

Harvard Heart Letter

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Spice up your cooking to cut down on salt

Herbs, spices, and other flavor-boosting techniques can help you eat less sodium, a proven strategy to lower blood pressure.

High blood pressure—one of the key drivers of heart disease—improves when people eat less sodium, a main component of salt (see "How salt affects your blood pressure," page 7).

One simple way to skimp on salt is to enhance your food with other flavors, including spices, herbs, aromatic roots (such as onions, garlic, and ginger), citrus, and vinegars. Two additional tips to optimize flavor: choose the freshest possible foods, and use appropriate cooking techniques,

says Dr. Rani Polak, founding director of the Culinary Healthcare Education Fundamentals (CHEF) Coaching program at the Institute of Lifestyle Medicine at Harvardaffiliated Spaulding Rehabilitation Hospital. "If you can combine these techniques together, your food will taste so amazing, you won't want to add extra salt," he says.

Herbs and spices

In addition to distinct flavors, fresh herbs can provide fragrance and color. Delicate herbs such as basil, cilantro, mint, oregano, parsley, and dill can enliven a variety of dishes. Add one or a combination of several favorites to a simple vinaigrette that you can toss with grains, vegetables, or legumes (beans and peas) or drizzle over grilled fish or chicken. Hardier herbs such as rosemary, sage, and thyme pair well with roasted root vegetables such as potatoes, carrots, and beets. For soups and stews, dried herbs work well.

Spices may offer more than a flavor boost, as these pungent plants contain compounds with antioxidant and antiplatelet properties that may benefit cardiovascular health. Studies have found that people who like spicy



Many international cuisines feature flavorful blends of different herbs and spices, such as garam masala and za'atar.

foods tend to eat less salt and have lower blood pressure. One possible explanation: capsaicin (the chemical responsible for the spicy-hot flavor in chili peppers) may alter how the brain processes salty flavors, leading to lower salt intake.

But if you're not a fan of the mouth-tingling heat of chilis, there's a world of other spices to enjoy. Indian cuisine is famous for garam masala, a blend of spices that often contains coriander, cumin, cinnamon, cardamom, cloves, and fennel. Za'atar is a Middle Eastern spice mix featuring dry hyssop (an herb similar to mint) combined with cumin, coriander, sesame seeds, and sumac, a red, tangy spice with a slightly sour flavor. Chinese five-spice blend is a mix of star anise, fennel, Sichuan pepper, cinnamon, and cloves.

However, you may want to try single spices in different dishes to better appreciate the unique characteristics of each one, says Dr. Polak, who is a trained chef. His current favorite: crushed coriander seeds, which he recently added to a simple salad of finely grated beets with a dressing of olive oil and fresh lemon juice.

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FIVE THINGS TO DO THIS MONTH

1 Enliven your meals with fresh herbs and spices. It may help you eat less salt. (page 1)

2 Include strength training in your workout. Like aerobic exercise, muscle-building exercises can help lower blood pressure. (page 2)

3 Understand the limits of an ECG recorded on a wristworn device. These apps still aren't accurate enough to reliably detect atrial fibrillation. (page 3)

4 Contemplating a chilly plunge? Heed this advice. Cold-water dips aren't advisable for people with certain heart problems. (page 5)

5 Add leafy greens in your daily diet. Just a cup in a salad or a smoothie may help lower your risk of heart disease. (page 8)

Harvard Heart Letter



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ASK THE DOCTOR

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

Strength training and blood pressure

Q I take medication for high blood pressure. I've heard that weight lifting can elevate your blood pressure, so should I avoid that type of exercise?

A If you have well-controlled blood pressure and are otherwise healthy, most types of strength training which includes weight lifting—are generally considered not only safe but beneficial for your overall health. You should take precautions, however.



But let's start with some definitions. Strength training

(also called resistance training) refers to any exercise that works your muscles against an opposing force. You can train your muscles using your own body's weight or equipment such as elasticized bands, dumbbells and other free weights, or specialized machines.

