

NIH News in Health

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Inside News: 3 Gratitude 4 Physical Activity and Depression 4 Colon Cancer Screening 4 NIH Social Media

The Skinny on Fat

The Good, the Bad, and the Unknown

Fat is an essential nutrient for our bodies. It provides energy. It helps our guts absorb certain vitamins from foods. But what types of fat should you be eating? Are there any you should avoid?

Recommendations about dietary fat have shifted over the last two decades. From the 1970s through the 1990s, nutrition researchers emphasized eating a low-fat diet.

This was largely because of concerns about **saturated fat**, explains Dr. Alice H. Lichtenstein, who studies diet and heart health at Tufts University. Saturated fat that's in the bloodstream raises the levels of LDL cholesterol—the “bad” cholesterol. This in turn raises the risk of heart disease.

But when people started following low-fat diets, they didn't only cut saturated fats. In many cases, they replaced healthy unsaturated fats with processed **carbohydrates**, explains Lichtenstein.



Healthy Fats • Research has shown that unsaturated fats are good for you. These fats come mostly from plant sources. Cooking oils that are liquid at room temperature, such as canola, peanut, safflower, soybean, and olive oil, contain mostly unsaturated fat. Nuts, seeds, and avocados are also good sources. Fatty fish—such as salmon, sardines, and herring—are rich in unsaturated fats, too.

Large studies have found that replacing saturated fats in your diet with unsaturated fats can reduce your risk of heart disease by about the same amount as cholesterol-lowering drugs.

People should actively make unsaturated fats a part of their diet, Sacks says. You don't need to avoid healthy fats to lose weight, he adds.

In an NIH-funded study Sacks led, called the POUNDS LOST trial, people who ate higher-fat or lower-fat diets had similar rates of weight loss. They were also both successful at keeping the weight off.

“Low-fat diets have the same effect on body weight gain or weight loss as higher-fat diets, or higher-protein diets,” he explains. “For weight loss,

continued on page 2

“Initially, when we recommended cutting total fat we did not anticipate people would replace it with fat-free foods, like cookies, crackers, and ice cream, made with refined grains and sugar,” says Lichtenstein. “It is what we refer to as an unanticipated consequence.”

As scientists have learned, those replacement calories matter. Studies have shown that replacing saturated fat with **unsaturated fat** reduces the risk of heart disease. However, replacing saturated fat with simple carbohydrates, such as added sugar and white bread, does not.

“There's still this misconception that eating fat—any kind of fat—is bad. That it will lead to heart attacks, or weight gain. That's not true. People really should be encouraged to eat healthy fats,” says Dr. Frank Sacks, a nutrition expert at Harvard University.

Definitions

Saturated Fats

Fats that are solid at room temperature; found in butter, lard, full-fat milk and yogurt, full-fat cheese, and high-fat meat.

Unsaturated Fats

Fats that tend to be liquid at room temperature; found in vegetable oils, seafood, and nuts.

Carbohydrates

A class of food molecule that includes sugars, starches, and fibers.

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continued from page 1

it's about getting a handle on whatever foods in your diet are giving you excess calories."

Replacing 'Bad' Fats • So are there fats you should avoid? Only a few years ago, doctors still had to advise people to avoid so-called trans fats in their diets. These largely manufactured fats could be found in things like margarine and many processed foods. They have been shown to raise the risk of heart disease.

Since 2015, the U.S. Food and Drug Administration has taken steps to remove artificial trans fats from the food supply. Most trans fats now in food come from the small amounts found naturally in animal products, like meat and butter.

Experts already recommend that people limit their intake of animal fats. "So that takes care of those trans fats as well," Lichtenstein says.

As for saturated fat, it's complicated. Not all of the saturated fat in the bloodstream comes from the saturated fat that we eat, explains Dr. Ronald Krauss, who studies cholesterol at the UCSF Benioff Children's Hospital Oakland. Instead, it's produced when the body breaks

down simple carbohydrates and sugars. That's one reason why replacing saturated fat in the diet with simple carbohydrates doesn't reduce the risk of heart disease.

