

We've been obsessed with fat for more than half a century. And this spring, the fervor hit a new level. Headlines screamed “Butter Is Back,” “Bacon Is Good for You” and “Ending the War on Fat”—stories suggesting everything we'd known was wrong and that we'd done a nutritional one-eighty on fat. So, understandably, a lot of questioning hands shot up in the air. Yours was likely one of them. Does this mean Julia Child—the original queen of butter and foie gras—had it deliciously right all along? Are we moving away from the idea of good and bad fats? Should we embrace marbled beef? Most of all, what does a heart-healthy diet look like now?

That feeling of being nutritionally adrift is understandable. After all, our aversion to so-called artery-clogging fatty foods—if not flat-out fear—is as ingrained as the advice to get eight hours of sleep a night and exercise regularly. It all started back in the 1950s, when scientist Ancel Keys made headlines by discovering that saturated fat raised cholesterol levels. Since cholesterol was known to increase heart disease risk, the logic went, we should avoid foods with saturated fat—and shortly thereafter, dietary guidelines were born and

# The **New Fat** Revolution

Bacon is everywhere. Butter is the new darling. Seems that fat is back big time. But should it be?

By Shaun Dreisbach

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the idea of eating low-fat took off. Then, about 15 years ago, the concept of “good” and “bad” fats was introduced. We were told to be eagle-eyed about saturated fat—trans fat joined the no-no list a few years later—and to embrace unsaturated fats like oils, nuts and avocados. So when a recent study in the *Annals of Internal Medicine* concluded that saturated fat does not, in fact, appear to increase heart disease risk (and sparked those headlines), our collective jaws hit the floor. *Wait, what?! How could this be?* The researchers analyzed data from 76 studies involving more than 600,000 people and found that those who ate the most of this so-called “bad” fat did not have a higher risk of cardiovascular disease than those who ate the least. (Trans fats remain a villain: in the study, they *were* associated with a higher risk.)

So should we end the war on fat? You’ll find answers on the next few pages. But first, let’s dispel one key myth about the *Annals* study: despite the news headlines, no one (at least in nutrition circles) is saying that all saturated fat is healthy. “Lack of harm is not the same thing as being beneficial,” explains David Katz, M.D., M.P.H., director of the Yale University Prevention Research Center and an *EatingWell* advisor. “We found saturated fat is on average neutral compared to everything else we eat—it doesn’t seem to

affect heart disease risk,” adds Dariush Mozaffarian, M.D., Dr.PH., dean of the Friedman School of Nutrition Science and Policy at Tufts University and a co-author on the study.

Now to the question on every omnivore’s mind: How could this be? Was the research that has informed our eating habits *that* wrong? Not entirely. “Our initial science was just focused on ‘bad’

LDL cholesterol—and showed that saturated fat raises LDL levels, which in turn raises heart disease risk. That’s all the evidence we had,” says Mozaffarian. “But nutrition science—which isn’t even 100 years old—has advanced rapidly, and the data has changed.” It’s true that sat fat raises LDL

