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A big fat mess

8 things to know about unhealthy fat

They put protein in ***that?!***

FOOD SAFETY
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The good, the bad, & the beef tallow

PETER G. LURIE MD, MPH
President, Center for Science in the Public Interest

The 2025 *Dietary Guidelines for Americans* (DGA), which were released in January by HHS Secretary Robert F. Kennedy Jr. and USDA Secretary Brooke Rollins, reaffirm longstanding limits on saturated fat and sodium. And they continue to recommend fruits, vegetables, and whole foods and that people use plain water as a primary beverage. That's the good part.

Unfortunately, the new *Guidelines* also push animal protein, butter, full-fat dairy, and beef tallow. (See p. 3.)

That harmful advice contradicts the evidence-based recommendations of the 2025 Dietary Guidelines Advisory Committee report, a two-year scientific review by 20 nutrition experts and federal scientists that included thousands of public comments and seven public meetings. (Learn more at **cspi.org/DGAC**.)

The USDA and HHS dismissed most of the advisory committee's recommendations, which they charged had an "ideological bias" because they had been framed through a health equity lens that evaluated the science "through considerations of race, ethnicity, culture, and socioeconomic status."

Instead, the secretaries put the *Guidelines*' scientific review in the hands of nine scientists—seven with ties to the meat, dairy, and/or supplement industry. The result: *Guidelines* that spread blatant misinformation and that are, at best, confusing and, at worst, damaging.

It is difficult to overstate how important the *Guidelines* are. They touch the lives of one in four Americans. In addition to providing nutrition guidance for us all, they are the foundation for federal nutrition programs (including school meals and SNAP), federal education programs, and the food served at many federal buildings. (Visit **cspi.org/DGAreach** to learn more.)

And now, for the first time, they can't be trusted.

Confused by the new *Dietary Guidelines*? Visit **cspi.org/UncompromisedDGA**.

That's why we at the Center for Science in the Public Interest, along with the Center for Biological Diversity, have created the **Uncompromised DGA**. They are what the *Guidelines* would have looked like had the government heeded the advisory committee's report.

You can trust the Uncompromised DGA, which have been endorsed by more than 20 organizations and 17 members of previous Dietary Guidelines Advisory Committees. So can policymakers, advocates, and health professionals.

CSPI remains committed to defending the role of science in public policy and to ensuring that nutrition guidance serve the *public* interest, not special interests.

Peter

For more *Nutrition Action* articles, recipes, and advocacy opportunities, visit CSPI.ORG

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Your Food and Health Watchdog

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A big fat mess

8 things to know about unhealthy fat

BY CAITLIN DOW

"We are ending the war on saturated fats," proclaimed HHS Secretary Robert F. Kennedy Jr. in January as he announced the 2025 *Dietary Guidelines for Americans* (DGA). Not so fast. Here's the good and the (mostly) bad in the new DGA, what the sat fat promoters get wrong, and why the sat fat debate won't go away.

1 Multiple kinds of evidence align.

If you read *Nutrition Action*, you're no stranger to the case for limiting saturated fat. But when everyone from social media influencers to RFK Jr. claims that sat fat doesn't matter, it's worth a refresher on why it does.

"The evidence is quite compelling from multiple aspects," says Frank Hu, chair of the nutrition department at the Harvard T.H. Chan School of Public Health.

■ LDL cholesterol. "There is no question that high saturated fat diets raise LDL, or 'bad,' cholesterol," says Hu.

In one of the most comprehensive analyses, researchers looked at the effect of swapping saturated fats for polyunsaturated fats (think vegetable oils, nuts, and seeds) in 69 well-designed feeding trials. For every 1 percent of calories from sat fat replaced with polys, LDL fell by a little more than 2 milligrams per deciliter.[1] That's impressive.

And few findings in medical research are as solid as the link between LDL and cardiovascular disease.

High LDL levels are not simply a risk factor for heart disease. They're a direct *cause*, say the American Heart Association, American College of Cardiology, and others.[2] That's based on evidence from more than 200 studies (including randomized trials) on more than two million participants.[3]

■ Observational studies. "Another very consistent line of evidence comes from large observational studies," says Hu.

Love a burger? To cut the sat fat, swap the beef for salmon and ditch the cheese.

He's talking about studies that ask people what they eat, then follow them for years or decades. And those studies have shown that substituting unsaturated for saturated fats slashes the risk of cardiovascular disease.[4]

■ Randomized trials. Randomized trials are the only type of study that can prove cause and effect. A common criticism from sat-fat deniers: No trials link saturated fat to heart disease.

That's misleading, though it's true that the trials that have been done are far from perfect. For starters, many were conducted in the 1960s and '70s.

"Researchers were still figuring out what good trials look like," says Kevin Klatt, an assistant professor in the department of nutritional sciences at the University of Toronto. "And it's often hard to tell exactly what they did."

That's because many of the published papers didn't report the same level of detail that is standard today.

What's more, the relationship between diet and heart disease was just emerging. Some studies, for example, only measured total cholesterol because investigators didn't yet know how important LDL was.

Even with those limitations, some things stand out. For example, Klatt and his colleagues recently combined the results of six older trials. In those that were designed to have people replace saturated fat with polyunsaturated fat, the risk of a heart attack was reduced by 25 percent over roughly four years.[5]

But results from the older trials, while important, are just "a small piece of the puzzle," says Klatt. "Because we don't have massive blockbuster trials that are definitive, you really have to triangulate across multiple lines of evidence."

And that evidence largely points in one direction: Too much saturated fat increases the risk of heart disease.

Photos: stock.adobe.com - Emin (top), Andrei Armiagov (beef burger), Leckerstudio (salmon burger).

For a lower-sat-fat breakfast, swap out bacon for avocado.

2 A blockbuster trial is unlikely.

If a definitive saturated-fat trial doesn't exist—and if its results could settle the debate—why not run one?

Three big issues: time, money, and compliance.

In 1962, a committee supported by the National Institutes of Health estimated that a randomized trial to test the impact of fats on coronary heart disease in middle-aged U.S. men would require a whopping 100,000 volunteers and take 4 to 5 years.[6]

Then, in 1971, a follow-up analysis by a federal task force concluded that a so-called National Diet-Heart Trial was not feasible, in part because it would need to be so long and so large that it would cost an estimated $500 million to $1 billion or more in 1971 dollars. And the volunteers would be unlikely to stick to their diets over the length of the trial.[7]

Another important consideration: "Given the data that we already have in terms of saturated fat's effect on LDL cholesterol and cardiovascular outcomes, I don't think it's ethical to assign people to a high-saturated-fat diet for five years or longer," says Hu.

3 It matters what you replace sat fat with.

If the best evidence on saturated fats points in one direction, why do RFK Jr. and others claim that it points the other way?

They're often relying on studies that don't consider what people replace saturated fat with.

For example, unless someone is trying to lose weight, if they cut back on sat fat, they're going to eat something else instead. And that something else is typically unhealthy carbs.

"In studies—both observational and clinical trials—that compare saturated fat with refined starch and added sugar, it's a wash for heart health," says Hu.[4,8]

"But that doesn't mean saturated fat is good. It just means that sat fat, refined starch, and added sugar are all bad in different ways. It's an illogical argument."

In other words, don't swap your bacon for white toast and jam and think you've done your heart a favor. A better swap: avocado.

That's because the strongest evidence favors replacing saturated fats with unsaturated fats—that is, vegetable oils, nuts, seeds, avocado, and so on. (Switching from sat fat to whole grains is also good, but switching to unsaturated fats is better for your heart.)[4]

In a recent study that followed more than 220,000 people for up to 33 years, participants with the highest intake of vegetable oils (like olive and canola) had a lower risk of dying during the study than those with the lowest intake. Substituting about two teaspoons of butter a day with plant-based oils was linked to a 17 percent lower risk of early death.[9]

4 Red meat doesn't deserve a health halo.

Replacing butter with olive oil or a vegetable-oil-based spread probably seems like a no-brainer. But what does the evidence show about replacing other sat-fat-rich foods?

That was one of the questions posed to the latest Dietary Guidelines Advisory Committee—a group of 20 experts who pore over the body of evidence to make recommendations for the final *Dietary Guidelines for Americans*.

"The comparisons were wide open," says Christopher Gardner, professor of medicine at the Stanford University School of Medicine, who led the committee's review of sat fat.

"It could be a lower-saturated-fat version of the same food—high-fat versus lean beef, say—or a totally different food—beef versus chicken or beef versus beans."

The evidence from studies that ask people what they eat, then follow them over time, clearly indicates that you're better off eating fats from plants (though not coconut or palm oil) rather than fats from animals.

For example, "if you substitute beef with beans, peas, lentils, or nuts, heart disease risk is lower," says Gardner.[10,11] "Do you know that it's because of the saturated fat? No, but we weren't saying that."

"We were saying that if you lowered the food source of saturated fat and replaced it with these other foods, that's where you get the benefit."[11]

And that kind of advice is easier for people to follow than telling them to track how many grams of saturated fat they eat, Gardner points out.

One wrinkle: When the advisory committee looked at clinical trials that compared red meat (beef, pork, or lamb) to white meat (chicken or turkey), they didn't find the clear differences in LDL cholesterol that you'd expect.[11]

Most varieties of red meat—especially ground beef—are higher in saturated fat than white meat, so

red meat should have more potent LDL-raising effects. But it's likely that the committee didn't find a difference because those trials are often *designed* to show no difference.