These muscle-building exercises may be dynamic or isometric. Dynamic exercises are those in which you move your muscles and joints, such as a biceps curl



A wall sit strengthens leg muscles by using your own body weight.

or a squat. Isometric exercises are performed against an immovable object, such as a wall or the floor, and include things such as planks or wall sits (see photo).

When you perform any type of exercise—whether it's aerobic, strength training, stretching, or even balance exercises—both your blood pressure and heart rate increase to meet the greater demand for oxygen from your muscles. Some research suggests that during exercise, isometric exercise may boost blood pressure more than dynamic exercise, but the evidence isn't conclusive. However, it's clear that just as with aerobic or endurance exercise (such as walking, jogging, cycling, or swimming), strength training can help lower your blood pressure if you do it consistently.

Most adults should do strength training exercises at least two days a week, according to the federal activity guidelines. Beginners should start with exercise bands or light hand weights. If you're more experienced, weight machines are a good option. Use a weight that's challenging but manageable. The general advice is to start with a single set of eight to 12 repetitions (reps) and then gradually build up to three sets over time. Rest for at least a minute between each set.

However, people who have high blood pressure, especially if it's not optimally controlled, should be cautious about any movements that involve lifting very heavy weights—not just loaded barbells at the gym, but also heavy furniture or boxes of books. That's because the sudden, intense effort can cause your blood pressure to spike—especially if you hold your breath, which people sometimes do in an attempt to increase their effort. During strength training exercises, be sure to exhale as you lift, push, or pull, and inhale as you release. Counting out loud as you lift and release can help you remember to keep breathing.

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(Please write "Ask the doctor" in the subject line.)

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

Screening for atrial fibrillation: An update

Wearable devices can detect this often-silent heart disorder. But as screening tools, they're not ready for prime time yet.

N early one in 11 people ages 65 and older have atrial fibrillation (afib), a heart rhythm disorder that causes bouts of rapid, irregular heartbeats. These unpredictable episodes—which may be fleeting or last for weeks or longer—may trigger symptoms such as dizziness and breathlessness, but not always.

However, the greatest threat from afib comes from the heightened risk of stroke that accompanies the condition. Because the heart's upper chambers (atria) don't contract regularly, blood may stagnate in the left atrium and form clots. If a clot escapes, it can travel to the brain and cause a stroke.

That potentially devastating outcome explains the ongoing effort to find an accurate, cost-effective method to detect afib—especially "silent" afib, which causes no symptoms and often remains unrecognized. "The idea is to catch afib soon enough so a person can start taking anti-clotting drugs to help prevent a stroke," says Harvard Medical School professor Dr. Peter Zimetbaum, director of clinical cardiology at Beth Israel Deaconess Medical Center.

Intermittent testing

Currently, doctors screen for afib during routine check-ups by asking people whether they have any afib symptoms and sometimes also with an electrocardiogram (ECG), a short recording of the heart's electrical activity. But because afib is usually transient, this strategy misses many cases. That's also true for other so-called intermittent screening strategies, which include simply monitoring a person's pulse at the wrist or neck for one full minute to check for a fast or irregular heartbeat. Home blood pressure monitors sometimes detect afib, as they also measure the user's heart rate.

Some smart watches and wrist-worn activity monitors feature programs that record ECGs. You open the app and touch sensors on the device, and it records your heart's rhythm for 30 seconds. If afib is detected, you receive an alert and a report you can share with your physician.



Electrocardiograms captured on smartwatches are not yet reliably accurate.

Current limitations

Sounds simple, right? It's more complicated than you might assume. For one thing, the algorithms to detect afib aren't completely accurate, and some reports can't be interpreted. Various things can throw off the recording, including movement (of either the person or the device), skin color, or environmental conditions such as lighting and temperature.

Another big issue: the reports can present an overwhelming amount of work for physicians, especially if they must sort through unusable data. "We don't have a system in place to manage all that information," says Dr. Zimetbaum. Even if the device correctly identifies an episode of afib, that doesn't necessarily mean you need treatment. For now, experts don't know what burden of afib (that is, how frequently it occurs and for how long) warrants putting someone on anti-clotting medication, which points to another key message. "There is no point in screening people who don't have symptoms of afib unless they are prepared to consider taking blood thinners for the rest of their life," says Dr. Zimetbaum.