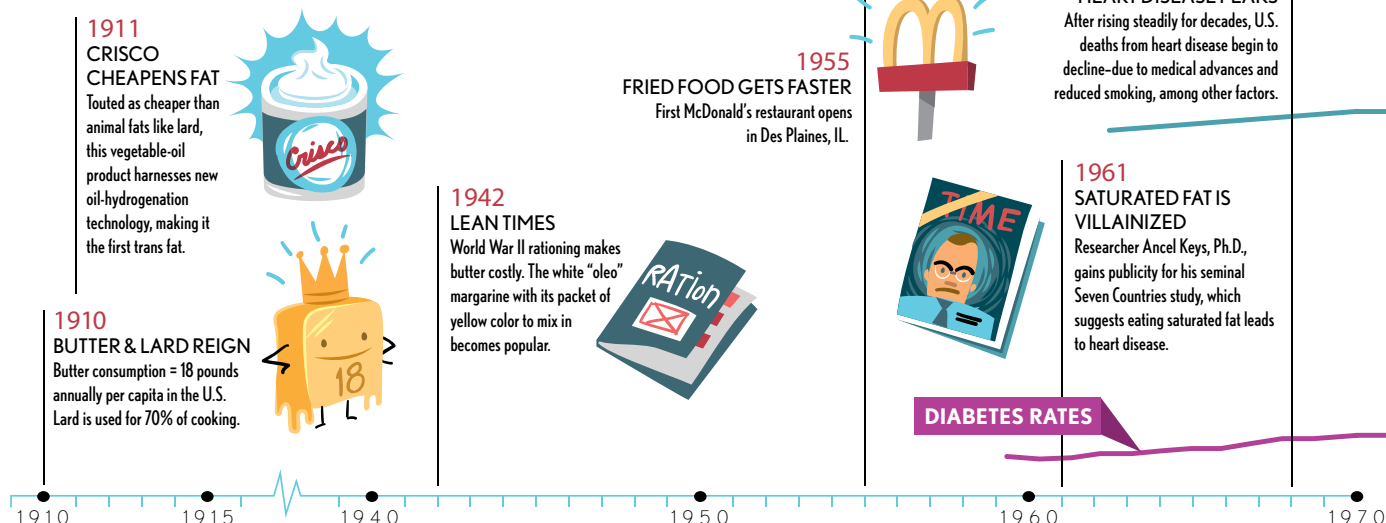
cholesterol; that finding from the 1950s holds up. But what researchers have since discovered is that it also raises HDL, the “good” cholesterol. And saturated fat does not increase the *number* of LDL particles, one of the most important predictors of cardiovascular risk. Saturated fat makes LDL particles larger and that’s pretty benign in terms of cardiovascular disease. (See “*Not All LDL Is Created Equal*,” page 53.)

It’s worth noting, too, that this isn’t some newfangled theory. Evidence that saturated fat may not raise heart disease risk has been in the literature for decades. It’s just that 2014 happened to be the

**“We shouldn’t be thinking about fat at all. It’s about the overall quality of the foods you eat.”**

# GREAT MOMENTS IN FAT

Fat—in our foods and on our waistlines—has been a churning issue for millennia. Hippocrates presciently wrote, “Corpulence is not only a disease itself, but the harbinger of others.” Not so long ago, dietary fat—with its concentrated energy—was a precious commodity, and body fat a key to survival. Then, in the 20th century, fat became something to be avoided. Interestingly, as our views on fat have flip-flopped, obesity and diabetes rates have continued to increase. Coincidence? —Anne Treadwell