Nutrition experts still recommend that people minimize the amount of saturated fat in the diet. But researchers are now looking at whether the type of food that saturated fat is found in matters. For example, the influence of plant-based saturated fats, such as those in coconut and palm oil, is still unclear and being researched further.

Recent studies suggest that some full-fat dairy products, such as yogurt, may actually have benefits for the heart, Krauss says.

Krauss and his colleagues recently ran a small study looking at the effects of replacing some of the sugar allowed in the DASH diet with saturated dairy fats. The DASH diet was developed by NIH to help lower blood pressure.

Participants who ate saturated dairy fat instead of sugar had less of a fat called triglycerides in their bloodstream. The higher-fat diet was also as effective at lowering blood pressure as the standard DASH diet.

More research is needed to understand which foods that contain saturated fats may influence the body in a good way.

Individual Needs • Researchers know that there are big differences in how people's bodies react to different types and amounts of fat. But they still don't know why. Studies have found that genes aren't likely responsible, Sacks explains.

Lichtenstein and Krauss are both studying how the microbes that live in the gut interact with dietary fats. The makeup of the microbiome—all the microorganisms that normally live in the body, mainly in the gut—can differ widely between people.



Wise Choices

Choosing Your Fats

- **Eat plant-based foods.** Plants can contain healthy fats, as well as important vitamins and minerals.
- **Include plant oils in your diet.** Healthy choices include canola, peanut, olive, safflower, soybean, sunflower, corn, and nut oils.
- **Replace foods containing saturated fats** (like butter or lard) with healthier unsaturated fat options.
- **Limit fatty red meat.** Instead, eat more fish, poultry, or lean meats.
- **Reduce sugars and replace processed grains,** such as white bread and white rice, with whole grains and brown rice. The body can use simple carbohydrates to make saturated fats.

It may turn out that different types of gut bacteria produce different compounds from fats. These compounds could then affect the body in different ways, Lichtenstein explains. Or different types of fats could promote the growth of different bacteria in the gut, which may then have varying effects on health.

"We just don't know yet, but there is tremendous interest in trying to understand the role of the gut microbiome in human health," she says.

If there's one thing that the research has shown, it's that the science of diets is very complex. Experts have moved away from focusing on single nutrients—such as fat—by themselves. Instead, Sacks says, researchers now talk about healthy dietary patterns: ways of eating that take all aspects of the diet into account. Learn more about healthy dietary patterns at health.gov/dietaryguidelines. ■

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**Web
Links**

For more about dietary fat, see "Links" in the online article: newsinhealth.nih.gov/2019/03/skinny-fat

Practicing Gratitude

Ways to Improve Positivity

How often do you feel thankful for the good things in your life? Studies suggest that making a habit of noticing what's going well in your life could have health benefits.

Taking the time to feel gratitude may improve your emotional well-being by helping you cope with stress. Early research suggests that a daily practice of gratitude could affect the body, too. For example, one study found that gratitude was linked to fewer signs of heart disease.

The first step in any gratitude practice is to reflect on the good things that have happened in your life. These can be big or little things. It can be as simple as scoring a good parking space that day or enjoying a hot mug of coffee. Or, perhaps you feel grateful for a close friend's compassionate support.

Next, allow yourself a moment to enjoy that you had the positive experience, no matter what negatives

may exist in your life. Let positive feelings of gratitude bubble up.

"We encourage people to try practicing gratitude daily," advises Dr. Judith T. Moskowitz, a psychologist at Northwestern University. "You can try first thing in the morning or right before you fall asleep, whatever is best for you."

Moskowitz has been studying the impact of keeping a daily gratitude journal on stress relief and health. Practicing gratitude is part of a set of skills that her research team encourages people to practice. These skills have been shown to help some people increase their positive emotions.

Her team is trying to better understand how a daily boost in positive emotions can help people cope with stress and improve their mental and physical health.