For people at high risk for afib (especially older people with underlying heart disease), doctors may use longer-term ECG monitoring devices. An implanted loop recorder-a key-sized device placed under the skin of your chestmonitors your heart rhythm for up to three years. But this somewhat invasive and costly procedure is usually reserved for people with unexplained strokes or fainting spells. Another option is a Band-Aid-sized patch you wear on your chest for two weeks. If the patch doesn't detect any afib during that time period, however, that's no guarantee that you don't have afib.

Future promise?

"Within the next five to 10 years, wearable devices like the Apple Watch or Fitbit probably will be able to correctly identify afib without reporting false alarms. But we aren't there quite yet," says Dr. Zimetbaum. Even your smartphone may one day be able to detect afib by recording your pulse when you press your finger on the camera, he says. But until these easy-to-use devices and accompanying programs or apps are available and affordable, widespread screening isn't feasible.

Meanwhile, to reduce your risk of afib, maintain a healthy weight, avoid alcohol (or drink only low to moderate amounts), and make sure your blood pressure is well controlled. If you snore loudly, get checked for sleep apnea, as this common sleep disorder is linked to a higher risk of afib.

KatarzynaBialasiewicz | Getty Image

Why people faint: From common to very rare causes

About one in seven fainting episodes stems from heart-related problems.

If you faint, be sure to note the circumstances, which may help a doctor diagnose the cause.

There's one simple reason behind all fainting episodes—the brain isn't getting enough blood. But there are many possible underlying causes, ranging from common, usually harmless issues to rare, potentially serious problems.

"Fainting always should be taken seriously, so be sure to get evaluated by a doctor if you faint, particularly if you have any history of heart problems," says Dr. Jeremy Ruskin, founder of the arrhythmia service at Harvard-affiliated Massachusetts General Hospital. But even people without any previous heart issues aren't off the hook. Sometimes syncope (the medical term for fainting) is the first sign of a previously undetected heart condition, he says.

The heart of a fainting episode

Cardiac syncope accounts for only about 15% of all fainting episodes—far fewer than reflex syncope, the most common type (see "When the nervous system overreacts: Reflex syncope"). Cardiac syncope is the most serious form of fainting, however, because it may be a harbinger of sudden death.

Heart-related causes of fainting usually result from an electrical problem that causes the heart to beat either too slowly or too quickly, says Dr. Ruskin. These so-called arrhythmias may be caused by damage from a heart attack or heart muscle disease (cardiomyopathy). Both can disrupt the electrical system of the heart and reduce its ability to pump effectively. Other causes include genetic abnormalities in the heart's electrical system, such as long QT syndrome or Brugada syndrome. Finally, conditions that can reduce blood flow and trigger fainting include a stiffening of the aortic

valve (aortic stenosis) or narrowing of the outlet of the left ventricle from hypertrophic cardiomyopathy.

A sudden pressure drop

Another common reason people faint involves a sudden drop in blood pressure that occurs upon standing, known as postural or orthostatic hypotension. During these episodes, blood pools in the lower part of your body. Less blood returns to the heart, lowering blood pressure and reducing blood flow to the brain. Common causes include medications to treat high blood pressure or an enlarged prostate gland, and nerve damage or dysfunction (neuropathy) from diabetes, Parkinson's disease, or other illnesses. Being too warm, not drinking enough water, anxiety, and hunger can aggravate the problem.

A rare twist

The narrowed arteries that are the hallmark of cardiovascular disease occasionally affect the vessels that supply the back of the brain, causing a condition called vertebrobasilar insufficiency (VBI). "This condition reduces blood flow to the back of the brain, a region that's critical for maintaining balance and consciousness," says Dr. Ruskin. But VBI can also strike people with wideopen arteries who have bone spurs from arthritis near those neck arteries. Twisting the neck can cause the spur to compress the vessel and obstruct blood flow. This problem, known as rotational vertebral artery syndrome or "bow hunter syndrome," is very rare.