Since the 1990s, studies—they're typically funded by the beef industry—have reported a similar impact on LDL when researchers pitted *very lean cuts* of red meat against white meat.[12-14]

Those results don't exonerate the saturated fat in red meat. They simply show that saturated fat boosts LDL whether it comes from red or white meat.

5 Dairy is complicated.

Roughly 50 to 60 percent of the fat in milk, cheese, and yogurt is saturated. That's why lowfat or nonfat dairy has been a mainstay of recommendations to reduce heart disease risk.

So why do many meta-analyses of observational studies (hint: they're often funded by the dairy industry) report that dairy or high-fat dairy isn't linked to an increased risk of heart disease?[15,16]

Again, it largely comes down to the foods you're comparing dairy to.

"We conducted a substitution analysis to simulate the effects of replacing one food with another for predicting cardiovascular disease," says Hu.

"We estimated that if you substitute dairy fat with plant-based fats from foods like nuts, beans, or soy, the risk is lower. But if you substitute dairy fat with fats from red meat and processed meat, the risk is higher."[17]

And in rigorously conducted randomized trials, dairy fat raises LDL.[18,19] Some types of dairy—like butter—may raise LDL more than others—like cheese. But those differences seem to be small, especially compared to how low LDL levels go in study participants who have been fed diets high in healthy, unsaturated fats.[19]

You might expect that plenty of trials have pitted whole milk against lowfat or skim and measured key outcomes like LDL, weight, appetite, and more.

But "there's surprisingly little out there," says Gardner. "How has that obvious question not been answered?"

(He notes that he's on the advisory board for a group running that kind of trial now. We'll keep you posted.)

More studies are needed to say whether the fermentation that foods like yogurt undergo or other characteristics of some dairy foods can have a neutral, or even positive, impact on your health, as some proponents claim.[20]

But it's not as though trials show that the saturated fats in meat and dairy offer health *benefits* that might offset their negative impact on LDL.

So it makes sense to eat mostly lowfat and nonfat dairy to keep your sat fat intake in check. While there's likely room in *healthy* diets to eat a little full-fat dairy, it's limited. But if your diet is already loaded with fatty red meat and butter, you'd be smart not to add any more.

6 The new *Dietary Guidelines* fumbled on sat fat.

In January, the government released its new *Dietary Guidelines for Americans* and an accompanying upside-down food pyramid that put red meat, cheese, and whole milk near the top (see p. 2).

First, the good news. "I think it's really important that the *Guidelines* retained the long-standing limit of no more than 10 percent of calories from saturated fat," says Hu. (For a 2,000-calorie diet, that shakes out to about 20 grams a day.)

For saturated fat, that's where the good news ends. The new *Guidelines* ignored what Gardner calls "exhaustingly thorough and system-

Saturated stats

Even foods rich in healthy fats—like nuts, salmon, and olive oil—contain *small* amounts of saturated fat. And the standard servings of cheese (1 oz.) and meat (3 oz.) are tiny; many dishes have far more. That's why you're likely to exceed the recommended sat fat limit (20 grams a day) if you eat red meat, full-fat dairy, butter, etc., more than just occasionally.

	Calories	Sat Fat (g)
FATS *(1 Tbs.)*		
Country Crock Original Spread	50	1.5
Beef tallow	120	6
Butter	100	7
Coconut oil	100	10
DAIRY		
1% milk *(1 cup)*	110	1.5
Greek yogurt, lowfat plain *(6 oz.)*	120	2
Half and half *(2 Tbs.)*	40	2
Cabot Lite50 Sharp Cheddar *(1 oz.)*	70	2.5
2% milk *(1 cup)*	120	3
Mozzarella, part-skim *(1 oz.)*	80	3
Cheddar cheese *(1 oz.)*	120	5
Greek yogurt, whole milk plain *(6 oz.)*	170	5
Whole milk *(1 cup)*	150	5
Häagen-Dazs Chocolate Ice Cream *(⅔ cup)*	310	12
MEAT & POULTRY *(cooked)*		
Chicken breast, skinless *(3 oz.)*	140	1
Chicken thigh, skinless *(3 oz.)*	150	2
Ground turkey, 93% lean *(3 oz.)*	180	2.5
Bacon *(2 slices, 0.8 oz.)*	110	3
Ground beef, 90% lean *(3 oz.)*	200	4
Ground beef, 80% lean *(3 oz.)*	230	6
Pork sausage, Italian *(1 link, 3 oz.)*	280	8
RESTAURANT FOODS		
Starbucks Flat White *(grande, 16 oz.)*	220	7
McDonald's Big Mac	580	11
Panera Chocolate Croissant	410	13
Applebee's Classic Cheeseburger	810	22
Shake Shack Chocolate Shake	750	27
Outback NY Strip Steak *(12 oz.)*	880	29
Panera Mac & Cheese *(bowl)*	960	35
Olive Garden Fettuccine Alfredo	1,220	55

Sources: company information, USDA FoodData Central.

Ignore the new food pyramid's advice to eat more red meat and full-fat dairy.

Photo: USDA and HHS.

atic" evidence-based recommendations from the Dietary Guidelines Advisory Committee (see No. 4).

Instead, the new *Guidelines* recommend high-sat-fat foods like red meat and full-fat dairy, and they call butter and beef tallow "healthy fats." But that's not consistent with the 10 percent cap on saturated fat.

"If you do the math, it's very difficult to eat full-fat dairy, meat, and butter while keeping saturated fat below 10 percent of calories," says Hu. (See "Saturated stats," p. 5.) "It's like saying, 'Follow a low-carb diet, but eat more bread.'"

So if you (like many Americans) haven't paid much attention to the *Guidelines*, now is *not* the time to start. But just because you might be able to ignore this messy guidance, it doesn't mean the mess doesn't matter.

The *Guidelines* have formed the backbone of U.S. nutrition policies for nearly half a century, shaping what foods can be consumed or purchased by children and adults in federal nutrition programs like school lunches and WIC (the Women, Infants, and Children program).

What about everyone else?

"I think the average American is going to be even more confused," Gardner predicts. "Trust in science is eroding. This just adds to that erosion."

7 Pay attention to your whole diet.

While nutrients like saturated fat matter, don't lose sight of the forest for the trees.

"I don't think individual people need to be fixated on saturated fat," says Hu. "Instead, it's important to put it into the context of an overall dietary pattern."

Take cheese, a major dairy food in the average American's diet.

Let's say you sprinkle some cheese on top of a salad full of vegetables and beans, or you eat a serving of cheese with whole-grain crackers and fruit. That's very different than eating cheese in cheeseburgers, pizza, burritos, pasta, or other dishes high in refined carbs, red or processed meats, and salt.

"It's okay to have some full-fat dairy or even red meat occasionally in a healthy diet," Hu notes. "But those animal foods should not be the foundation. It's not a good idea to go back to the meat-centric plate of the 1950s and 1960s."

8 The sat fat debate rages on.

For most nutrition experts, the evidence for cutting back on saturated fats and replacing them with unsaturated fats is solid. So why are we still talking about it?

"There are interested industries that are always going to fund studies on this," Klatt points out. He's talking about the dairy and red meat industries. And studies they pay for are often designed to show neutral or positive effects of their products.

"But people also love a 'We used to think this, and now we don't' story," he adds. "So researchers are always chasing after that. You see it all the time in nutrition: sodium, fat, sat fat, carbs."

What's more, what we eat is complex. And studying that complexity is hard.

"People are not using the same measuring stick to try and see through the hazy fog of how diet affects chronic disease," says Klatt.

"Nutrition science will always lend itself to someone taking legitimate limitations in the evidence, and weaponizing them so that they can write a diet book or develop an entire persona around being a truthsayer."

"It's a lot of things happening at once, and then you throw all of that into a contrarian, Make-America-Healthy-Again-influencer ecosystem, and any semblance of the truth can become a casualty."

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[15] *Eur. J. Epidemiol.* 32: 269, 2017.
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[17] *Am. J. Clin. Nutr.* 104: 1209, 2016.
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[20] *Adv. Nutr.* 10: 917S, 2019.

Got Nutrition Facts questions?

6 CONFUSING EXAMPLES, EXPLAINED

BY LINDSAY MOYER

Nutrition Facts look simple, but things can get complicated. Spend enough time reading food labels, and you're likely to wind up befuddled once in a while. (We've been there.) Here are two common sources of confusion about serving sizes. Turn the page for alcohol, vitamins, sugar, calories, and more.

How many minis per serving?

Despite what the big numbers on the Nutrition Facts labels seem to be saying, a Pepperidge Farm Plain Mini Bagel doesn't have more calories than a Pepperidge Farm full-size Plain Bagel. Those 320 calories are for three minis.

That's because labeling rules require that mini bagels, like full-size bagels, list Nutrition Facts for the number of bagels that comes closest to 110 grams. (In this case, that's three 40-gram minis.)

Why so heavy? Because the average bagel keeps getting bigger…and serving sizes reflect what we typically eat, not necessarily what we *should* eat.

So if you want a one-mini portion, divide the calories (and the sodium, etc.) by the number of bagels in a serving.

How many crackers per serving?

The serving sizes on the Nutrition Facts labels for Ritz (5 crackers) and Triscuits (6 crackers) look similar…but they're not.

In fact, a serving of Triscuits weighs almost twice as much as a serving of Ritz (28 grams vs. 16 grams). That makes Ritz look lower in calories (and sodium) …but it's not.

