



# Harvard Heart Letter

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## Updated exercise guidelines showcase the benefits to your heart and beyond

*Every little bit of activity counts—and the first steps toward fitness have the most impact.*

### How much activity do I need?

Moderate-intensity aerobic activity

Anything that gets your heart beating faster counts.

at least  
150  
minutes  
a week



Tight on time this week? Start with just 5 minutes. It all adds up!

Muscle-strengthening activity

Do activities that make your muscles work harder than usual.

at least  
2  
days  
a week



AND

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Federal exercise guidelines were updated for the first time in a decade.

Without question, being physically active is the best thing you can do for your heart health. Here's the good news: according to new federal exercise guidelines, even just a few minutes of moving can count toward the recommended aerobic exercise goal of 150 minutes of moderate-intensity activity per week (see "Examples of moderate and vigorous exercise" on page 7).

"Studies show that the total amount of energy expended is what's important for health, not whether it comes in short or long bouts," says Dr. I-Min Lee, a professor of medicine at Harvard Medical School who studies the role of physical activity in disease prevention. "This certainly is an encouraging message for people who are inactive," she adds, noting that the previous guidelines recommended exercising in sessions lasting at least 10 minutes.

### Sit less, move more

The new guidelines, which were issued by the U.S. Department of Health and Human Services in November 2018, also emphasize the

health risks of sitting, lying, or reclining for extended periods of time during normal waking hours. This sedentary behavior has been linked to greater risk of high blood pressure, heart disease, and death from any cause. If you tend to sit for long stretches, setting a timer on a fitness band or smart watch that goes off at regular intervals (say, every

30 minutes) may help remind you to get up and move around, says Dr. Lee. The more you can move, the better, but even just a little exercise can make a difference. In fact, the greatest health benefits seem to occur when people transition from being inactive to active, even if they still fall short of the recommended exercise goals. The steepest reductions in the risk of heart disease occur at the lowest, initial levels of activity.

### Exercise's many benefits

The guidelines also highlight new evidence showing that physical activity has immediate, measurable health benefits for the following four factors linked to heart health:

**Blood pressure.** Exercise may lower blood pressure for up to 13 hours after the activity. Done on a regular basis, it may lower systolic blood pressure (the first number in a reading) by an average of 5 to 8 points.

**Anxiety and depression.** Exercise appears to ease anxiety symptoms right away, and over the long term, physical activity seems

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## FIVE THINGS TO DO THIS MONTH

**1 Review the warning signs of a heart attack.** These dangerous events sometimes go unrecognized. (page 3)

**2 Assess your "risk-enhancing factors" for heart disease.** Having one of more of these may affect your doctor's advice about taking a statin. (page 4)

**3 Look out for lead.** This toxic heavy metal may raise cardiovascular risk. (page 6)

**4 Try some different forms of exercise.** Choose from this list of moderate or vigorous activities to meet your weekly goals. (page 7)

**5 Make this simple recipe for black bean tacos.** They're healthier, less expensive, and almost as easy as going out for fast-casual Mexican food. (page 7)



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## ASK THE DOCTOR

by DEEPAK L. BHATT, M.D., M.P.H., *Editor in Chief*

### In case my father needs a transfusion, should I donate blood?

**Q** My father is having open-heart surgery because of blocked arteries, and I'm concerned that he might need a blood transfusion. I have the same blood type as he does, so should I donate blood in case he needs it?

**A** Transfusions related to cardiovascular surgery are far less common today than in the past. One reason is the routine use of a "cell saver." This device suctions, washes, and filters lost blood and returns it to the person during surgery. Still, there is a reasonable chance your father might need a blood transfusion during or after his surgery. Many people undergoing open-heart surgery end up needing a transfusion, though rates do vary widely depending on the length and complexity of the surgery, as well as by surgical center.

By replenishing lost blood, transfusions can be lifesaving. For those related to surgery, doctors usually transfuse just red blood cells, which carry oxygen from the lungs to other body organs. However, receiving a transfusion is not entirely risk-free. That's true whether a person receives blood from a family member or friend (known as directed donation, as you are proposing) or an anonymous donor. The risk isn't primarily from contracting a blood-borne infection, which is extremely unlikely. All donated blood is subjected to strict screening criteria, including testing for blood borne-diseases such as HIV and hepatitis C. Rather,

a blood transfusion seems to weaken the immune system, making the person more susceptible to infections he or she might acquire from other sources (including the hospital).