Uncovering the cause

A detailed history from the patient and witnesses provides the best clues for identifying the underlying cause of a fainting episode, says Dr. Ruskin. If you faint, make a note of any circumstances or symptoms you experienced around that time. Testing always includes a recording of the heart's electrical activity (electrocardiogram, or ECG) and a heart ultrasound (echocardiogram) to check for structural changes in the heart. Many people will also need longer-term ECG monitoring with special devices or additional tests. ♥

When the nervous system overreacts: Reflex syncope

At least half of all fainting episodes stem from an overly sensitive response by the nervous system known as reflex syncope. In all cases, the nervous system tells the heart to slow down and the blood vessels to dilate, which lowers blood pressure and diminishes blood flow to the brain. The most common type, vasovagal syncope, refers to the effects of the vagus nerve (which regulates heart rate and blood pressure, among other things). It occurs when your body overreacts to emotional distress or the sight of blood, or during situations that overstimulate the vagus nerve, such as having a bowel movement, coughing, or swallowing.

Carotid sinus hypersensitivity is a rare cause of syncope that occurs in response to pressure—caused by wearing a tight collar or shaving, for example—on a certain spot in the neck. The pressure stimulates structures called baroreceptors that activate hormone and nerve signals to regulate blood pressure. Older people (usually men) with plaque buildup in the carotid arteries are most likely to experience this hypersensitivity.



Cold-water dips: Healthy or risky?

Swimming in cold water is generally safe, but some people should be cautious.

F ew things are more invigorating than a dip in the ocean, a lake, or any cool body of water, especially during late summer's heat. A rare breed of hardy souls—mostly extreme athletes even seek out ice-swimming competitions in the winter.

Some people swear by the health perks of cold-water immersion, which allegedly includes fat loss, improved sleep, and reduced inflammation—all of which may benefit cardiovascular health. But so far, the evidence is pretty shallow.

"We have a good understanding of the immediate effects of cold-water submersion on the body. But the research looking at health outcomes from repeated exposure to cold water is quite limited," says cardiologist Dr. Aaron Baggish, director of the cardiac performance lab at Harvard-affiliated Massachusetts General Hospital. Most people who enjoy cold-water swimming can do so safely, provided they always swim with a partner. But those with history of heart rhythm abnormalities should avoid cold-water dips, he says.

The diving reflex

Christopher Moswitzer | Getty Images

When you put your face in waterparticularly cold water-the nerve receptors in your nose and mouth send a signal to your brain that you're in water. Your brain then tells your body to redistribute blood from your extremities (arms and legs) into your chest and brain to conserve oxygen, Dr. Baggish explains. This well-known phenomenon, called the diving reflex or diving response, causes your heart to slow down dramatically and your blood pressure to rise. The term is a bit of a misnomer because the reflex occurs at the water's surface and doesn't require diving per se. But the colder the water, the greater your body's response.

Even if you don't put your face in the water, the shock of cold water against your skin sets off the body's "fight-orflight" response. The resulting surge of adrenaline causes blood vessels supplying the skin to narrow. This conserves heat but shifts even more blood to the chest, taxing the heart.

Heart rhythm risk

Extra adrenaline can also disrupt the heart's steady rhythm, although this usually isn't a problem in someone with a healthy heart. People who aren't accustomed to chilly water may have a more exaggerated response initially, but they generally acclimate over time. And what people consider to be cold can vary, of course (see "A little chilly—or the big chill?")

"I get a lot of questions about Boston's annual polar bear plunge. The only people I advise against doing it are those with a heart rhythm abnormality such



Ocean or lake swimming is great exercise, but people with certain heart conditions should be careful if the water is chilly.

as atrial fibrillation," says Dr. Baggish. Both the fight-or-flight response and the diving reflex may trigger an underlying arrhythmia to appear, he adds.

Curbing inflammation?