"By practicing these skills, it will help you cope better with whatever you have to cope with," Moskowitz explains. "You don't have to be experiencing major life stress. It also works with the daily stress that we all deal with. Ultimately, it can help you be not just happier but also healthier."

While practicing gratitude seems to work for some people, it doesn't for everyone. That's why Moskowitz's research team teaches other skills, too. These include meditating and doing small acts of kindness.

Her team has been developing and testing these skills with people who have illnesses like advanced cancer, diabetes, HIV infection,



and depression. She's also worked with people who care for others with serious illness.

When you make gratitude a regular habit, it can help you learn to recognize good things in your life despite the bad things that might be happening. Moskowitz says that when you're under stress, you might not notice all the moments of positive emotion that you experience. With her research program, she's trying to help people become more aware of those moments of positive feelings.

"Put some effort into experiencing gratitude on a daily basis and see how it goes," Moskowitz advises. "It might just surprise you that—despite how bad things are—there are things you feel grateful for alongside it." And feeling grateful may help improve both your mind and your body. ■



Wise Choices Gratitude Tips

Create positive emotions by being thankful every day:

- **Take a moment.** Think about the positive things that happened during the day.
- **Journal.** Make a habit of writing down things you're grateful for. Try listing several things.
- **Savor your experiences.** Try to notice positive moments as they are happening.
- **Relive the good times.** Relive positive moments later by thinking about them or sharing them with others.
- **Write to someone.** Write a letter to someone you feel thankful toward. You don't have to send it.
- **Make a visit.** Tell someone you're grateful for them in person.



Web Links

For more about gratitude, see "Links" in the online article: newsinhealth.nih.gov/2019/03/practicing-gratitude



Health Capsules

For links to more information, please visit our website and see these stories online.

Physical Activity May Lessen Depression Symptoms

Researchers found that how much sleep you get, how much energy you have, and how much physical activity you do can affect feelings of depression. The findings suggest that physical activity may improve your mood and sleep.

Physical activity can help improve your health and quality of life. Not getting enough can increase your risk for some diseases and mental health issues.

A research team looked at the relationship between sleep, physical activity, energy, and people's moods. They collected data about physical

activity and sleep over two weeks using devices worn around the wrist.

Participants used the mobile devices to rate their mood and energy levels four times a day. Ratings ranged from "very happy" to "very sad" for mood and "very tired" to "very energetic" for their energy levels. They also rated their sleep and daily activities.

The team found that physical activity improved people's moods later in the day. The effect was even larger for those with bipolar disorder, a mood disorder that has periods of feeling extremely "up" to

feeling very "down" and depressed. Physical activity also made people feel more energetic and affected their sleep.

Feeling tired and getting too much sleep decreased people's physical activity. But their moods during the day didn't change how much physical activity or sleep they got later.

"The research team and I are currently conducting additional studies to understand these complex interactions better," says Dr. Kathleen Merikangas, a mental health researcher at NIH. ■

Detecting Colorectal Cancer

Did you know that if colorectal cancer is found early, it may be easier to treat? Many tests are available that can detect colorectal cancer during its early stages.

A colonoscopy uses a tool called a colonoscope to see inside your colon. Doctors look for cancer as well as pre-cancerous growths called polyps. They can remove any growths they find during the colonoscopy. This prevents the

polyps from developing into cancer.

Other tests can be performed at home. These require you to collect a sample of stool (feces) and send it to a lab. The lab then looks for tiny amounts of blood in the stool or other signs, like cancer-specific DNA.

A newer screening test, called a virtual colonoscopy, uses X-rays to see inside the colon. If a doctor sees polyps with this test, they can remove them later with a colonoscope.

Experts recommend that most people start screening for colorectal cancer at the age of 50. If you have a family history of the disease, you may need to start screening earlier.

Talk with your doctor about what type of screening would be best for you. For more information on colorectal cancer screening, visit www.cancer.gov/types/colorectal/screening-fact-sheet. ■



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