For some people, banking their own blood prior to the surgery may be an option. Known as autologous donation, this procedure avoids the immune-related problems that can occur after receiving another person's blood. This type of donation requires a prescription from your



Sometimes, people may be able to bank their own blood prior to undergoing surgery.

physician and must be scheduled in advance and stored until the surgery.

The downside of an autologous donation before surgery is that it may lead to mild anemia, defined as having too few red blood cells or not enough hemoglobin, the oxygen-transporting protein in blood. In general, anemia is of greater concern for people with coronary artery disease or a heart valve problem.

Some research also suggests that older blood may be more problematic than fresher blood, so there are several factors that can affect what the "best" blood is to transfuse. In many cases, that turns out to be whatever blood is available in the hospital's blood bank if a transfusion ends up being necessary. The ideal approach would be to ask your father's surgeon what options are available. ♥



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Because of the volume of correspondence we receive, we can't answer every question, nor can we provide personal medical advice.

# The danger of “silent” heart attacks

*As many as half of all heart attacks go unrecognized—and their long-term consequences can be serious.*

Most people don't realize that they could have a heart attack without even knowing it. Although these are commonly referred to as “silent” heart attacks, a more accurate term may be “unrecognized” heart attack, says cardiologist Dr. David Morrow, director of the cardiac intensive care unit at Harvard-affiliated Brigham and Women's Hospital.

“Some people do have symptoms, so in that sense, their heart attack is not silent. They just don't recognize the sensations as coming from their heart,” he explains. The two most common problems people report are indigestion and muscle pain, when the real cause is actually reduced blood flow to the heart. People may also experience atypical symptoms, such as nausea or excessive sweating during a heart attack (see “Heart attack symptoms”).

Raising awareness of unrecognized heart attacks is important, as new research published in *JAMA Cardiology* suggests that over the long term, these events are just as dangerous as recognizable heart attacks (see “Survival after an unrecognized heart attack”).

But some people don't have any clear-cut symptoms. That group potentially includes people with diabetes, who face a higher-than-average risk of heart attack in the first place, but who may have a diminished sense of pain because of nerve damage (neuropathy) that can occur with diabetes, says Dr. Morrow.

## How long, how strong?

During a heart attack, the duration and intensity of symptoms can vary quite a bit. In general, there must be 15 to 30 minutes of reduced blood flow to result in a detectable heart attack (that is, part of the heart muscle becomes damaged or dies). But sometimes symptoms come

and go; these are known as stuttering symptoms. And the intensity doesn't correlate with the size of the heart attack. Some people have mild symptoms from a very large heart attack, while others have severe symptoms with a small heart attack, says Dr. Morrow.

Silent heart attacks are usually discovered on an electrocardiogram (ECG), which is a recording of the heart's electrical activity. Damage to the heart's muscle caused by a heart attack shows up as a distinct signature on an ECG. The cardiac MRI tests done for

the recent *JAMA Cardiology* study can reveal heart damage, but they are too costly for routine screening.

ECGs are quick and inexpensive, but they can miss a prior unrecognized heart attack or produce false positives, meaning they find evidence of a heart attack when there actually wasn't one. As a result, ECGs are not recommended for routine screening for people with an average risk of a heart attack who don't have symptoms. However, an ECG and other testing is appropriate for people with symptoms that suggest a heart attack, even if the cause is unclear. “I'd much rather have people get evaluated and it turn out to be nothing serious than not be evaluated and weather a heart attack at home,” says Dr. Morrow. ♥

## Survival after an unrecognized heart attack

A new study reported in *JAMA Cardiology* identified people who'd experienced heart attacks—some recognized, some not—as well as others who'd never had a heart attack, and followed them all for about 13 years.