It's not clear whether cold-water swims have any effect on inflammation connected to cardiovascular disease. But athletes often immerse themselves in ice-cold water immediately after a workout to reduce tissue inflammation and injury caused by intense exercise, Dr. Baggish notes. The cold causes blood vessels in the limbs to constrict, and the resulting reduced blood flow dampens inflammation. Even though the effect is temporary, it's a great way to minimize muscle discomfort the next day, he adds. ▼



A little chilly—or the big chill?

We normally think of 70° F as a pleasant temperature. But that's air, not water temperature. Lap swimming pools are usually set between 78° and 82°, which is similar to the water temperature along Florida's beaches in August. West Coast beaches are much cooler; even in southern California, the Pacific Ocean is only about 68° in the summer.

For most people, anything under 70° will feel decidedly brisk. But open-water swimming enthusiasts don't mind the chilly temps, although some don neoprene wet suits when the temperature falls below 65° or 60° .

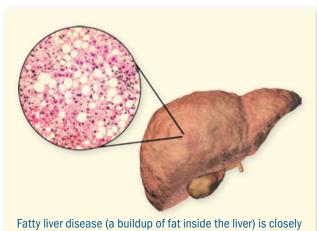
But that's practically balmy compared with the water at most polar bear plunges, which are a New Year's Day custom in many communities across the country. At the one in Boston Harbor (a tradition since 1904), the water temperature hovers around 42°.

Fatty liver disease: A threat to the heart?

Excess weight can lead to fat buildup in the liver, a condition linked to greater cardiovascular risk.

linked to heart-related risks.

About one person in four has an oftensymptomless condition marked by a buildup of fat inside the liver, called nonalcoholic fatty liver disease (NAFLD). Like diabetes, this metabolic disorder is closely linked to obesity, especially excess weight around the middle of the body.



The strongest predictor of fatty liver disease is having type 2 diabe-

tes, and both diseases are closely linked to cardiovascular disease. But obesity usually underlies and connects all these problems together, says Dr. Michelle Lai, a hepatologist at Harvard-affiliated Beth Israel Deaconess Medical Center.

"When you gain weight, the resulting stress on your body causes your metabolism to go haywire, and your blood pressure, blood sugar, and cholesterol start to rise," she says. All these conditions—along with more fat around your abdominal organs—often occur together, creating what's known as metabolic syndrome. Diabetes and NAFLD are part of metabolic syndrome, which is often a harbinger of heart disease.

However, some people who aren't overweight still develop NAFLD, especially those of Asian and Hispanic descent. They may appear naturally slim, but after years of following a typical American diet, they accumulate abdominal fat and develop metabolic syndrome, says Dr. Lai. Even if their body mass index falls into a normal range (see <u>www.health.harvard.edu/</u> <u>bmi</u> for a calculator), they may have an elevated waist circumference. These people can improve their liver health by losing weight, she adds.

Types of fatty liver disease

NAFLD is distinct from alcoholic fatty liver disease, which is caused by longterm heavy drinking and affects about 5% of adults in the United States. NAFLD, which is also referred to as simple fatty liver, usually doesn't cause any symptoms. It's typically discovered by chance during an imaging test (such as an abdominal ultrasound, MRI, or CT scan) done for another reason. Sometimes, blood tests reveal slightly elevated liver enzymes, but many people with NAFLD have normal liver function. Doctors can usually make the diagnosis based on the person's medical history and imaging tests.

About a third of people with NAFLD have nonalcoholic steatohepatitis (NASH), in which the liver cells are inflamed and injured. This process may create scar tissue, which can eventually replace normal liver cells and lead to a condition called cirrhosis. An enhanced type of imaging known as elastography uses sound waves to measure the stiffness of the liver, a surrogate marker for scar tissue. If the test reveals signs of scarring, doctors typically perform a liver biopsy to determine the presence of cirrhosis. Cirrhosis from NASH increases the risk of liver cancer, which is often deadly.

Reversing NAFLD

People with NAFLD can slow or even reverse the condition with the same lifestyle strategies that improve cardiovascular health: losing weight, adopting a healthy diet, and exercising regularly.