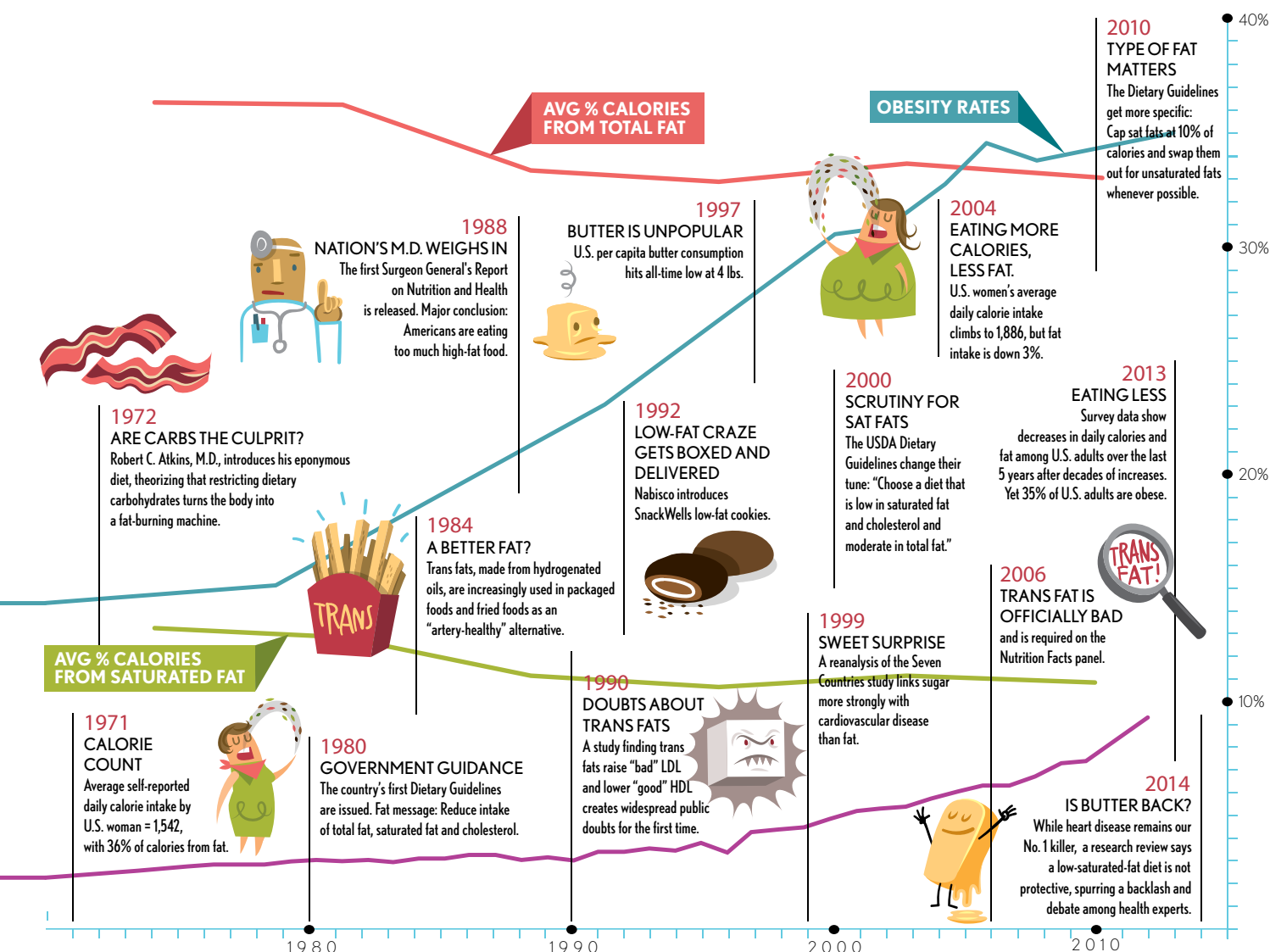


year it went viral. To be sure, the issue is still being studied—and debated. Not everyone agrees on the degree to which saturated fat impacts our health. But, for now, the bottom line appears to be this: “We’ve evolved our thinking and the ‘good’ and ‘bad’ stuff has got to go,” says Pamela Pecke, M.D., clinical assistant professor at the University of Maryland School of Medicine. “Let’s think in terms of beneficial and not-so-great. There is no bad, except for trans fats.”

There is even preliminary evidence that suggests some types of saturated fat may be more neutral than others—and possibly even beneficial. Stearic acid, a kind of saturated fat in dark chocolate and beef, for example, has been shown to have no heart-harmful effects, notes Katz. And, in the context of an overall healthy diet, it may possibly offer some pros: a recent study in the *Journal of Human Hypertension* found that a DASH-style diet (low in salt and sugar, rich in fruits, veggies and whole grains) that swapped in lean beef as the main protein source (about 4 ounces a day) lowered blood pressure and improved blood vessel function. An earlier study concluded that a similar diet can also improve cholesterol levels. Then there’s coconut oil. It was once demonized for its super-high sat-fat content (92 percent!). But the kind of fat it’s primarily composed of (lauric acid) now appears to have no impact on cholesterol. There’s also mounting evidence that full-fat dairy products may actually im-

prove your health compared to low-fat. (See “Myth: Full-Fat Milk Is Unhealthy,” page 52.) Still, this is complex stuff—because, as Mozaffarian points out, foods like beef, dairy, nuts, tropical oils and vegetable oils contain multiple types of saturated *and* unsaturated fats, and how the body reacts to them (not to mention the other nutrients in the food) can impact their health effects. At the moment, there’s no need to get in a twist about specific saturated fats until scientists sort out more of the details.

The *Annals* study also sparked a serious conversation about another health issue at play: what *replaced* the fat in our diets when we banished it. We started eating more sugar and processed carbohydrates. “We replaced one thing with something worse,” says Mozaffarian. “These types of refined carbs *do* lower LDL levels, but they also lower HDL levels and increase triglycerides [a type of fat in your blood]. They’re also linked to higher blood glucose and weight gain. So we’re not just talking about an increased risk of heart disease, but also obesity and diabetes.” That may be part of the reason why the group in the *Annals* study who ate the least saturated fat didn’t have lower rates of cardiovascular disease than those who ate loads of it—because they were subbing in unhealthy processed carbs and sugar instead. It also helps explain why, despite the fact that we’ve lowered our saturated fat intake over the past several decades,



TREND SOURCES: CENTERS FOR DISEASE CONTROL & PREVENTION AND *CIRCULATION*, A JOURNAL OF THE AMERICAN HEART ASSOCIATION. STARTING POINTS DETERMINED BY AVAILABILITY OF DATA.

obesity rates have continued to climb and heart disease is still our number-one killer. "What the study really tells us is that there's more than one way to eat badly," says Katz.