Here's a summary of the findings:

**Who:** 935 adults in Iceland with an average age of 76.

**How:** MRI of the heart (which can reveal damage caused by a heart attack) done at the start of the study showed that 17% of the participants had at some point had an unrecognized heart attack,

while another 10% had a recognized heart attack.

**Why:** To determine the short- and long-term prognosis after an unrecognized heart attack.

**Key findings:** After three years, those who'd had unrecognized heart attacks were no more likely to have died than people with no history of heart attack. But after 10 years, about half of the people with unrecognized heart attacks had died—a rate that was nearly identical to those who'd had recognized heart attacks.

## Heart attack symptoms

Although the most common sign of a heart attack in both men and women is the classic one—discomfort in the center of the chest that spreads through the upper body—this symptom doesn't always occur. Some people experience nonclassic symptoms, and these might be slightly more frequent in women and in older people.



### Classic symptoms

- Pressure, aching, or tightness in the center of the chest
- Pain or discomfort that radiates to the upper body, especially shoulders or neck and arms
- Sweating

### Nonclassic symptoms

- Shortness of breath
- Weakness
- Nausea or vomiting
- Dizziness
- Back or jaw pain
- Unexplained fatigue

# A more personalized approach to treating high cholesterol

*New guidelines refine the recommendations for treating the leading causes of death and disability.*

**C**holesterol, the waxy, fatlike substance that contributes to heart attacks and strokes, is among the best-known contributors to cardiovascular disease—and with good reason. For decades, doctors have recommended blood cholesterol testing, often during annual checkups. Nearly one in three American adults has high levels of LDL, the most harmful type of cholesterol. Expert advice on managing this common problem now takes a more personalized approach, according to updated guidelines released by the American College of Cardiology and American Heart Association last November.

“The new guidelines really codify and support what many preventive cardiologists already do,” says Dr. Jorge Plutzky, director of preventive cardiology at Harvard-affiliated Brigham and Women’s Hospital. They tailor treatment based not just on LDL values but also a person’s overall risk, he explains.

The guidelines continue to recommend an LDL-lowering statin for everyone who’s already had a heart attack or, in most cases, a stroke. And among such people, those whose LDL remains higher than 70 milligrams per deciliter (mg/dL) despite taking a high-intensity statin may also need additional drugs.

## Advice for at-risk adults

For people who are at risk for cardiovascular disease but don’t yet have it, the guidelines offer detailed advice about who may benefit from taking a statin. For example, people ages 40 to 75 who have diabetes and an LDL of 70 or higher should take a statin; so should anyone with extremely high LDL (190 mg/dL or greater).

For people not in those categories, the guidelines advise doctors to use a



Blood cholesterol values are not the only factor to consider when deciding if and when to take drugs to prevent heart disease.

calculator to assess a person’s 10-year risk for heart disease. You can do this yourself at [www.health.harvard.edu/heartrisk](http://www.health.harvard.edu/heartrisk). You’ll need to know your total and HDL cholesterol values and your blood pressure. The calculator also takes into account your age, sex, race, and smoking status.

## From low to high risk

Regardless of LDL level, everyone should focus on healthy lifestyle choices. Beyond that, your risk score will guide your doctor’s treatment advice. Following are the general guidelines:

- ▶ **Low** (a score of less than 5%). A statin is not recommended.
- ▶ **Borderline** (a score of 5% to 7.4%). If you have one or more factors that add to your risk (see “Risk-enhancing factors”), discuss possible statin treatment with your doctor.
- ▶ **Intermediate** (a score of 7.5% to 19.9%). If you have one or more risk-enhancing factors, a moderate-intensity statin would be advised, with a goal of lowering LDL by 30% to 49%.
- ▶ **High** (a score of 20% or higher). Take a statin, with a goal of lowering LDL by at least 50%.

The inclusion of risk-enhancing factors is an example of how these new

guidelines take a more personalized approach. But Dr. Plutzky cautions that the hard evidence and the relevance of these factors varies. For instance, having a father who had a heart attack before age 50 doubles your relative risk. But the influence of other factors (such as having rheumatoid arthritis or being of South Asian ancestry) is less certain.