Here's what's going on. Ritz lists a serving size that's also required for saltines, melba toast, crispbreads, and other crackers "that are usually not used" as a snack, per the FDA's rules.

That lighter serving size makes sense if, say, you're eating fewer rye crispbread crackers because you're layering them with toppings. But if you're snacking on Ritz, saltines, crispbreads, etc., straight from the box, they're no different from any other cracker.

So if you're going to compare them to a typical cracker like Triscuits, double their numbers first.

Photos: Drazen - stock.adobe.com (top), NIQ Product Explorer (bagels), Lindsay Moyer - CSPI (crackers).

Why do some alcoholic drinks have a Nutrition Facts label and others don't?

Angry Orchard Crisp Apple Hard Cider comes with clear Nutrition Facts that list calories, added sugars, sodium, and everything else. Ditto for many hard seltzers and wine coolers.

But most beers, wines, and hard liquors either list only a few numbers (calories, carbs, fat, protein) or nothing at all. Why the split?

A small group of drinks—most hard seltzers, wine coolers, and hard ciders—are subject to the Food and Drug Administration's labeling rules, so they must have Nutrition Facts. But most alcohol isn't regulated by the FDA, so nutrition info isn't required. (Some brands include it voluntarily.)

What can you do? To find out calories or other info about alcoholic drinks that have no Nutrition Facts, you can try checking the company's website, asking their customer service department, or checking our chart of calories in many popular drinks at cspi.org/alcohol.

What else you should know about missing labels

Most beverages and foods—other than fresh whole fruits and vegetables—must have a Nutrition Facts label.

One big exception: The U.S. Department of Agriculture's rules let companies skip a Nutrition Facts label on whole cuts of meat and poultry if the grocery store posts the information for the most popular cuts on a poster or brochure in the store. (Ground or chopped meat must have a label on the package, though.)

More missing numbers: Even if a food or drink has a Nutrition Facts label, it may not include everything you might want to know.

Caffeine, for example, isn't required. Some companies list the caffeine content of their products elsewhere on the package or on their website, or they provide the information if you ask customer service. When in doubt, check our chart at cspi.org/caffeine.

Don't beans have more vitamins and minerals than the Nutrition Facts show?

Photos: Lindsay Moyer - CSPI.

A can of Bush's Cannellini Beans lists the amount of just four vitamins and minerals (other than sodium) on its Nutrition Facts label: vitamin D, calcium, iron, and potassium.

But if you've been reading along in *Nutrition Action*, you know that beans are vitamin-and-mineral superstars: We're talking about not just a nice supply of iron and potassium, but also magnesium, zinc, copper, and folate.

So why aren't they all listed?

On most Nutrition Facts labels, the FDA only requires vitamin D, calcium, iron, and potassium. They're a priority because shortfalls of the four are (1) relatively common and (2) linked to major health problems. (If a food adds—or makes a claim about—any other vitamin or mineral, it must also be listed on the Nutrition Facts label. And any label *can* show others, but it's voluntary.)

That's why, if you don't see another vitamin or mineral listed, you shouldn't assume the food has none of it, especially if it's known to be a natural source (like, say, the vitamin C in strawberries).

And it's why, if you use an app like MyFitnessPal to track your food intake, your daily totals for some vitamins and minerals may be underestimates.

Does honey count as added sugars?

When honey, maple syrup, brown sugar, or another sugary sweetener is an ingredient in a cereal, granola bar, yogurt, or other food, its sugar is always included in the grams of "added sugars" line on the food's Nutrition Facts label.

So why is that line largely blank on the label for Wholesome Organic Honey?

The label lists 17 grams of "total sugars," but the line below it—the one that's supposed to show how many grams of "added sugars" are included in that total—is empty...except for a "34%." What gives?

Disclosing the grams of "added sugars" on Nutrition Facts labels for sugary sweeteners is voluntary, which explains why the number is often missing.

The backstory: A line showing grams of "added sugars" on honey or maple syrup, industry lobbyists argued years ago, would make it look like companies had added *more* sugar to their honey, syrup, etc.

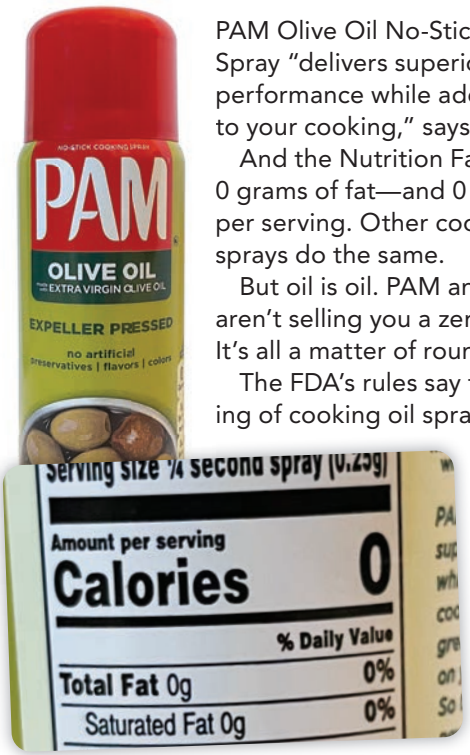
So the FDA lets those sweetener labels use a mostly blank line if they want to. They only need to include the "% Daily Value" (DV), which tells you how much of the 50-gram recommended daily limit for added sugars you're getting in one serving.

But all of a sweetener's sugars count when they calculate the % DV. That's why the Wholesome Organic Honey label lists 34% DV. As the label's footnote explains, "One serving adds 17g of sugar to your diet and represents 34% of the Daily Value for Added Sugars."

What else you should know about added sugars

You could also see a largely blank "added sugars" line on the Nutrition Facts label for any white or brown sugar, coconut sugar, agave syrup, etc. Just don't be fooled by that. Whether sugars come from honey, maple syrup, agave syrup, or sugar, they all count as "added sugars" in your diet.

Does oil spray have zero fat and calories?



PAM Olive Oil No-Stick Cooking Spray "delivers superior non-stick performance while adding zero fat to your cooking," says the can.

And the Nutrition Facts label lists 0 grams of fat—and 0 calories—per serving. Other cooking oil sprays do the same.

But oil is oil. PAM and the others aren't selling you a zero-fat version. It's all a matter of rounding.

The FDA's rules say that a serving of cooking oil spray is a mere ¼ gram. Since the spray is almost pure oil, that's equal to roughly ¼ gram of fat, which has about 2 calories. But anything below ½ gram of fat or 5 calories rounds down to zero on Nutrition Facts labels, say the feds.

Of course, that doesn't mean you end up with no fat or calories. A can of PAM dispenses its ¼-gram serving of oil in just a "¼ second spray." That's pretty fast. If it takes you, say, four seconds to fully coat your pan, you're looking at an estimated 4 grams of oil and 35 calories. That's fine—olive oil is healthy—but it's always good to know what you're getting.

What else you should know about rounding

Sugar's rounding works similarly. If a food contains less than ½ gram of sugar per serving, it rounds down to 0 grams on the Nutrition Facts label.

That explains why a seasoning blend with a tiny, ¼-teaspoon serving size—like McCormick Grill Mates Brown Sugar Bourbon Seasoning—doesn't even have an entry for sugar on its Nutrition Facts label even though it contains two kinds of sugar plus molasses.

Does that matter? Not really. If you're using a typical serving, the amounts are trivial.

For more examples, go to **cspi.org/LabelConfusion**

Photos: Lindsay Moyer - CSPI.

Quick Studies

BY BONNIE LIEBMAN

A snapshot of the latest research on diet, exercise, and more.

Low-calorie sweeteners for weight loss?

Do low-calorie sweeteners lead people to lose—or gain—weight?

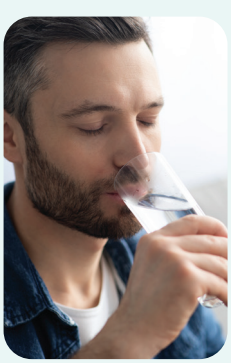
Researchers had 277 adults with excess weight eat a low-calorie meal-replacement diet for 2 months, which led them to lose 22 pounds. For the next 10 months, they were randomly assigned to eat a healthy diet either with or without low-cal sweeteners. (Both diets got less than 10 percent of their calories from added sugars.)

By the end of the 10 months, the no-low-cal-sweetener group had regained 10 pounds, while the low-cal-sweetener group had regained only 6 pounds. (The average participant started the study at 200 pounds.) Blood pressure, blood sugar, and LDL ("bad") cholesterol fell by roughly the same amount in both groups.

WHAT TO DO: Don't worry that using low-cal sweeteners will lead you to gain weight...or regain extra weight. But avoid aspartame, acesulfame potassium, saccharin, and sucralose, which may raise the risk of cancer. Stevia extract, monk fruit extract, and allulose are safer options.

Nature Metab. 7: 2083, 2025.

Best drinks for type 2 diabetes?



Does drinking water instead of diet drinks lead to lower blood sugar levels in people with type 2 diabetes?

Scientists randomly assigned 178 people with type 2 diabetes who typically drank beverages made with low-calorie sweeteners to consume 24 oz. of either diet drinks or unflavored water (sparkling or still) every day. After 24 weeks, hemoglobin A1c (a long-term measure of blood sugar) was higher in the water group (it averaged 7.44 percent) than in the diet-drink group (7.14 percent). Both groups started at about 7.20 percent.