So what, exactly, *should* we be eating, given all this new evidence? A diet that's almost forehead-smackingly simple—and which most experts agree on, no matter where they fall on the saturated-fat issue: eat a diet rich in a variety of fruits, nuts and vegetables, some healthy protein like fish, poultry and dairy, and minimally processed, whole-grain carbs—the kind that are high in fiber and have been fiddled with the least, like brown rice and whole-wheat bread. Also key: limit sugary foods and processed carbs like white bread, white rice and low-fiber breakfast cereals. If it has a lot of unpronounceable ingredients and a long shelf life, keep walking. (Any of this sounding familiar?) And fats? How should we think about those? For the record, the Dietary Guidelines for Americans recommend limiting saturated fat to less than 10 percent of total daily calories—and instead emphasizing foods containing unsaturated fat. Eating way more of these genuinely healthy fats than saturated ones is advice worth following. But many experts have a different take: "We shouldn't be thinking about fat at all," says Mozaffarian. "It's about the overall quality of the foods you eat. Depending on the foods you choose, you can eat a low-fat diet that's terribly unhealthy and raises your heart disease risk, and you can eat a high-fat diet that does the same, or you can eat very healthy versions of either."

He and other experts believe we get too hung up on grams and percentages, and what we really need to do is take a big-picture view of what we're eating. "Foods are complicated," explains Mozaffarian. "We can't just look at one aspect and judge their overall healthfulness." Katz agrees: "It's time to stop focusing on macronutrients like fat and think in terms of what should make up the majority of your diet. If you do that, you can't go too far wrong." So... if you want to have the *occasional* cheeseburger, it's fine.

Looks like Julia Child was onto something, after all. Her wise words: "I think one of the terrible things today is that people have this deathly fear of food: fear of eggs, say, or fear of butter. Most doctors feel that you can have a little bit of everything."

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## myth: FULL-FAT MILK IS UNHEALTHY

Full-fat dairy has been *verboten* since glass bottles of milk stopped being delivered to your doorstep. But a growing body of research suggests that it may actually be better than the low-fat stuff at reducing our risk of obesity and other health issues. (Sounds scandalous, right?) In fact, in a recent review of 16 studies looking at the effects of full- and low-fat dairy on obesity, 11 of them found that high-fat dairy consumption was actually associated with lower weight. And a 2013 Swedish study showed that full-fat dairy was linked to smaller waistlines, while participants who ate low-fat versions had more of the kind of belly fat that raises your risk for heart disease and diabetes. "Despite all the dietary recommendations to eat low-fat dairy—and low-fat in general—there never was any strong evidence supporting it," says Walter Willett, M.D., Dr.P.H., chair of the department of nutrition at the Harvard School of Public Health. "We're not totally sure how full-fat dairy helps lower obesity risk, but it may cause greater satiety, so you eat less. Another possible reason is that specific fatty acids in full-fat dairy, such as CLA (conjugated linoleic acid), may affect insulin in a way that alters fat storage in the body. Those fatty acids are stripped out of products when lowering the fat content." Yogurt, in particular, has been linked with leanness in multiple studies, which may be because of the probiotics it contains—an added benefit. Of course, you haven't just been given license to eat wheels of Brie or tubs of ice cream. There is still the issue of calories to consider. But in small amounts? Willett says go for it. —S.D.



## 5 Things to Know About Cholesterol

Turns out this compound is way more complex than experts originally thought. And diet is only part of the picture: a recent study published in the *Journal of the Academy of Nutrition and Dietetics* that compared high- and low-fat diets found that eating the low-fat diet didn't have a significant impact on blood cholesterol levels. What arguably plays a bigger role? Things like weight, age and genetics. Here we help you get some of the key new discoveries straight. —S.D.