For people at intermediate risk in whom the decision to take a statin could go either way, guidelines now suggest using a specialized x-ray called a coronary artery calcium scan. A result that shows calcium in the heart’s arteries suggests the process underlying most heart attacks is under way, which may help convince a person to take a statin. However, the scan certainly isn’t mandatory. Statins have an excellent safety profile and most people tolerate them well, which often simplifies the decision for people who’d rather avoid the test, says Dr. Plutzky. ♥

## Risk-enhancing factors

The presence of one or more of the following factors may sway your doctor’s advice about whether you should take a statin:

- ▶ early heart disease in a close family member (before age 55 in men and before age 65 in women)
- ▶ LDL value of 160 mg/dL or higher
- ▶ metabolic syndrome
- ▶ chronic kidney disease
- ▶ a chronic inflammatory condition such as psoriasis, rheumatoid arthritis, or HIV/AIDS
- ▶ menopause before age 40
- ▶ a pregnancy-associated condition such as pre-eclampsia
- ▶ South Asian ancestry
- ▶ elevated blood levels of triglycerides, lipoprotein a, apo B, or C-reactive protein
- ▶ low ankle-brachial index (a blood pressure test to check for clogged leg or arm arteries).

# Prescription-strength omega-3 fatty acids to prevent heart disease?

*A drug made from a highly purified fat from fish reduced cardiovascular events in people with heart disease or diabetes.*



Some people at high risk for a heart attack or stroke now have a new option to help them dodge those dangerous events: a prescription drug that contains large doses of EPA, an omega-3 fatty acid found in fish oil.

In a recent study, the drug, icosapent ethyl (Vascepa), led to dramatic drops in heart attacks, strokes, and deaths from cardiovascular disease in people with high triglycerides (see “What is the REDUCE-IT trial?”). Triglycerides, a type of fat in the blood, have been getting more attention of late for their role in heart disease.

Physicians already use icosapent ethyl to treat people with very high triglyceride values—that is, 500 milligrams per deciliter (mg/dL) or higher (see “Triglycerides: Know your number”). But these new results will likely spur much broader use of the drug, says cardiologist Dr. Sek Kathiresan, professor of medicine at Harvard Medical School.

“Until recently, we only had two types of medications proven to reduce the risk of a repeat heart attack: aspirin and cholesterol-lowering drugs,” he says. But about 30% of people who survive a heart attack end up having another one, despite taking both of those drugs. Often, their LDL cholesterol is normal (thanks to the medication), but their triglycerides are too high, explains Dr. Kathiresan.

## Taming triglycerides

Genetics and lifestyle factors both affect triglyceride values. “Two conditions that can lead to high triglycerides are obesity and type 2 diabetes, which are rampant in this country,” Dr. Kathiresan notes. Losing weight can help lower triglycerides; so can regular aerobic exercise. It’s also important to cut back on

processed carbohydrates, saturated fat, and alcohol.

But if you’re wondering whether over-the-counter fish oil supplements might help, forget it. Those supplements aren’t regulated for purity or quality control. They do contain EPA (often in combination with DHA, another omega-3 fatty acid), but in amounts far lower than in icosapent ethyl. The effective amount of EPA is available only by prescription, says Dr. Kathiresan.

## Additional advantages?

The heart-protecting benefits of icosapent ethyl appear to result from factors beyond just lowering triglycerides. For example, the drug also appears to tamp down inflammation and make the

blood less likely to clot, both of which may decrease the odds of a heart attack. EPA also seems to make cell membranes more stable, possibly discouraging dangerous heart rhythms. That may be why people who got the drug were less likely to experience sudden cardiac arrest.

The most common side effect is mild gastrointestinal upset, but Dr. Kathiresan says most of his patients find that’s not a big issue for them. People whose medical histories are similar to those of the people studied in the REDUCE-IT

trial may want talk to their cardiologist about icosapent ethyl, which is FDA-approved for lowering triglyceride levels 500 mg/dL or higher, and covered by many health insurance plans. ♥

### Triglycerides: Know your number

**Normal**  
Less than 150 mg/dL

**Borderline high**  
150–199 mg/dL

**High**  
200–499 mg/dL

**Very high**  
500 mg/dL or higher

## What is the REDUCE-IT trial?

A study published in the Nov. 10, 2018, *New England Journal of Medicine* compared icosapent ethyl (a drug made from a highly purified form of fish oil) to a placebo in people at high risk of heart-related problems. Here’s a summary:

**Who:** 8,179 middle-aged and older people with triglyceride levels that ranged from 135 to 499 mg/dL. All were taking statins to control their cholesterol. About 70% had already experienced a heart attack, stroke, or other cardiovascular event; the other 30% had type 2 diabetes and other risk factors, such as high blood pressure.