WHAT TO DO: Got type 2 diabetes? Don't worry that diet drinks raise A1c. But stick to safe sweeteners (see above). And don't assume that water raises A1c. Some people in the water group might have replaced diet drinks with sweets.

Diabetes Care 2025. 49: 239, 2026.

Diet & kidney cancer

A healthy DASH or Mediterranean diet may help lower the risk of kidney cancer.

Scientists enrolled 113,594 people aged 40 to 70 in the UK Biobank study. After 11 years, those who had most closely followed a DASH (Dietary Approaches to Stop Hypertension) diet had a 33 percent lower risk of kidney cancer than those who had eaten the least DASH-like diets. Similarly, those who ate a healthy Mediterranean diet had a 29 percent lower risk than those whose diets least resembled a healthy Mediterranean diet.

WHAT TO DO: This study can't prove that a DASH or Mediterranean diet can prevent kidney cancer, since something else about people who eat them might explain their lower risk. But those diets—both rich in vegetables, fruits, fish, beans, nuts, whole grains, and healthy oils and low in red and processed meats—can protect your heart, so whaddya got to lose?

J. Transl. Med. 23: 1318, 2025.

Vaccines & plunging cervical cancer rates

U.S. women born in the 1990s have half the risk of cervical cancer of women born in the 1970s.

Cervical cancer rates fell by a remarkable 11 percent *per year* starting with women born from 1987 to 1989. Those women were about 18 years old in 2006, the year vaccines for HPV (human papillomavirus) became available.

WHAT TO DO: Girls and boys should get the HPV vaccine at age 9 to 12 to lower the risk of six cancers caused by HPV, say health authorities.

J. Nat. Cancer Inst. 2026. doi:10.1093/jnci/djaf374.

Full-fat dairy & weight loss

Do high-fat dairy foods lead to weight loss by curbing appetite, as some people claim?

In a study partly funded by the Dairy Farmers of Canada, researchers randomly assigned 74 adults with excess weight to (a) cut 500 calories and eat less than 1 serving of low-fat dairy every day, (b) cut 500 calories and replace them with a serving of whole milk at breakfast, a full-fat yogurt before lunch, and 2 full-fat cheese sticks before dinner every day, or (c) eat the same 3 full-fat dairy foods with no advice to cut calories.

After 12 weeks, the first group had lost 1.5 pounds, the second group had gained 0.8 pounds, and weight didn't budge in the third group.

WHAT TO DO: Don't expect high-fat dairy to promote weight loss.

J. Nutr. 2026. doi:10.1016/j.tjnut.2026.101373.

Low-fat vs. low-carb diets for belly fat

A low-carbohydrate diet may lead to a greater loss of visceral (deep belly) fat, which is more closely linked to disease than other body fat.

The DIETFITS trial randomly assigned 449 men and premenopausal women with excess weight to either a healthy low-fat or healthy low-carb diet.

After 1 year, both groups had lost about 12 pounds. However, men on the low-carb diet lost slightly more visceral fat than those on the low-fat diet. Women lost no more visceral fat on the low-carb diet. (It's not clear if those results would also apply to postmenopausal women, who often have more visceral fat.)

WHAT TO DO: Want to cut visceral fat? Try a diet that cuts carbs and relies on non-starchy vegetables plus fish, poultry, nuts, and healthy oils.

Int. J. Obesity 2025. doi:10.1038/s41366-025-01989-x.

Tai chi for insomnia?

Cognitive behavioral therapy (CBT) is the first-line treatment for chronic insomnia, but many people can't find or afford a CBT therapist. Could tai chi help?

Scientists randomly assigned 200 people aged 50 or older with moderate insomnia to two 1-hour group sessions a week of either Yang-style tai chi or CBT for 3 months.

After the sessions ended, insomnia severity scores had dropped more in the CBT group (by 11 out of 28 points) than in the tai chi group (by 7 out of 28 points). But a year later, severity scores had dropped by 10 points in both groups.

Likewise, after 3 months, 83 percent of the CBT group vs. 56 percent of the tai chi group no longer had insomnia. But a year later, 63 percent of the CBT vs. 77 percent of the tai chi group no longer did (that difference wasn't statistically significant).

WHAT TO DO: Got chronic insomnia? A CBT intervention is your best bet (see Sept./Oct. 2024, p. 8). But over the long term, tai chi may work at least as well.

BMJ 2025. doi:10.1136/bmj-2025-084320.

Lipoic acid for multiple sclerosis?

Can the antioxidant supplement lipoic acid slow the progression of multiple sclerosis, as a pilot trial suggested?

Scientists randomly assigned 115 people with MS to take 1,200 mg of lipoic acid or a placebo every day. After 2 years, the lipoic acid takers had no slower decline in walking speed and no fewer falls than the placebo takers.

What's more, lipoic acid takers were more likely to have kidney problems (protein lost in urine and decreased glomerular filtration rate).

WHAT TO DO: Unless new clinical trials demonstrate that lipoic acid is safe and effective, don't take it to treat MS.

Neurology 106: e214454, e214578, 2026.

Think you know food safety?

5 ASSUMPTIONS TO RETHINK

BY CAITLIN DOW

We all make assumptions in the kitchen: Food poisoning is mild. Symptoms come from the last meal you ate. Rinsing produce eliminates risk. But the evidence tells a different story. Here's what you need to know to stay safe.

ASSUMPTION: Food poisoning is just an upset stomach that lasts a couple of days.

"That's false," says Ben Chapman, head of the department of agricultural and human sciences at NC State University. "People die."

In fact, researchers estimated that in 2019, close to 1,000 people in the U.S. died from seven of the most common pathogens found in food.[1]

What's more, notes Chapman, "we have lots of examples of long-term health effects from pathogens like *E. coli*, which can lead to kidney failure, or from *Salmonella*, which can cause reactive arthritis." (While rare, reactive arthritis can cause joint pain that develops days—or weeks—after a *Salmonella* infection. For some people, the symptoms last for years.)

Another pathogen that can cause long-term problems: *Toxoplasma gondii*. People may be exposed to the parasite from cat feces or from undercooked meat, shellfish, or fresh produce.

If you're healthy, an infection might cause no symptoms at all. On the other hand, you might experience tender lymph nodes, muscle aches, and pains that can last for weeks or months. People who are immunocompromised may have even more-severe symptoms.

A *Toxoplasma gondii* infection during pregnancy can cause a miscarriage or stillbirth, and infants who were infected before birth can suffer vision loss, mental disabilities, or seizures later in life.

The kicker: The parasite can persist in the body in an inactive state and can lead to behavioral changes over time.[2]

Chapman's bottom line: "The vast majority of foodborne illness infections are acute and people get over them quickly. But you never know how you're going to react to a pathogen."

Plastic cutting boards aren't necessarily safer—or better—than wood. But it's a good idea to use them when prepping raw seafood, poultry, or meat.

ASSUMPTION: My last meal caused my food poisoning symptoms.

Maybe…or maybe not.

Most foodborne pathogens—that is, bacteria, viruses, or parasites—don't cause symptoms immediately.

For example, it can take from 12 hours to three days before you start showing signs of a *Salmonella* infection. And a norovirus infection can take between 12 hours and two days. But it can take up to 90 days for *Listeria monocytogenes* symptoms to show up.[3]

On the other hand, you'll know you've got food poisoning from *Staphylococcus aureus* within one to seven hours.

"Or if a toxin was in your food because of a bacteria like *Bacillus cereus*, you might have a very quick onset of symptoms," says Chapman. *Bacillus cereus* toxins can hit you within just a couple of hours.

"But it's not as simple as, 'Oh, we all ate last night at this restaurant, so that's what made us sick,'" says Chapman.

"If, say, a family of four had also eaten dinner together three nights ago at home, that could have been the source of their symptoms."

ASSUMPTION: Plastic cutting boards prevent food poisoning better than wood cutting boards.

"Both types of cutting boards have their benefits," says Chapman, "and they

also have their risks."

"Plastic cutting boards are robust and hardy. You can put them in the dishwasher, no problem. And the time and temperature of a normal dishwasher cycle—not even the sanitize cycle—is enough to effectively remove bacteria and viruses."[4]

The downside of plastic: Over time, your knives create grooves that can harbor bacteria. What's more, plastic cutting boards may be a source of microplastics that make their way into your food…and then into you.[5]

The main benefit of wood cutting boards: "As they dry, water and any bacteria that may still be present after cleaning get drawn in to the center of the board by capillary action," says Chapman.

That traps the bacteria, which will die as the board dries.

The downside of wood: Cleaning them requires a bit more effort.

That's because you shouldn't put wood cutting boards into the dishwasher, cautions Chapman. "If you do, they're going to break or warp over time."

"And wood cutting boards have to be dry to use them safely," he adds. "If they're wet, there isn't enough time for that capillary action to take place."

So what does Chapman use in his home?

"I try to use plastic cutting boards for raw meat, fish, or poultry because I can run them through the dishwasher when I'm done with them. And I use wood cutting boards for basically everything else."

Photo: Towfiqu Barbhuiya - stock.adobe.com.

ASSUMPTION: Rinsing fruits and vegetables removes the risk of food poisoning.

If you think that rinsing your produce prevents food poisoning, think again.

Rinsing mostly removes soil and grit, Chapman points out. It can also get rid of some harmful bacteria, though not everything.

That's because many of the bugs that cause food poisoning (like *Listeria monocytogenes* or *E. coli*) "are tightly bound to the surface, so you can't remove them in your home."

Rinsing fruits and vegetables helps remove soil and grit, but may not remove disease-causing microbes.