**1 Exercise is good for your heart in more ways than one!** Regular aerobic workouts—we're talking moderate intensity like a brisk walk, nothing crazy—can increase HDL levels by nearly 25 percent in three months. Why that matters: this “good” type of cholesterol grabs on to unhealthy cholesterol and ferries them to the liver, which breaks them down and clears them from your system. HDL also helps with blood-vessel health and prevents plaque buildup. So get moving, already! Your exercise Rx: 30 minutes on most days of the week.



**2 That white bagel may be worse for you than the cream cheese.** You thought the saturated fat in the cream cheese schmear was the main problem. But a growing body of evidence suggests that highly processed carbs—ahem, white bagel—may put you at an even greater risk for heart disease. How? Your body rips through them so quickly that your blood sugar and insulin levels climb then plummet. Eat a lot of these types of foods and all that roller-coastering bumps up levels of free fatty acids in your blood that, in turn, increase inflammation in the body, damage blood vessels and jack up your cholesterol (see below, “Not All LDL Is Created Equal”). Minimally processed carbs like steel-cut oatmeal (a better pick than the bagel!) don't have this effect.



**3 Dietary cholesterol and blood cholesterol are two different things.** In other words, just because you eat foods high in cholesterol (such as shrimp and eggs) doesn't mean your blood cholesterol levels will go through the roof. What actually raises your cholesterol are processed carbs, saturated and trans fats—with trans fat being the real enemy.



**4 Diet does affect some people more than others.** Apolipoprotein E (or ApoE) is a protein in the blood that ferries cholesterol and triglycerides to the liver, which metabolizes and disposes of them. That's a good thing. But having particular genetic variants of ApoE can prevent your body from metabolizing fats and carbs properly and predispose you to high cholesterol and heart disease—as well as diabetes and Alzheimer's disease. So if your diet is less than stellar—particularly in terms of trans fat and carbs (an excess of which gets converted to cholesterol)—your cholesterol levels could quickly become unhealthy. Your doctor might order an ApoE blood test if you have a family history of heart disease or if your cholesterol and triglyceride levels are high. Knowing what exact variants you have can help identify the most effective treatments—be it altering your diet, exercising and adding medication—to help bring your cholesterol down to a healthy level.



**5 Your estimated heart disease risk may be different than it was a year ago.** Docs used to use your total cholesterol and HDL levels to determine your odds of developing cardiovascular disease. No more. In fall 2013, the American College of Cardiology and American Heart Association released a new risk calculator with updated data on how factors like blood pressure, age and whether you smoke affect your 10-year and lifetime odds of developing the disease—and whether you should be prescribed statins. Go to [heart.org](http://heart.org) to get a preview, and see your doctor for a detailed assessment.

## Not All LDL Is Created Equal

Once upon a time, LDL was simply LDL—and it was all bad. Then some brainy researchers with electron microscopes discovered that LDL actually comes in different sizes and densities. Some LDL particles are large and fluffy, while others are small and dense. “Most cholesterol screens don't break this down for you.

But how much of each you have is what really determines whether you have a higher risk of heart disease,” says Pamela Peeke, M.D., clinical assistant professor at the University of Maryland School of Medicine. “The large LDL particles bounce off your artery walls like a beach ball and make their way through your system until they're finally disposed of. These larger ones are pretty benign. The small ones, however, shoot through your arteries like BBs—beating up the lining of your blood vessels, and

**It's not the number, it's the size of the LDL particles that matters most—the types of food that impact the size may surprise you.**

then sticking to them, which results in plaque formation. These are the true ‘bad’ LDLs. Having a lot of these small, dense particles makes you three times more likely to develop heart disease.”

There are advanced lipoprotein screens—such as the VAP test and NMR LipoProfile—that your doctor can order to sort all this out,

especially if you have diabetes, a family history of heart disease, or your HDL is low and your triglycerides are high, even if your LDL isn't elevated. “It's possible to have a total LDL cholesterol

that's normal, but too many small, dense LDL particles and you'd be at risk,” explains Peeke. This also explains, at least in part, why saturated fat doesn't affect heart disease risk. Because while foods like butter may raise LDL levels, it's the big, bouncy type as opposed to the damaging little BBs that processed carbs produce. —S.D.