**How:** Participants were randomly assigned to take a 4 grams daily of the drug or a look-alike placebo containing mineral oil for a median of almost five years.

**Key findings:** Compared with people in the placebo group, those taking the drug were 25% less likely to die from heart disease or to have a heart attack, stroke, or unstable angina (unexpected chest pain that usually occurs during rest) or to need a procedure to open a blocked heart artery.

*Editor’s note:* Harvard Heart Letter editor-in-chief Dr. Deepak L. Bhatt was the principal investigator of the REDUCE-IT trial, with funding from the study sponsor to Brigham and Women’s Hospital.

# Lead and heart disease: An underappreciated link?

*This toxic metal can boost blood pressure and may raise the risk of cardiovascular disease.*

Lead is widespread in our environment, and even low blood levels of this toxic metal may raise the risk of heart disease, a growing body of evidence suggests.



Scraping paint from homes built before 1978 may expose you to lead dust.

Last year, a study in *Lancet Public Health* found a link between lead exposure and a higher risk of death from cardiovascular disease. The data came from a nationally representative sample of more than 14,000 people in the United States who were adults in the late 1980s. The association persisted after researchers controlled for many confounding factors and was evident even among people with blood lead

levels of less than 5 micrograms per deciliter (mcg/dL). Until 2013, only levels higher than 10 mcg/dL were considered worrisome, and mainly for children.

“Today, average blood lead levels are just over 1 mcg/dL, down from an average of 10 mcg/dL in the 1980s,” says Dr. Rose Goldman, associate professor of medicine at Harvard Medical School. But there is no safe blood level of lead, according to the CDC. And even though about half the lead in the blood leaves the body in urine within a month or two, a portion of it goes into the bones, where it can stay for

decades, she says. Bone tissue constantly remodels itself, and that stored lead can be released back into the bloodstream in response to different conditions, including pregnancy, breastfeeding, hyperthyroidism, and aging.

## Lead's legacy

Studies that measure bone lead levels in the tibia (shin bone) with a noninvasive test called x-ray fluorescence have found that increases in blood pressure are associated with higher bone lead levels. Not only does lead have detrimental effects on blood vessels, it may also raise harmful LDL cholesterol levels and promote blood clots, all of which can contribute to cardiovascular problems.

Another clue pointing to lead's toxic legacy comes from a 2017 study in the *International Journal of Epidemiology*. As the authors noted, deaths from cardiovascular disease dropped by 43% between the mid-1980s and the early 2000s. But improvements in traditional risk factors, such as cholesterol and blood pressure, cannot fully account for that decrease. According to the analysis, nearly one-third of the drop over that time period may be explained by the reductions in exposure to lead and cadmium, another heavy metal. Those drops are thanks to public health policies such as smoking bans, air pollution improvements, hazardous waste cleanups, renovations in drinking water infrastructure, and the elimination of lead in gasoline.

## Get the lead out

Despite those successes, lead remains an insidious presence in daily life (see “Where lead still lurks”). Because even low levels of lead can cause harm, people should take steps to minimize their lead exposure throughout life, says Dr. Goldman. ♥

## Where lead still lurks

Although lead was banned from paint decades ago, it's still found in homes and other structures built before 1978. To avoid inhaling lead dust, don't scrape or sand your older home; hire an EPA-certified lead abatement professional. Lead can also contaminate drinking water through erosion from lead pipes, mainly in homes built before 1986. Consider testing your water, especially if young children live in your home.