Dr. Lai encourages tells her patients to avoid fad diets and to instead gradually change how they eat. "My main advice is to avoid sugar, especially sweetened beverages that contain highfructose corn syrup, since we know that too much fructose can inflame the liver," she says. Although there's some controversy about whether wine might be okay for people with NAFLD, she recommends avoiding alcohol or drinking only occasionally, if desired. Some evidence suggests coffee may benefit people with fatty liver disease. Just be sure not to add sugar or those flavored, sweetened syrups popular in specialty coffee drinks, says Dr. Lai. A Mediterranean-style eating pattern that emphasizes fruits, vegetables, whole grains, lean meats, and healthy fats is a good idea.

Getting regular exercise (even without weight loss) can boost your metabolism and help reverse metabolic syndrome. Several studies suggest that both aerobic and strength training may improve fatty liver disease as well.

Investigators are working to develop drugs to help reverse NAFLD. But to date, there are no FDA-approved medications to treat fatty liver disease. Dr. Lai's patients often ask her about milk thistle, a dietary supplement widely touted as improving liver health. However, a 2019 study comparing a placebo to various concentrations of a highly purified version of milk thistle in people with NASH showed no benefit from the supplement, says Dr. Lai. ♥

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nelon © Vladimir1965 | Getty Images

Flavor-boosting strategies ... from p.1

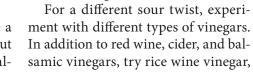
Aromatic roots

Regular white or yellow onions are a staple ingredient for many cooks, but don't overlook leeks, shallots, or scallions, which have slightly different flavor profiles. Fresh, raw garlic can be quite pungent, but cooking sliced or minced garlic will mellow its flavor. Roasting whole garlic bulbs softens both the texture and taste, creating a paste you can spread on crackers or breads or add to savory dishes. Freshly grated ginger root imparts a warm, spicy flavor to recipes and is popular in many Asian cuisines.

Citrus fruits and flavored vinegars

Both the juice and the zest (peel) of lemon, limes, and oranges can give foods a fresh, sharp taste. Lemons and other sour sub-

stances are literally mouthwatering they increase saliva production, which helps you to better perceive flavors in foods. Using lemon juice and zest can replace up to 75% of the sodium in different recipes for vegetables, fish, and meats without sacrificing flavor, according to one small study. Chefs often recommend squeezing a lemon



before serving.

samic vinegars, try rice wine vinegar, sherry vinegar, or a vinegar infused with fruits (such as raspberries or strawberries) or herbs (such as tarragon or basil). Use them in salad dressings or stir into soups or stews near the end of cooking.

wedge on all manner of foods just

Shopping and cooking tips

Late summer is an ideal time to find locally grown produce at farmers' mar-

kets. "Carrots that came out of the ground just a few days ago taste so much better than baby carrots that have been sitting in a plastic bag for months," says Dr. Polak. Fresh,

add extra flavor to foods. Dr. Polak. Fresh, puthwatering perfectly ripened vegetables and fruits are often delicious raw or prepared very simply, so you can really appreciate their flavors, he adds. For sturdier vegetables of the sodium vegetables, fish, crificing flavor, such as squash, sweet potatoes, broccoli, such as sautéing or roasting in a little

bit of olive oil helps to caramelize the natural sugars, creating more flavor.

How salt affects your blood pressure

The less salt you eat, the lower your blood pressure, according to a study that pooled findings from dozens of clinical trials published since the early 1970s.

Lemon zest (the outer peel) and juice can

The trials lasted between four weeks and three years and included more than 10,000 people in total. Their sodium intakes (manipulated by diet changes, supplements, or both) ranged from 0.4 grams to 7.6 grams per day. (On average, Americans consume more than 3.4 grams of sodium daily.) The studies also measured 24-hour unipervented and the pertinent.



urinary sodium levels to confirm how much the participants were consuming.