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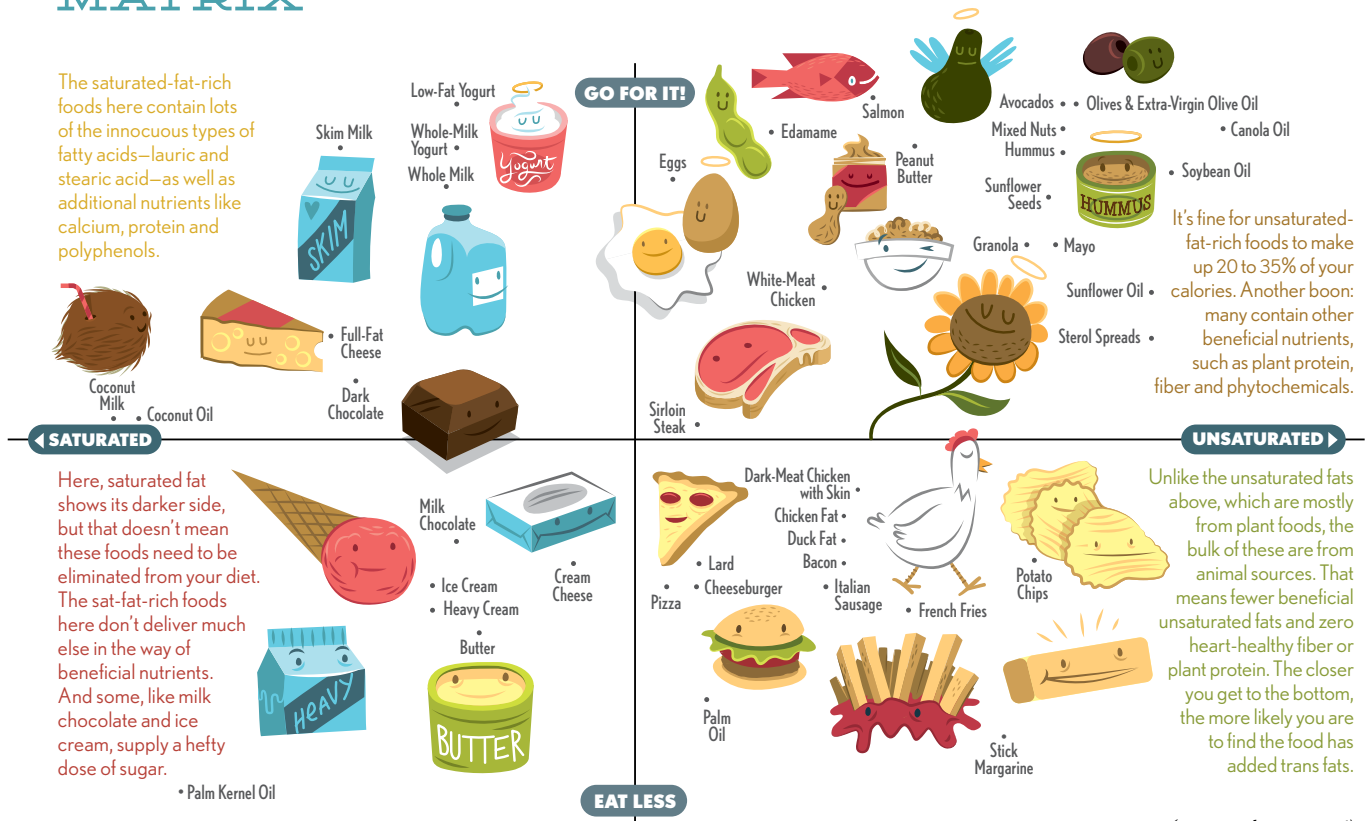
# The Fat Decoder

People are confused about the differences between the types of fat in our diet—saturated, unsaturated, trans. Here, we explain them. —*Holley Grainger, M.S., R.D.*