### Here are some other possible sources of lead exposure:

- ▶ **Cosmetics.** The FDA's recommended limit for lead in lipstick (which you may ingest when you lick your lips) is 10 parts per billion, but some brands contain much higher amounts. Consider seeking out lead-free brands.
- ▶ **Hair dyes.** In October 2018, the FDA banned lead acetate from hair coloring products. But companies still have a year to comply with the ruling, so check labels if you use these products, which are mainly drugstore brands that gradually cover grays.
- ▶ **Bullets.** Indoor and outdoor firing ranges can expose people to dust from lead bullets. Wild game shot with leaded bullets may also be contaminated with lead.
- ▶ **Herbal remedies and supplements.** Both Ayurvedic remedies and traditional Chinese medicinal herbs may be contaminated with lead, as evidenced by high blood levels seen in some users.
- ▶ **Cookware and tableware.** Cooking or eating off lead-glazed ceramics (usually decorative traditional pottery, not commercially made products) has caused lead poisoning. Hardware stores carry lead testing kits you can use to check such products.

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**Exercise guidelines ...** from p. 1

to reduce the risk of depression. These mental health conditions are increasingly being recognized both as a cause and a consequence of cardiovascular disease.

**Insulin sensitivity.** Activity can improve your body's response to insulin, the hormone that helps control blood sugar levels. Better insulin sensitivity may lower the risk of type 2 diabetes, a major risk factor for cardiovascular problems.

**Sleep.** Getting more physical activity may help you fall asleep more quickly, improve your sleep efficiency (meaning you spend a higher percentage of your time in bed actually sleeping), and help you sleep more deeply. Other possible benefits include less daytime sleepiness and a reduced need for sleeping pills. Of note: people with insomnia (trouble falling and staying asleep) as well as those with obstructive sleep apnea (a nighttime breathing disorder marked by breathing pauses) have reported these benefits.

**Wait, what about weight?**

Excess weight is yet another common problem linked to heart disease. And while the benefits take longer to accrue, exercise may help people stave off the weight gain that often occurs as people age. To lose weight, you'll also need to eat fewer calories. If you do lose weight, being active helps prevent those pounds

from creeping back on. But if you don't lose weight, don't give up on exercise! According to the guidelines, the health benefits of physical activity are generally independent of body weight. You will still reap those benefits, no matter how your weight changes over time.

**Guideline goals**

You can meet your weekly physical activity goal by getting just 22 minutes of moderate-intensity aerobic activity every day. (Aerobic activities include those that get your heart pumping faster than normal.) Or you could exercise for an hour on Saturday and again on Sunday, and squeeze in another 30 minutes one day during the week. This activity planner ([health.gov/MoveYourWay/Activity-Planner](http://health.gov/MoveYourWay/Activity-Planner)) can help you tally up your activities, including those that build muscles.

Per the guidelines, these strengthening exercises should be done twice weekly in addition to your aerobic exercise. Note that you don't have to do push-ups or go to a gym to lift weights. "In fact, you don't even need dumbbells; you can use everyday items in your house, such as a 5-pound bag of rice," says Dr. Lee. Or you can use stretchy resistance bands, which look like big, wide rubber bands, for a gentler strength workout. Using them is a simple way to do strength training, particularly for older people, she adds. ♥

**Examples of moderate and vigorous exercise****Moderate-intensity activities**

- ▶ Walking briskly (2.5 mph or faster)
- ▶ Recreational swimming
- ▶ Bicycling slower than 10 mph on level terrain
- ▶ Tennis (doubles)
- ▶ Active forms of yoga (for example, Vinyasa or power yoga)
- ▶ Ballroom or line dancing
- ▶ General yard and home repair work
- ▶ Exercise classes such as water aerobics

**Vigorous-intensity activities**

- ▶ Jogging or running
- ▶ Swimming laps
- ▶ Tennis (singles)
- ▶ Vigorous dancing
- ▶ Bicycling faster than 10 mph
- ▶ Jumping rope
- ▶ Heavy yard work (digging or shoveling, with heart rate increases)
- ▶ Hiking uphill or with a heavy backpack

**Legume of the month****BLACK BEANS**

Black beans are a staple in many Central and South American countries. In Guatemala, they may be stuffed in a thick corn tortilla (*pupusa*), while Costa Ricans enjoy a dish of refried black beans, rice, and onions called *gallo pinto*. The Brazilian national dish, *feijoada* (pronounced "fej wah dah"), also features black beans, and while it traditionally includes sausage and other meat, you can find recipes for vegetarian versions online.