In other cases, the bacteria may be inside the fruit or vegetable. If so, washing the surface doesn't do any good.

And don't bother with produce washes, soap, or more aggressive cleaners like bleach, says the U.S. Department of Agriculture. They aren't approved for use on food and may leave chemical residues on your produce.

So go ahead. Rinse your produce to remove soil and grit and maybe some bacteria and viruses. Just don't expect it to guarantee that your food is safe.

ASSUMPTION: I don't need to rinse fruits or vegetables if I'm going to toss the peel.

For most produce, it doesn't matter whether you rinse first or not.

"But we have good scientific data showing that rinsing and scrubbing cantaloupe with a produce brush reduces risk," says Chapman.

Why cantaloupe? Its rough rind, which is full of crevices, can trap microbes. What's more, "cantaloupes are not high in acid," notes Chapman. That means that bacteria like *Salmonella* can grow more easily than they would in, say, strawberries.

"And if there is a pathogen on the outside of the cantaloupe and I cut through it, I'm essentially dragging that pathogen right across my cut line, through the middle of the melon."[6]

If the cantaloupe gets eaten right away, the risk of food poisoning is low.

"The issue is when I cut it, then let it sit at room temperature either on a buffet or my counter or at a cookout," says Chapman. "The longer it's out at room temperature, the more that pathogen that I dragged across the meat of the cantaloupe can grow."

But if it's *Listeria* that your knife brought inside the cantaloupe from the skin, you could be in trouble even if you refrigerate the cut melon right away. "*Listeria* grows at refrigeration temperatures," explains Chapman.

That's why it's a good idea to always scrub your cantaloupes.

[1] wwwnc.cdc.gov/EID/article/31/4/24-0913_article.
[2] *Sci. Rep.* 2017. doi:10.1038/s41598-017-10926-6.
[3] cspi.org/article/what-you-need-know-about-food-poisoning.
[4] *J. Appl. Microbiol.* 128: 1324, 2020.
[5] *Environ. Sci. Technol.* 57: 822, 2023.
[6] *J. Food Prot.* 79: 764, 2016.

Mixed bag

WHAT'S IN THAT LUXURY IV, ANYWAY?

BY JESSIE SEILER

Medical spas hawking IV therapy are popping up everywhere, with promises to rid you of your hangover, boost your immune system, and even slow or reverse aging. Each "treatment" can cost hundreds of dollars. The evidence for the effectiveness of IV therapies is shaky. But the risks? Those are real.

What is IV therapy?

You've probably seen a patient receiving intravenous (IV) fluids or medication before, either on TV or in real life. IVs are a way for doctors to make sure that people who are sick, injured, dehydrated, or having surgery can stay hydrated. They can also deliver medications directly into the bloodstream.

In recent years, though, IV therapy outside of hospitals has exploded. According to a 2024 industry report, the number of "medical spas" (non-hospital locations that offer IVs and other treatments) nearly doubled (from 5,431 to 10,488) between 2018 and 2023. And those spas averaged $1.4 million in annual revenue.

Depending on where you go and what you're looking for, IV treatments—they can be done on site or in your home—can be expensive.

A simple "IV hydration" with saline, which will "restore essential fluids, improve hydration, and boost energy levels—helping you feel refreshed and revitalized," according to one "medspa," will run you about $100.

Adding vitamins, minerals, and other ingredients to the IV can quickly jack up the tab.

Want to "prevent unnecessary aging"? It'll cost you $199 per treatment at one spa. A "detoxifying" session can be yours for $299. And you can "optimize your mind and body" for $999.

Are IV therapy claims backed by science?

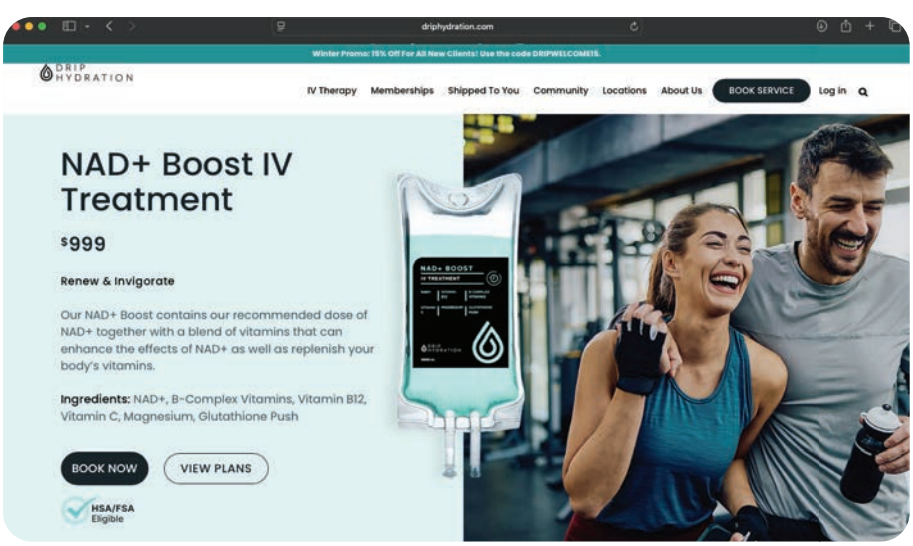
If IV therapies at medical spas could help us age more slowly, lose weight, be better athletes, get an immune boost, or even beat the common cold—all claims that some spa websites make—they might be worth it. But the evidence just isn't there.

A 2023 review found no high-quality evidence to support IV vitamin therapies for people who don't have a severe vitamin deficiency (like scurvy), a critical illness, or a specific medical condition (like a problem absorbing vitamins due to hemodialysis, a treatment for kidney disease).[1]

If you're a healthy adult looking to shore up your vitamin and mineral intake, look no further than a balanced diet, or maybe a multivitamin pill if you need one (see Sept./Oct. 2024, p. 3).

And if you want to get rid of a hangover or jet lag, you can ignore the med-spa hype and just wait for it to go away on its own. (And you don't even have to pay us for that advice!)

So why waste hundreds—or thou-



The average trip to a medical spa costs $527, but some treatments, like this "NAD+ Boost IV," can cost almost twice that much. And it probably won't be covered by your insurance.

Photo: Trsakaoe - stock.adobe.com (top).

sands—of dollars on "treatments" with no supporting evidence? Probably the same reason people throw away their money on wellness fads like detox supplements and cleanse diets.

Who oversees medical spas?

When you visit a "medical" spa, you might assume that you're going to be treated by a doctor. Wrong.

The American Medical Association recently reported that roughly 70 percent of medical spas lack any affiliation with a medical practice.

Why not? Because they don't have to. States are generally responsible for regulating medical spas. But they're not doing much.

In a recent paper in a leading medical journal (it was co-authored by CSPI president Peter Lurie), researchers found that no state had legislation in place to regulate medical spas that offer IV therapy (although Texas has since passed a law covering who can order and give IV therapy).[2]

The researchers also contacted 102 medical spas while posing as shoppers, pretending they were looking for treatment for specific problems.

The spa employees they spoke with were often willing to offer advice and make false claims about IV therapy to treat ailments like headaches and colds. None of the spas accepted insurance.

The authors concluded that "more stringent oversight may be necessary to protect public health, including standards for facility registration and reporting of product information, benefits, and risks."

The American Medical Association has called for states to pass laws requiring that a physician be present at every site and that non-physicians wear identification clearly indicating that they are not doctors.

What are the risks of IV therapy?

In the "secret-shopper" study, when medical spas were asked about the potential risks of IV therapy, just one in four offered any information about what could go wrong.[2]

Medical spas are not tightly regulated. In some cases, employees have mixed therapies themselves without following sanitary procedures, the FDA said in 2021.

In fact, treatment can come with serious side effects.

"Anything we place in the human body can carry risk, including those things which are thought to be natural, such as vitamins or fluids," said Brent A. Bauer, director of research at the Mayo Clinic section of integrative medicine and health, in an October 2024 interview with Mayo Clinic Press.[3]

"High doses of certain vitamins and minerals have been linked to kidney damage, heart rhythm abnormalities, blood pressure changes, gastrointestinal symptoms, and damage of the peripheral nerves."

The IV itself might be risky, too. Infections at the site of the IV placement can lead to bloodstream infections or sepsis, a life-threatening consequence of an infection.

What's more, repeated IV administrations could cause inflammation, bruising, and even vein damage or collapse. And there's always the risk that people could do themselves serious harm by passing up an actual proven treatment in favor of a useless IV therapy.

Another danger: In 2021, the FDA warned that some medical spa employees may be mixing, or compounding, the IV therapies themselves without following standardized sanitary procedures.[4]

The agency described "a 50-year-old female patient who was hospitalized and treated for suspected septic shock with multi-organ failure after receiving an IV-vitamin infusion in her home."

Her blood tested positive for bacteria that may have come from the unsanitary facility in which the IV therapy was compounded, where inspectors also found expired pharmaceutical ingredients.

BOTTOM LINE: Expensive IV therapy isn't backed by science and could be risky for your health.

If you're worried about a vitamin or mineral deficiency or you're not feeling your best, talk to your doctor about testing and treatment options before dropping hundreds of dollars, or more, at unproven and potentially risky medical spas.

