivio</td>
<td>50</td>
<td>1</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Benecol Light</td>
<td>50</td>
<td>1</td>
<td>95</td>
</tr>
<tr>
<td>✔✔ Parkay Light</td>
<td>50</td>
<td>1</td>
<td>110</td>
</tr>
<tr>
<td>✔✔ Blue Bonnet Calcium plus Vitamin D</td>
<td>50</td>
<td>1</td>
<td>130</td>
</tr>
<tr>
<td>✔✔ Fleischmann’s Original</td>
<td>60</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>✔✔ Fleischmann’s Made with Olive Oil</td>
<td>60</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td>✔✔ Benecol Original</td>
<td>70</td>
<td>1</td>
<td>105</td>
</tr>
<tr>
<td>✔✔ Brummel &amp; Brown Made with Real Yogurt</td>
<td>45</td>
<td>1.5</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Smart Balance Light—Extra Virgin Olive Oil, Churn Style, or Original</td>
<td>50</td>
<td>1.5</td>
<td>80</td>
</tr>
<tr>
<td>✔✔ Country Crock—Calcium with Vitamin D, Churn Style, or Original</td>
<td>50</td>
<td>1.5</td>
<td>100</td>
</tr>
<tr>
<td>✔✔ Blue Bonnet</td>
<td>50</td>
<td>1.5</td>
<td>120</td>
</tr>
<tr>
<td>✔✔ Parkay</td>
<td>60</td>
<td>1.5</td>
<td>90</td>
</tr>
<tr>
<td>Country Crock Honey</td>
<td>70</td>
<td>1.5</td>
<td>45</td>
</tr>
<tr>
<td>✔✔ Parkay Squeeze</td>
<td>70</td>
<td>1.5</td>
<td>110</td>
</tr>
<tr>
<td>✔✔ Promise Buttery</td>
<td>80</td>
<td>1.5</td>
<td>85</td>
</tr>
<tr>
<td>✔✔ Olivio</td>
<td>80</td>
<td>1.5</td>
<td>95</td>
</tr>
<tr>
<td>✔✔ Smart Balance Made with Extra Virgin Olive Oil</td>
<td>60</td>
<td>2</td>
<td>70</td>
</tr>
<tr>
<td>✔✔ I Can’t Believe It’s Not Butter! It’s Vegan</td>
<td>60</td>
<td>2</td>
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<tr>
<td>✔✔ I Can’t Believe It’s Not Butter! the Original</td>
<td>60</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ I Can’t Believe It’s Not Butter! with Olive Oil</td>
<td>60</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Pure Blends Avocado Oil</td>
<td>60</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>✔✔ Smart Balance Low Sodium</td>
<td>70</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>✔✔ Land O Lakes Fresh Buttery Taste</td>
<td>70</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>✔✔ Land O Lakes Soft Squeeze</td>
<td>90</td>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>Canoleo Original</td>
<td>100</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>I Can’t Believe It’s Not Butter! with Coconut Oil</td>
<td>60</td>
<td>2.5</td>
<td>90</td>
</tr>
<tr>
<td>Earth Balance—Made with Olive Oil or Omega-3</td>
<td>80</td>
<td>2.5</td>
<td>80</td>
</tr>
<tr>
<td>Smart Balance—Omega-3, Organic, or Original</td>
<td>80</td>
<td>2.5</td>
<td>90</td>
</tr>
<tr>
<td>Earth Balance Organic Whipped</td>
<td>80</td>
<td>2.5</td>
<td>100</td>
</tr>
<tr>
<td>Olivio Coconut</td>
<td>70</td>
<td>3</td>
<td>90</td>
</tr>
<tr>
<td>Brummel &amp; Brown Organic</td>
<td>80</td>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>Earth Balance—European Style, Original, or Soy Free</td>
<td>100</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Land O Lakes Margarine</td>
<td>100</td>
<td>3</td>
<td>105</td>
</tr>
<tr>
<td>Melt Organic—Probiotic or Rich &amp; Creamy</td>
<td>80</td>
<td>3.5</td>
<td>85</td>
</tr>
<tr>
<td>Pure Blends Coconut Oil</td>
<td>60</td>
<td>4</td>
<td>90</td>
</tr>
<tr>
<td>Earth Balance Organic Coconut</td>
<td>100</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>Nutiva Organic Butter Flavor Coconut Oil</td>
<td>130</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

### Sticks (1 Tbs.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Calories</th>
<th>Sat Fat (g)</th>
<th>Sodium (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Blue Bonnet Light</td>
<td>50</td>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>✔ Parkay Light</td>
<td>50</td>
<td>2</td>
<td>75</td>
</tr>
</tbody>
</table>

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**Soy Free**:

- **Best Bites**: ✔ Honorably Mentioned. ✔✔ Average of the varieties listed. Note: Best Bites and Honorably Mentioned refer to nutrition, not taste.

**Daily Limits** (for a 2,000-calorie diet): Saturated Fat: 20 grams. Sodium: 2,300 milligrams.

Sources: company information and USDA. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.
You can thank traditional breeding for these new or long-forgotten varieties. (Orange cauliflower, for example, was discovered in a Canadian marsh in the 1970s.)

Ditto for rainbow carrots. Carrots were yellow or purple until Dutch breeders reportedly produced the orange household staple in the 1600s. Now there’s even white and red!

Naturally occurring plant pigments account for the color riot. Beta-carotene makes carrots and cauliflower orange, while anthocyanins turn them purple. Lycopene (plus beta-carotene) pushes carrots into the red zone, while lutein yields yellow.

Less beta-carotene means less vitamin A, but overall, you can expect roughly similar nutrients, regardless of color. That means a decent dose of fiber, vitamin C, vitamin K, and folate from cauliflower. (The green variety—cauliflower crossed with broccoli—has extra C.) Carrots deliver fiber and vitamin A. And both have just 20 to 30 calories in a half cup.

Check out The Healthy Cook (p. 10) for three addictive dips for raw or roasted veggies, and the Dish of the Month for a mesmerizing carrot salad.

It’s not just the colorful leaves that are changing it up this fall.

“An hearty double burger made with unexpected flavor combinations, including crispy Apple-wood smoked bacon, smoky bacon-onion sauce, two slices of real white cheddar, mild sweet mustard sauce and in-house fried onion strings.”

McDonald’s new Double Bacon Smokehouse Burger comes “stacked with two 100% fresh beef ¼ lb. patties that are hotter, juicier and cooked when you order.”

How exciting! The new arrival is part of Mickey D’s Signature Crafted Recipes line—“a collection of premium recipe flavors that elevate 100% fresh beef quarter-pound burgers.” And elevate, it does.

Each Double Bacon Smokehouse has 1,130 calories plus 27 grams of saturated fat, 63 grams of carbs (thanks largely to its white-flour “artisan” roll), and 1,920 milligrams of sodium.

It’s like eating two McDonald’s Quarter Pounders with Cheese. And that’s without fries or a drink.

And if the Smokehouse also elevates your weight, cholesterol, blood pressure, and blood sugar, good luck with that.

“The move to fresh beef quarter-pound burgers is the latest step in McDonald’s food journey to build a better McDonald’s,” says the company.

What about building healthier McDonald’s customers? Guess that’s not part of the journey.

mcdonalds.com—(800) 244-6227

Your potatoes turning green? Solution: store them in a dark, dry, cool place (but not the fridge). To avoid food poisoning, cut away green flesh (and any eyes or sprouts) before cooking.