Every 1-gram drop in daily sodium excretion was linked to a 2.4-point drop in systolic blood pressure (the first number in a reading) and a 1-point drop in diastolic blood pressure (the second number), the researchers found. The study appeared in the April 20, 2021, issue of *Circulation*.

Fruit of the month



Melons

An ice-cold slice of watermelon, cantaloupe, or honeydew can be especially refreshing on a hot summer's day. Melons have a high water content and are fairly low in calories (a one-cup serving of cubed melon has only about 45 to 60 calories), making them a good choice for a sweet treat if you're watching your weight.

Watermelon contains several nutrients known to benefit heart health. One is lycopene, an antioxidant that may help improve cholesterol levels and blood pressure. The other is citrulline, an amino acid that may boost levels of nitric oxide, a substance known to relax blood vessels and lower blood pressure.

How do you choose a ripe watermelon? They usually have a light green or white "bald spot" where the melon rested on the soil. When that spot changes to a pale yellow or cream color, the melon is ripe. Also, an unripe melon has a glossy rind that becomes more satin or matte as the fruit ripens. Thumping on the fruit to listen for a deep, heavy thud isn't a very reliable method, according to the USDA.





RESEARCH WE'RE WATCHING

Keep heart disease at bay with a salad a day?

E ating just one cup of leafy green vegetables a day may lower your heart disease risk, suggests a study published online April 21, 2021, by the *European Journal of Epidemiology*.

The study included more than 53,000 people who took part in the Danish Diet, Cancer, and Health study over a 23-year period. When the study began, their average age was 56, and none had heart disease. Researchers found that people who ate the most nitrate-rich vegetables (especially leafy greens such as spinach and lettuce) had a 12% to 26% lower risk of cardiovascular disease over the course of the study. One cup of greens per day appeared to be the optimum amount, as people who ate higher amounts didn't further lower their risk.

The heart benefit may stem partly from the slightly lowered

blood pressure observed in those participants. During digestion, nitrate found in foods is converted into nitric oxide, a compound that relaxes and widens blood vessels.

While these observational findings can't prove that leafy greens lower heart disease risk, they jibe with findings from similar studies.

rilonacept (Arcalyst), it targets a substance

involved in the underlying inflammation that

triggers pericarditis. The medication is taken as

a self-administered weekly injection. In a clinical

trial, the drug helped quell painful symptoms and

lowered the risk of future flare-ups. Side effects

include redness or swelling at the injection site

and respiratory symptoms such as a runny nose

New treatment for pericarditis approved

S ometimes the lining surrounding the heart (the pericardium) becomes irritated because of an infection, heart surgery, or unknown reasons. This irritation, known as pericarditis, can cause sharp, stabbing pain in the center of the chest. Although it usually disappears within four to six weeks, some people experience repeated attacks.

In March, the FDA approved a new drug specifically to treat recurrent pericarditis. Called

Pregnancy problems may foretell future heart disease

W omen who develop health problems such as high blood pressure or diabetes while they're pregnant face an increased risk of heart disease later in life, according to a scientific statement from the American Heart Association published May 4, 2021, in the journal *Circulation*.

Up to 15% of women experience what doctors refer to as adverse pregnancy outcomes. In addition to high blood pressure and diabetes (known as gestational hypertension and gestational diabetes, respectively), four other pregnancy-related conditions also are associated with cardiovascular risk: preterm birth (giving birth before the 37th week of pregnancy), delivering a small baby (one that weighs less than 5 pounds, 8 ounces), placental abruption (when the placenta separates from the uterus before birth), and stillbirth (death of a baby before delivery).

During pregnancy, a woman's heart pumps about 50% more blood than usual, and the demands on her body are akin to cardiac stress test. Women with who had pregnancy complications—

even if they gave birth decades ago should share that information with their physicians. The added cardiovascular risk may warrant more vigilant screening and treatment of factors related to heart health, such as blood pressure, blood sugar, and cholesterol.

What's coming up:

- ► The eyes: A window to heart disease risk?
- ► Strength exercises for frail, older adults
- Plant-based meat alternatives: A better burger?

and cough.

▶ When heart scans reveal other possible health problems