[1] *Drug Ther. Bull.* 61: 151, 2023.
[2] *JAMA Int. Med.* 85: 1455, 2025.
[3] mcpress.mayoclinic.org/living-well/iv-vitamin-therapy-understanding-the-lack-of-proven-benefit-and-potential-risks-of-this-health-fad.
[4] fda.gov/drugs/human-drug-compounding-fda-highlights-concerns-compounding-drug-products-medical-offices-and-clinics-under-insanitary.

Hit the ground running

WHAT KIND OF RUNNING (OR WALKING) SHOES ARE BEST?

BY CAITLIN DOW

On the hunt for a new pair of running shoes? Should you go minimalist and feel the earth beneath your feet? Or maximalist and envelop your trotters in a cloud-like layer of foam? If you're a walker, not a runner, is the answer the same? We've got the pros and cons worth considering.

Minimalist versus maximalist

There are five features of minimalist shoes, says Jean-François Esculier, head of research and development at The Running Clinic and clinical associate professor in the department of physical therapy at the University of British Columbia.

"They're thinner, they have a lower drop, which means the heel is not as elevated versus the front of the shoe, they're more flexible, they're lighter, and there are fewer technologies to control the movement of the foot and to give stability."

What about a maximalist shoe? "The key feature is that it's thicker, so there's more foam under the foot," says Esculier.

"Most of the time, those shoes will also have a higher drop or slope. And maximalist shoes are usually stiffer, so they won't really allow your foot to adjust its position based on the terrain."

To understand where a shoe falls on the minimal/maximal scale, Esculier and his colleagues created the "Minimalist Index," which rates shoes from 0 to 100 percent.

"A score of 100 percent would be a minimalist shoe like the Vibram FiveFingers," says Esculier. "If you go toward the other end of the scale, you'll find thicker, stiffer, more supportive shoes."

HOKA shoes are what most of us think of as maximalist, but plenty of other brands make similar high-foam shoes. Curious where your favorite shoe lands on the scale? To find out, check out therunningclinic.com/shoes.

Pros and cons of MINIMALIST shoes

Why might a minimalist shoe be better? "The body has the ability to adjust to the terrain," Esculier explains, "and it does a better job if it can feel the ground better. So by having less interference between the foot and the ground, the foot will be able to sense the terrain, which will help your body absorb impact better."

While you might think that more padding means less impact, the opposite tends to be true.

"Quite often, if you ask someone to run barefoot versus with thick shoes, they will change how they run in order to not hit the ground as hard," says Esculier.[1]

Minimalist shoes also help build stronger feet.

"There are numerous studies on people who started wearing more minimal shoes and their foot muscles grew bigger and stronger," notes

Maximalist shoes (left) are thicker, have a higher drop from the heel to the front of the foot, and are stiffer than minimalist shoes (right).

Photos: stock.adobe.com - Yury Kirillov (top); sports photos (bottom left shoe), Iuliia Sokolovska (bottom right shoe).

Esculier.[2] "And by having stronger feet, you reduce the load on your knees and your hips."

Stronger feet may also mean better balance and an improved ability to feel and sense things—like pressure, touch, position, and movement—in your foot and ankle.

What are the downsides?

"If you transition too quickly to a minimal shoe, nearly everyone will get a foot, Achilles tendon, or calf muscle injury," says Esculier. "You have less load at the knee, hip, and lower back with minimalist shoes, but you have more load at the foot, ankle, and calf."

Solution: Transition to minimalist shoes slowly, over the course of a few weeks or even months.

Pros and cons of MAXIMALIST shoes

"A big pro in favor of maximalist shoes is that they are a great tool to physically protect your feet," says Esculier.

"Maybe you have diabetes and your feet need to be protected due to the numbness, pain, or ulcers caused by diabetic neuropathy. Or maybe you have a chronic foot injury like plantar fasciitis that does not allow you to run unless you have maximalist shoes.

"Or if you are doing longer distances on trails that are hard on your feet, like there are pointy rocks and the terrain is a bit harder on your feet, then a maximalist shoe would protect your feet a bit more."

The cons? "They tend to lead to foot muscles that are not as strong, and they increase the load on your knees, hips, and lower back."

Walking versus running

The same reasoning you'd use to choose one type of running shoe over another also applies to picking walking shoes.

"It's just that the magnitude of the difference won't be as large because walking is lower impact," Esculier explains.

Still not convinced that a minimalist shoe is good for your joints? In one study, researchers randomly assigned 50 older women with knee osteoarthritis to wear a minimalist shoe for at least six hours a day or to continue wearing their typical footwear.

After six months, the minimalist-shoe wearers reported less knee pain and stiffness and better function than the control group. They also reported taking fewer painkillers throughout the study.[3]

Are these shoes made for walking? The same principles for choosing a running shoe apply to choosing a walking shoe.

Should you switch shoes?

"If you are fully adapted to your shoe, you're comfortable in it and not injured, and you don't want to change anything with your performance, you should not change the type of shoe you run in," says Esculier. "Any change in your training is a risk factor for injuries."

But let's say there is a problem.

"If you tell me that you have a chronic knee injury, chances are you should reduce the load at your knees at each step," says Esculier. "So I would go to something more minimalist. If you tell me that you have a foot injury, you might benefit from something a bit more maximalist."

What if you're not used to anything because you're new to running?

"I like to get people started with something more on the minimalist side of things," says Esculier. "Not 100 percent minimalist, like five-toed shoes, but something with around a 70 percent score on the Minimalist Index."

"That lower amount of cushioning allows you to feel the ground better so you can minimize impact when you run and develop stronger feet."

And, of course, whatever shoes you end up with won't last forever. When should you replace them?

You may have heard that you should get a new pair after 300 to 500 miles of use. Ignore that advice, says Esculier. It comes from shoe manufacturers, and there's no evidence to support it.

His recommendation: "Change your shoes when they don't feel comfortable anymore, or when they are broken down or deformed, regardless of how many miles they have been used for."

Want to know what other factors you should consider or ignore (like foot type) before buying a running or walking shoe and if you can trust the advice from a shoe salesperson? Check out cspi.org/runningshoes.

Bottom line

If you're happy with your running or walking shoes, no need to switch things up. Beyond that, there are no hard and fast rules about which shoe is best.

"In the end, the best shoe is the one that you like that gets you out the door," says Esculier.

[1] *JBJS Rev.* 11: e23.00098.
[2] *Int. J. Sports Med.* 44: 320, 2023.
[3] *Clin. Biomech.* 30: 1194, 2015.

Protein-a-palooza

WHAT'S WORTH BUYING?

BY LINDSAY MOYER

Supermarkets are awash in protein desserts, snacks, and bars. But most adults in the U.S. already eat more than enough protein (the Daily Value is 50 grams). Who needs extra from processed junk? In contrast, some healthy higher-protein foods may be worth it. Here's a look at four examples of each.

4 HEALTHY PROTEIN FOODS

Milking it

Fairlife and other brands now offer "ultra-filtered milk" that filters out some of dairy milk's naturally occurring sugar. The milk that remains is higher in protein and calcium, but no higher in calories.

That's how a cup of Fairlife Fat Free Ultra-Filtered Milk ends up with 13 grams of protein and 30 percent of a day's calcium, compared to a typical fat-free milk's 8 grams of protein and 25 percent of a day's calcium. Both have 80 calories.

Want a plant-based protein milk pick? See the back cover.

Grain gains

It's not so easy to find a just-add-water pancake mix that's made with whole-grain flour...and that also adds some extra protein. But if you can, you won't have to think about rounding out your breakfast with a serving of yogurt, eggs, milk, etc.

Kodiak Power Cakes Buttermilk Flapjack & Waffle Mix has it all. Every 220-calorie serving—roughly three small pancakes—supplies 15 grams of protein (thanks to added wheat and milk proteins). The icing on the 'cakes: they have just 3 grams of added sugars. Impressive!

A firm winner

Nasoya Super Firm Organic Tofu has more protein per bite than regular tofu because it has been pressed to remove more water. Each 3.2 oz. (130-calorie) serving delivers 14 grams of protein. That's about 50 percent more than you'd get in the same amount of most firm or extra-firm tofus.

Nasoya's high-protein tofu is also a timesaver because it comes vacuum packed. That means there's little to no water to drain. So if you have a recipe that calls for squeezing the excess water out of ordinary tofu, you can just skip that step. Simply open the package, blot dry the block of tofu, cube or slice it, season, and sauté or bake.

Use your noodle

Pastas made of legumes—like red or yellow lentils, chickpeas, or edamame—are overachievers. Compared to whole wheat pasta, the legume varieties have about as much (or more) fiber and two to three times as much protein.

Take Barilla Red Lentil Rotini. It pumps 14 grams of protein into a standard serving—2 oz., before cooking. (The "25g" on the front? That's for a larger, 3.5 oz. serving.)

Going with a legume noodle like Barilla's is a wise move if you're whipping up, say, a pasta primavera with vegetables but no beans, tofu, tempeh, or plant-based meat.

Photos: NIQ Product Explorer (top left), Lindsay Moyer - CSPI (top right), Marlena Koch - CSPI (all others).

4 PROTEIN JUNK FOODS

Barely worth it

A 210-calorie Barebells Salted Peanut Caramel Soft Protein Bar is high in protein (16 grams) and free of added sugars, but it's no chicken breast.

The bar is high in saturated fat (blame its candy-like coating) and is partly sweetened with sucralose, a low-calorie sweetener that we rate as "avoid" (see chemicalcuisine.org).

Then there's the processed fiber polydextrose and the sugar alcohols maltitol and xylitol, all of which can lead to a laxative effect if you consume more than you can tolerate. (Individuals vary, but people with irritable bowel syndrome may be especially sensitive.)