Black beans are also popular in the United States, thanks in part to the proliferation of fast-casual Mexican restaurants that feature black beans as a side dish or tucked into burritos, tacos, and other specialties.



Here's a simple recipe that you can easily adapt to what you happen to have on hand.

**Easy black bean tacos**

- ▶ 1 15-ounce can of unsalted black beans
- ▶ 8 to 12 corn tortillas
- ▶ Suggested toppings: Chopped tomatoes, corn kernels, sliced bell peppers, shredded lettuce or cabbage, grated cheese, plain yogurt, salsa, diced avocado, chopped onion, chopped cilantro.

Heat the beans in the microwave or the stovetop; stir.

Wrap tortillas in a clean towel and microwave for 30 seconds.

Set out all ingredients to let everyone make their own tacos.



## RESEARCH WE'RE WATCHING

### Does blood pressure rise because of age—or something else?

**A**mong people in the United States and other westernized countries, blood pressure readings tend to rise with age. But a new study suggests that's not true for the Yanomami, a tribe of hunter-gatherer-gardeners living in a remote Venezuelan rain forest.

Researchers measured blood pressure in 72 Yanomami people and 83 people from a nearby tribe, the Yekwana. The people ranged in age from 1 to 60 years old. The Yekwana have been slightly “westernized,” thanks



to missionaries and an airstrip that allows for occasional deliveries of processed food and salt.

The Yanomami had no age-related rise in blood pressure. But the Yekwana's blood pressure readings began rising during childhood—by about a quarter of a point per year, on average. As the authors suggest, “a rise in blood pressure may not be natural but rather a consequence of unnatural Western exposures.” The study was published online Nov. 14, 2018, by *JAMA Cardiology*.

### Healthy habits help people sidestep clogged leg arteries

**T**he buildup of fatty plaque in arteries outside of the heart, especially in the legs, is known as peripheral artery disease (PAD). A new study finds that middle-aged adults with optimal scores on a metric of cardiovascular health called “Life's Simple 7” are much less likely than people with less favorable scores to develop PAD.

Developed by the American Heart Association, the Simple 7 score takes into account cholesterol, blood pressure, blood sugar, physical activity, diet, smoking status, and body mass index. For the

study, published in the November 2018 *American Journal of Epidemiology*, researchers followed 12,865 people with an average age of 54 over a median of about 24 years. People with optimal scores or average scores had, respectively, a 91% and 64% lower risk of PAD compared with people whose scores suggested poor health. The findings are similar to or even stronger than previous studies focusing on the predictive power of Life's Simple 7 for heart disease or stroke risk, according to the authors.

### Psyllium fiber: Regularity and healthier lipid levels?

**P**syllium, which comes from the seeds of the herb *Plantago ovata*, is a popular fiber supplement used to treat constipation (Metamucil is one familiar brand, but many similar products are available). Psyllium husk also helps lower LDL cholesterol levels as well as two other lipid markers for heart disease, according to a study in the Sept. 15, 2018, *American Journal of Clinical Nutrition*.

The study pooled findings from 28 trials in people with normal and high cholesterol levels. It found that a daily dose of about 10 grams of psyllium husk lowered harmful LDL cholesterol 13 mg/dL when taken for at least three weeks. It also led to a similar drop in non-HDL cholesterol (a number that includes LDL and other harmful

lipoprotein particles) and ApoB (a substance found in many lipid particles, considered by some experts to be an even better predictor of heart disease than LDL or non-HDL).

Psyllium husk is available in wafers, bars, and capsules, and as a powder that's mixed with liquid to form a thick gel. It's thought to absorb bile acids and cholesterol, which are then eliminated from the body during bowel movements. ♥



## What's coming up:

- ▶ **Couch-to-5K running programs**
- ▶ **Choosing a cooking oil: New considerations**
- ▶ **How a big belly may harm your heart**
- ▶ **Brain health clues from the Framingham Heart Study**