The Fat	Health Note	Food Sources
<b>Saturated Fat.</b> Typically solid at room temperature.	The old adage that eating too much saturated fat can raise your risk of heart disease has been contested recently—and now saturated fat is believed to be more benign than we originally thought.	Tropical oils (e.g., coconut, palm), butter, fatty meats, full-fat dairy products, coconut milk.
<b>Monounsaturated Fat.</b> Liquid at room temperature, but solid at cooler temps.	This fat helps to improve cholesterol levels, therefore lowering your risk of heart disease. It also controls blood sugar by improving insulin levels.	Avocados, nuts and seeds, and peanut, olive and canola oils.
<b>Polyunsaturated Fat.</b> Liquid at any temperature. There are many types of polyunsaturated fats, but two—omega-3s and omega-6s—are essential, meaning our bodies don't make them, so we need them in our diet.	<b>Omega-3 Fat:</b> The omega-3s EPA and DHA have a long list of science-backed benefits. They can help lower triglycerides, blood pressure and heart disease risk—as well as quell inflammation and improve mood.	Wild salmon, tuna, sardines, other oily fish, walnuts, flaxseed.
	<b>Omega-6 Fat:</b> Higher intakes of omega-6s may improve insulin resistance, reduce diabetes risk and lower blood pressure. We get plenty of omega-6s in our diets and having an even balance of omega-6s and 3s is recommended, so for optimum health, concentrate on increasing foods with omega-3s in your diet.	Soybean, corn and sunflower oils—and packaged foods made with these oils.
<b>Trans Fat.</b> There are naturally occurring trans fats found in small amounts in butter and meat. The bulk of them, however, are produced by adding hydrogen to the chemical structure of vegetable oils—thus making them more solid.	Eating trans fat raises your “bad” LDL cholesterol, but also lowers your “good” HDL cholesterol—and raises your risk of heart disease. Avoid these completely.	Listed as “partially hydrogenated” oil in ingredient lists of processed foods, such as cookies, cakes, crackers and margarine. And can still be found in foods touting “0 grams trans fat”—always check the ingredient list. (Manufacturers can round down if there's 0.49 gram or less per serving.)

## the FAT MATRIX

Olive oil is good, bacon is bad. Likewise, unsaturated fat is good, saturated bad, right? If only it were that simple. Foods aren't made up of just one kind of fat; they're a mix of many different kinds. Many fat-containing foods pack good-for-you nutrients like fiber, protein and calcium, helping to elevate their status. Here, with guidance from several leading experts, we make some judgments on where foods fall in terms of how much we should be eating. —*Karen Ansel, M.S., R.D.N.*



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# myth: CANOLA OIL IS TOXIC.

There are all sorts of rumors about canola oil—so let's sort fact from fiction.

First, you may have heard that canola oil contains high levels of the toxic compound erucic acid. Not true. "The rapeseed plant that canola oil was originally derived from does contain high levels of erucic acid, but it's been bred out of the canola plant we get our oil from today, so levels are very low and not harmful—the FDA regulates how much is allowed (no more than 2 percent)," says Libby Mills, R.D.N., a spokesperson for the Academy of Nutrition and Dietetics. In the late 1960s, traditional plant breeding methods—not biotechnology—were used to rid rapeseed of its undesirable qualities and canola was born. Today most of our canola oil is genetically modified, which adds a certain creep factor for some people. Truth is, there's no hard evidence that genetically modified foods like canola oil cause adverse health effects in humans, but there's also no good research proving that they don't. The FDA doesn't independently test GMOs; rather, they rely on reports from the manufacturer when clearing them for public consumption. So if you're concerned about GMOs, buy organic.

Then there's the claim that canola oil is processed using dangerous chemicals. There's a kernel of truth here. Canola—like many oils—is extracted using hexane, which is dangerous (it's flammable). That said, the final oil is essentially hexane-free—and there's no solid evidence to suggest this method of processing is bad for your health.








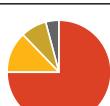
There is also some truth to the idea that *cooking* with canola can be toxic. But there's no need to rid your pantry of it. When canola oil is heated to high temperatures (think: frying), especially for a long time, linoleic acid (a healthy fatty acid also in corn, safflower and soybean oils) gets broken down into a compound called HNE, which has been linked to heart and liver disease and neurological problems. HNE becomes particularly concentrated when canola oil hits its smoke point or is reheated. "There's no research on what amount of HNE is harmful, but it's prevalent in packaged and restaurant foods—especially fried foods," says Mills. —S.D.

## SMOKE POINT

The temperature at which an oil begins to smoke. It varies with each oil (see chart, opposite), but in general the more refined the oil, the higher the smoke point. Heating an oil to its smoke point destroys beneficial compounds and creates harmful free radicals.