You'd think a bar with "peanut" in its name would get most of its protein from peanuts. Wrong. Try milk protein and collagen protein. The truth is, you'd be better off snacking on 210 calories' worth of peanuts. You'd still get some protein (9 grams instead of 16), but with healthier fats and no additives of concern, plus vitamins and minerals like folate and magnesium.

Sugar & Flour Tarts

"PROTEIN," shouts the huge yellow banner on Pop-Tarts Boostin' Brown Sugar Cinnamon.

The new protein varieties of classic Pop-Tarts add enough wheat protein and milk protein concentrate to up the protein in a two-tart serving from 4 or 5 grams to 10 grams. But that serving will cost you 380 to 400 calories. That's a pretty lousy deal.

Most of the calories in Protein Pop-Tarts, though, come from white flour and added sugars, not protein. Two tarts deliver 30 grams of added sugars—that's roughly 120 calories from sugar alone.

What's more, the blueberry and strawberry varieties deliver a smattering of synthetic dyes like Red 40, Blue 1, Blue 2, and Yellow 6, all of which we rate as "avoid" (see chemicalcuisine.org).

Potato ploy

The powdered-protein marketing move has hit nearly every processed food. One of the latest: instant mashed potatoes.

A four-serving pouch of Idahoan +Protein Buttery Homestyle Mashed Potatoes costs about 30 percent more than a four-serving pouch of regular Idahoan Buttery Homestyle Mashed Potatoes. That's a hefty premium for just 4 more grams of protein per serving (6 vs. 2)...especially when they come with a handful of extra unwanted calories (130 vs. 110).

Then there's the sodium. Both the +Protein and regular varieties have a high 460 milligrams per serving.

If you want more protein from your potatoes, mash your own, then stir in some plain Greek yogurt. (Or dollop a baked potato with yogurt instead of sour cream.) But most meals built around beans, tofu, poultry, meat, or seafood already have plenty of protein…so why worry about adding more?

Not-so-smart snack

Quest Cheddar Blast Cheese Crackers are essentially Cheez-Its made with milk protein instead of white flour. And while the Quest crackers have more protein than Original Cheez-Its (10 grams vs. 3 grams in a 1 oz. serving), neither wins. Compared to the Cheez-Its, the Quests have about twice as much sodium (420 milligrams) and saturated fat (3.5 grams). And Quest's 5 grams of fiber largely come from processed polydextrose.

"Snack like a genius," says Quest. But smart snackers in search of a savory crunch would be better off with a pouch of whole crispy chickpeas like those from Biena, Saffron Road, or similar brands.

A 1 oz. serving of Saffron Road Organic Sea Salt Crispy Chickpeas, for example, has 6 grams of protein and 5 grams of fiber from chickpeas, with no sat fat, not too much sodium (210 mg), and no more calories than Quest. Love those legumes!

Photos: Marlena Koch - CSPI

The Healthy Cook

Quick chick

Savory Peruvian chicken is a go-to takeaway on busy weeknights in my house. But when I'm in the mood to cook, I can get these recipes on the table almost as fast. Now, so can you. Try serving the chicken with the quinoa, green beans, or both. Mmm.

PERUVIAN CHICKEN

My quicker take on Peruvian chicken uses sautéed thighs instead of a whole rotisserie chicken and only has a handful of spices, but it comes with flavor to spare.

- 1 Tbs. reduced-sodium soy sauce
- 2 cloves garlic, finely grated
- 1 tsp. mustard powder
- 1 tsp. smoked paprika
- ½ tsp. brown sugar
- ¼ tsp. ground cumin
- ¼ tsp. freshly ground black pepper
- 4 boneless, skinless chicken thighs
- 1 Tbs. extra-virgin olive oil
- 1 fresh lime, quartered

1. In a medium bowl, whisk together the soy sauce, garlic, mustard, paprika, sugar, cumin, and pepper.
2. Toss the chicken in the mixture to evenly coat.
3. In a large nonstick pan over medium heat, heat the oil until shimmering. Sauté the chicken until browned, 4–5 minutes. Turn the chicken and add ¼ cup water.
4. Cover the pan and simmer until the chicken is cooked through, about 15 minutes. Add more water, as needed, to keep the pan from becoming dry.
5. Serve the chicken with the pan juices and the lime.

TIME: 30 MINUTES | SERVES 4

PER SERVING (1 thigh): calories 230 | total fat 10 g | sat fat 2 g | carbs 3 g | fiber 0 g | total sugar 1 g | added sugars 1 g | protein 30 g | sodium 290 mg

For cooking advice, write to Chef Kate at healthycook@cspi.org

Photo: Kate Sherwood - CSPI.

CILANTRO & LIME QUINOA

This anything-but-boring side is inspired by a zingy green sauce that's often served with Peruvian chicken. I've added avocado so that the sauce stands up to the quinoa.

- 1 bunch cilantro
- 1 jalapeño pepper
- 1 avocado
- 1 lime, halved
- ½ tsp. kosher salt
- 3 cups cooked warm or cold quinoa

TIME: 10 MINUTES | SERVES 4

PER SERVING (¾ cup): calories 230 | total fat 8 g | sat fat 1 g | carbs 34 g | fiber 7 g | total sugar 2 g | added sugars 0 g | protein 7 g | sodium 260 mg

1. Set aside a few sprigs of cilantro. Chop the remaining cilantro, the jalapeño, and the avocado. Juice half the lime.
2. Combine the cilantro, avocado, jalapeño, lime juice, and salt in a food processor. Process into a smooth sauce.
3. In a medium bowl, toss the quinoa with the sauce. Spoon into a serving dish. Top with the reserved cilantro sprigs and serve with the remaining lime half.

TIP Two steps to perfectly cooked quinoa: (1) Toast the seeds in a dry pan for a few minutes to bring out their subtle, nutty flavor. (2) Add the water and cook until their tiny "tails" unfurl.

STIR-FRIED GREEN BEANS

When I first saw this side dish at a Peruvian chicken takeaway, I thought green beans and eggs were an odd concoction. As it turns out, they've become a favorite. I hope you agree.

- ¾ lb. green beans
- 2 tsp. + 1 tsp. extra-virgin olive oil
- 1 cup diced red onion
- 2 eggs, beaten
- ⅛ tsp. kosher salt

TIME: 15 MINUTES | SERVES 4

PER SERVING (¾ cup): calories 110 | total fat 6 g | sat fat 1.5 g | carbs 13 g | fiber 3 g | total sugar 6 g | added sugars 0 g | protein 5 g | sodium 100 mg

1. Trim the green beans and cut them into bite-sized pieces. In a large nonstick pan over high heat, bring the green beans and enough water to cover them to a boil. Cover and cook until tender-crisp and bright green, about 3 minutes. Drain into a colander.
2. Reduce the heat to medium and return the pan to the burner. Heat 2 tsp. of the oil until shimmering. Stir-fry the onion until lightly browned, 4–5 minutes. Push to one side.
3. Return the green beans to the pan and shake to distribute them evenly, keeping the onions to one side. Stir-fry until tender, 2–3 minutes. Combine with the onion and keep warm.
4. In a small nonstick pan, add the remaining 1 tsp. oil and stir-fry the eggs until cooked, 1–2 minutes. Toss with the green beans and onions. Season with the salt.

Photos: Kate Sherwood - CSPI.

Butter me up

HOW TO PICK A NUT OR SEED BUTTER

BY LINDSAY MOYER & MARLENA KOCH

Stir or no-stir? Almond or peanut? Sunflower or sesame? Decisions, decisions. With no more than a few ingredients, most nut and seed butters are simple. But picking a healthy one isn't always easy. Here's what may—or may not—matter to you.

1 To stir or not to stir? Our Best Bites and Honorable Mentions have no more than 3 grams of saturated fat in two tablespoons.

That lets in lots of butters with just one or two ingredients: nuts (or seeds) and maybe salt. The downside: You'll need to stir them before spreading.

Some "no-stir" types keep their nut-or-seed oils from separating by adding a touch of highly saturated palm oil, coconut oil, or fully hydrogenated oil. But, for the most part, the amounts are small enough to keep the butters in Best Bite or Honorable Mention territory (see "Spreadin' the news").

2 Peanut, almond, or cashew? Peanut butter or almond butter: Is there a clear winner? Not really.

The biggest difference is how they hit your wallet: Almond butter costs far more. Healthwise, almonds have somewhat more magnesium, vitamin E, and fiber than peanuts. But those differences matter less than the benefits of both: Each has LDL-cholesterol-lowering polyunsaturated fats (see p. 3) and a nice dose of plant protein.

Then there's cashew butter, which can offer a change of pace for your taste buds. But if you want it for an everyday spread, keep in mind that cashews (and their butters) have fewer polyunsaturated fats than peanuts, almonds, or sunflower, sesame, or pumpkin seeds.

3 Give seeds a chance. Allergic to peanuts, almonds, or cashews but want a butter that still delivers healthy fats? You have options.

Two great-tasting Honorable Mentions: Skippy (no-stir) and Smucker's (need-to-stir). Take your pick!

■ **Sunflower.** SunButter's sunflower seed butter is not only free of peanuts and tree nuts; it's also produced in a facility without them, says the company.

■ **Pumpkin.** Don't let its pepita-green hue deter you. Pumpkin seed butter is among the few kinds that can match the protein (8 grams) found in a (two-tablespoon) serving of peanut butter.

■ **Sesame.** Tahini is toasted sesame seed butter. That's crucial info for anyone who's allergic to sesame (one of the "Big Nine" top allergens). But for everyone else, it's worth a try.

While you may not want to spread tahini on your sandwich because it's a tad runny, you *will* want to use it for making dynamite salad dressings, sauces, and more. (Head to cspi.org/recipes and search for "tahini.")

4 Does extra protein matter? Two tablespoons of Skippy Protein have 10 grams of protein, vs. 7 or 8 grams in most regular peanut butters. Its boost from added pea protein is small.

And if your diet already includes foods like tofu, Greek yogurt, meat, poultry, and/or seafood, the two or three extra grams of protein won't matter.

If you want to maximize protein from plants with unpumped-up butters, peanut and pumpkin have the most (8 grams in 2 Tbs.), while cashew butter has half that much (4 grams)

Spreadin' the news

Best Bites (✔✔) and **Honorable Mentions** (✔) have no more than 3 grams of saturated fat in a 2 Tbs. serving. Best Bites have no added sugars or salt. Honorable Mentions can have up to 3 grams of added sugars and 150 mg of sodium.

Unflavored butters are ranked from least to most sat fat, then added sugars, then sodium. *Flavored* butters are ranked from least to most added sugars, then sat fat, then sodium.

	Calories	Sat Fat (g)	Added Sugars (g)	Sodium (mg)	Protein (g)
Peanut Butter *(2 Tbs.)*					
✔ Smucker's Organic—Chunky or Creamy[1]	180	2	0	50	8
✔ MaraNatha Organic Crunchy	190	2	0	70	8
✔✔ Any brand with no salt, sugar, or oil[1]	190	2.5	0	0	8
✔ Smucker's Natural—Chunky or Creamy[1]	190	3	0	105	8
✔ Peanut Butter & Co Crunch Time	180	3	2	100	7
✔ Peanut Butter & Co Smooth Operator	190	3	2	100	7
✔ Skippy—Creamy or Super Chunk[1]	190	3	2	140	7
✔ Skippy Protein—Chunky or Creamy[1]	210	3	2	140	10
Justin's Classic	210	3.5	0	25	7
Jif No Added Sugar Creamy	200	3.5	0	55	8
Simply Jif Creamy	200	3.5	1	65	7
Jif Natural—Creamy or Crunchy[1]	190	3.5	2	75	7
Peter Pan—Creamy or Crunchy[1]	210	3.5	2	115	8
Jif—Creamy or Extra Crunchy[1]	190	3.5	2	125	7
Skippy Natural—Creamy or Super Chunk[1]	200	3.5	2	140	7
Skippy No Sugar Added—Chunky or Creamy	210	4	0	110	7
Almond Butter *(2 Tbs.)*					
✔✔ Any brand with no salt, sugar, or oil[1]	190	1.5	0	0	7
✔✔ MaraNatha Natural Creamy No Sugar or Salt Added	200	2.5	0	0	7
✔ Peanut Butter & Co Smooth	190	2.5	0	100	6
✔✔ Justin's Classic	220	3	0	10	6
Mixed Nut or Cashew Butter *(2 Tbs.)*					
✔ NuttZo Power Fuel—Crunchy or Smooth	180	2	0	65	6
✔✔ 365 Unsweetened Cashew Creamy	190	3	0	0	4
NuttZo Almond Coconut Crunchy	160	5	0	55	4
Nut Powders *(2 Tbs.)*					
✔✔ PB2 Pure Peanut	60	0	0	0	6
✔✔ PBFit Simply Peanut	70	0	0	0	9
✔ PB2 Original Peanut	60	0	1	90	6
✔ PB2 Almond	50	0	1	100	5
✔ PBFit Classic Peanut	60	0	2	95	8
Seed Butters *(2 Tbs.)*					
✔ SunButter No Sugar Added	210	1.5	0	130	7
✔ SunButter—Crunchy or Original	200	1.5	3	130	7
SunButter Honey	190	1.5	5	125	5
✔✔ SunButter Organic	220	2	0	5	8
✔ 88 Acres Sunflower	200	2	2	15	5
✔ SunButter Creamy	200	2	3	130	7
✔ 88 Acres Pumpkin	190	2.5	2	15	8
✔✔ Soom Tahini	190	3	0	5	6
✔ 365 Organic Tahini	200	3	0	40	6
Flavored Butters & Powders *(2 Tbs.)*					
✔ PB2 Cocoa Peanut Powder	50	0	3	100	4
✔ Justin's Cinnamon Almond	200	2	3	60	6
✔ Justin's Maple Almond	210	3	3	90	5
88 Acres Vanilla Cinnamon Sunflower	200	1.5	4	10	5
Good & Gather Dark Chocolate Creamy Almond	180	2.5	4	65	5
88 Acres Dark Chocolate Sunflower	190	1.5	5	15	5
SunButter Chocolate	200	2.5	5	90	6
Justin's Vanilla Almond	200	3	5	90	5
Soom Sea Salt Chocolate Sesame	160	2	6	115	5
Peanut Butter & Co Dark Chocolatey Dreams	170	2.5	6	45	6
Soom Chocolate Sesame	170	2	7	15	5
Justin's Chocolate Hazelnut & Almond	200	3	8	90	4
Jif Peanut Butter & Chocolate	200	3.5	8	85	5
Nutella Hazelnut Spread with Cocoa	200	4	19	15	2
365 Organic Hazelnut Cocoa Spread	200	12	19	20	3

✔✔ Best Bite | ✔ Honorable Mention | [1] Average of the varieties listed.

Daily Values (DVs): Saturated Fat: 20 g. **Added Sugars:** 50 g. **Sodium:** 2,300 mg. **Protein:** 50 g.

Source: company information. Nutrition Facts and ingredients can change, so always check the label. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.

and almond, sunflower, and sesame butters land somewhere in the middle.

5 Watch out for sugary flavors. Most unflavored nut or seed butters have no more than 3 grams of added sugars in 2 Tbs. That's as high as we let our Honorable Mentions go. Our Best Bites have none.

But some flavored spreads pile it on. Nutella, for example, delivers 19 grams—that's 4½ teaspoons—of added sugars. In contrast, Target's Good & Gather Dark Chocolate Creamy Almond Butter (4 grams) just misses an Honorable Mention. Bravo!

6 Sodium is no big deal. It's rare to find a nut butter that tops 150 milligrams of sodium in 2 Tbs. (our max for an Honorable Mention). But if you're counting every milligram, head for our Best Bites, which have no added salt.

FOOD FIND

Smooth move

"Say hello to the pour that gives you more," said the press release announcing the launch of new **Silk Protein** milk.

More, indeed. While many companies are adding protein to chips, cookies, and other junk foods we're better off without (see p. 18), Silk is doing something right. They're making sure *healthy* plant-based milks have enough nutrients to replace cow's milk.

True to its name, Silk Protein has more protein (13 grams per cup) than regular cow's milk or soymilk (8 grams). That's because it's made from soymilk plus a little extra soy protein isolate.

The protein-boosted fortified soymilk also contains at least as much calcium, potassium, and vitamins A, D, and B-12 as dairy milk. And if you opt for Silk's **Original** (not **Chocolate**) variety, each cup comes with just 3 grams of added sugars.

How does Silk Protein taste? Surprisingly sweet, considering that the Original has little added sugars and zero low-calorie sweeteners. The milk is also creamy yet low in saturated fat, thanks to its soy.

Most chocolate plant milks have more added sugars than "original" varieties. That includes Silk Protein Chocolate (7 grams). But Silk adds less sugars than most, likely because its Chocolate is partly sweetened with (safe) stevia extract.

How sweet is that!

FOOD FAIL

OMG!

"Calling all cheese lovers!" shouted the **Applebee's** January press release. "Applebee's sizzlin' start to the New Year just got cheesier with the NEW **O-M-Cheese Burger**."

Really?

Just five days into the new year, and Applebee's had already launched a five-alarm fire for your arteries—a limited-time bacon cheeseburger with fries, served in a pool of melted cheese.

Let's say you sop up every drop of molten cheese in the 1,680-calorie skillet. That'll rack up 3,590 milligrams of sodium (1½ days' worth) plus 40 grams of saturated fat (twice the daily max).

All told, you'd be better off eating *three* McDonald's Quarter Pounders with Cheese.

Even without the fries, the O-M-Cheese Burger (plus the cheesy goo it's swimming in) will set you back 1,280 calories. That's more than *four* McDonald's cheeseburgers.

But it's not just about the calories. It's that nearly all of them come from red and processed meat (beef and bacon), cheese (American cheese, queso, and shredded cheese), white flour (the brioche bun), and deep-fried white potatoes (the fries).

"There's no burger experience like it!" gushed Applebee's chief marketing officer in the press release.

We're betting your cardiologist will agree.

QUICK DISH

SIMPLE CHICKPEA SALAD

In a large bowl, whisk together 2 tsp. red wine vinegar, 1 Tbs. minced red onion, 2 Tbs. extra-virgin olive oil, and ¼ tsp. kosher salt. Toss with a 15 oz. can (drained) no-salt-added chickpeas, 1 cup halved cherry tomatoes, and 1 cup chopped cucumber. Spoon onto a serving dish. Optional: Pluck the leaves from 1 sprig of dill and scatter on top. Serves 4.

Photos: Lindsay Moyer - CSPI (top left), Applebee's (top right), Kate Sherwood - CSPI (bottom).