# The Oil Guide

Fat isn't just a nutrient essential to your body, it's also a key player in cooking. Fat carries heat, helping to cook foods quickly and evenly. It also coats your taste buds, making flavor linger longer. Our favorites include olive and canola oils and butter. Take a closer look at those—and some other common oils—with this buyer's guide. —*Holley Grainger, M.S., R.D.*

	What the Science Says	Best Used For	Avg. Smoke Point	Fat Breakout
<b>AVOCADO</b> Oil extracted from ripe avocados after the skin and seed are removed.	The green hue of avocado oil comes from carotenoids (specifically eye-healthy lutein) and chlorophyll. Though chlorophyll has been touted as a blood cleanser and detoxifier, there's no solid science backing these claims.	With a hint of avocado flavor, this oil works well in a salad dressing and its high smoke point makes it good for stir-frying or sautéing.	482°F	
<b>BUTTER</b> Though butter is a dairy product, not an oil, it's often used in many of the same applications as oil.	A tablespoon of butter delivers 7% of the daily value for vitamin A—nearly what you'd get in a cup of milk. Some say ghee, or clarified butter (butter that has been heated to remove water and milk solids, leaving behind pure fat) is healthier than butter, but there isn't any science to support that claim.	Delicious as a spread and a favorite for baking because it provides moisture as well as fat. Use clarified butter for high-heat sautéing because it has a higher smoke point.	300°F	
<b>CANOLA</b> Oil extracted from the crushed seeds of the canola plant.	Canola has the smallest amount of saturated fat and the most heart-healthy omega-3 fats of any of the common cooking oils. It's also a good source of vitamins E & K.	With a high smoke point, light texture and neutral flavor, it's an excellent choice for sautéing, baking and frying. Its neutral flavor also makes canola a good choice for some dressings.	468°F	
<b>COCONUT</b> Oil extracted from the meat of mature coconuts. It's solid at room temperature, but liquid above 75°F. Can be used in solid or liquid state.	Although coconut oil is mostly saturated fat, it contains a type of fat that elevates "good" HDL cholesterol. More research is needed to support coconut oil's purported therapeutic benefits—such as potential antimicrobial and antibacterial properties.	Use it for baking and low-heat sautéing because of its smoke point. Match it with foods that go with its coconut flavor.	350°F	
<b>EXTRA-VIRGIN OLIVE</b> Oil cold-pressed from ripe olives. (Regular and light olive oils are more refined.)	People who regularly eat extra-virgin olive oil in place of saturated fats have a lower risk of heart disease, high blood pressure and stroke—and lower cholesterol.	Has a fruitier flavor and aroma than most oil, making it great for salad dressing, drizzling and moderate-heat sautéing.	375°F	
<b>GRAPESEED</b> Oil pressed from the seeds of wine grapes.	Rich in polyunsaturated omega-6 fats, which help lower cholesterol, grapeseed oil also delivers vitamin E.	Grapeseed oil is light in color and flavor with a hint of nuttiness. It has a high smoke point, making it a good option for baking, sautéing and stir-frying.	420°F	
<b>PEANUT</b> Oil extracted from peanuts. Available in refined, unrefined and toasted versions.	Though in small amounts, it's the only oil that contains resveratrol, a compound that may protect against certain cancers and heart disease. Also a good source of vitamin E.	Great neutral flavor; try roasted peanut oil for a toasty flavor. Use refined peanut oil for frying, grilling, sautéing or roasting due to its higher smoke point. Unrefined has a lower smoke point and is good for medium-heat cooking or salad dressings.	450°F* 320°F**	
<b>SAFFLOWER</b> Oil from the seeds of the safflower.	In a study, adding a daily dose of safflower oil (about 1 2/3 tsp.) to their diet helped obese women with type 2 diabetes trim belly fat, improve their insulin sensitivity and "good" HDL cholesterol and lower C-reactive protein, a marker for inflammation.	Safflower oil (sometimes labeled "high heat" or "high oleic") has a high smoke point and very light flavor, making it good for stir-frying, sautéing and baking.	510°F	

\*Refined \*\*Unrefined ■ Monounsaturated ■ Polyunsaturated ■ Saturated ■ Other

**HOW TO STORE YOUR OILS:** Heat and light can damage oil and may alter its taste, so store oil in a cool, dark place for up to a year. Be sure to read labels carefully, though, because some oils have specific storage requirements (grapeseed, for example, should be refrigerated).



**LEARN ABOUT HEALTH BENEFITS** of 7 more oils and when to cook with them at [eatingwell.com/webextra](http://eatingwell.com/webextra)