

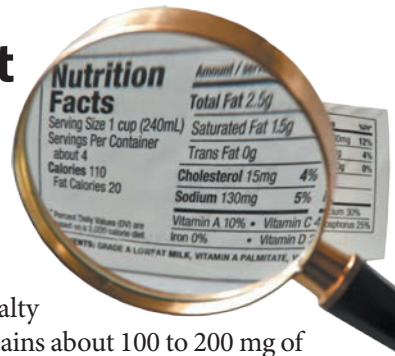


# Harvard Heart Letter

VOLUME 28 • NUMBER 12 | AUGUST 2018

## Simple swaps to eat less salt

Learn the most common sources of sodium in your diet and some easy substitutions you can make.



If you think steering clear of potato chips, pretzels, and other savory snacks is the best way to trim salt from your diet, think again. Yes, those foods are salty—but they only rank no. 7 on the top 10 sources of sodium (a major component of salt) in the average American's diet.

The category of bread and rolls tops the list, which is based both on sodium content and how often people eat the foods. Bread is not especially salty, but we eat a lot of it, as well as similar foods such as hamburger and hot dog buns, bagels, and English muffins.

But you don't need to cut these foods out of your diet, says Debbie Krivitsky, director of clinical nutrition at the Cardiovascular Disease Prevention Center at Massachusetts General Hospital. "Breads require salt for both taste and texture, so low-sodium breads are not very popular," she explains. A better strategy is to choose lower-salt versions of what you put between or on the bread (or buns, pizza dough, or tortillas)—and to choose whole-grain versions whenever possible.

### Too much salt

The average adult eats about 3,400 milligrams (mg) of sodium per day, which is far more than the recommended daily goal of 2,300 mg. The American Heart Association recommends an even lower goal: no more than 1,500 mg per day, especially for those with high blood pressure or heart disease.

Here are the top 10 types of food that account for more than 40% of the sodium we eat each day, along with some ideas for simple swaps to trim your salt intake.

**1 Breads and rolls.** As noted above, this category tops the list not because bread is

especially salty (a slice contains about 100 to 200 mg of sodium) but because we eat so much of it.

*Smart swaps:* Instead of toast or a bagel for breakfast, have a bowl of oatmeal prepared with just a pinch of salt. Bypass the dinner breadbasket for a serving of whole grains, such as barley, brown rice, farro, or quinoa.

**2 Pizza.** All the essential pizza ingredients—the crust, sauce, and cheese—contain a lot of salt. Adding cured meats such as pepperoni or sausage adds even more sodium.

*Smart swap:* Make a homemade pizza using a whole-wheat, prebaked pizza crust with low-sodium pizza sauce and slivers of part-skim mozzarella or other light cheese (see no. 9 for other suggestions). Top with sliced bell peppers, mushrooms, or any other vegetables you like. Bake at 450° F until the cheese melts.

**3 Sandwiches.** Like pizza, most sandwiches contain salty ingredients (bread, cheese, cold cuts, and cured meats; see no. 4).

*Smart swaps:* Load up your sandwich with veggies such as tomato, avocado, and lettuce. Skip the cheese and add hummus. Or try peanut butter with sliced apple or banana.

**4 Cold cuts and cured meats.** These processed meats include bacon, ham, salami, sausage, hot dogs, and deli or luncheon meats. Not only are they high in sodium chloride (salt), they may also contain sodium nitrate as a preservative, which further boosts the sodium count.

*Smart swaps:* Cook your own fresh chicken or turkey breast to slice up for sandwiches, or buy low-sodium turkey or chicken breast.

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## FIVE THINGS TO DO THIS MONTH

**1 Make the most of your heart medications.** Timing and other factors can alter the effectiveness and side effects of some drugs. (page 3)

**2 Learn about radiation exposure from cardiac imaging.** The theoretical risks are small, but get these tests only when necessary. (page 4)

**3 Check out places to volunteer your time.** The social connections just might help protect your heart. (page 5)

**4 Make some bruschetta.** It's a tasty way to eat seasonal fresh tomatoes, which are rich in heart-healthy nutrients. (page 7)

**5 Try low-sodium versions of foods you eat frequently.** This chart can help you decipher the label information. (page 7)



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Published monthly by Harvard Health Publishing,  
a division of Harvard Medical School

### In association with

**B** Belvoir Media Group, LLC, 535 Connecticut Avenue,  
Norwalk, CT 06854. Robert Englander, Chairman and  
CEO; Timothy H. Cole, Executive Vice President, Editorial  
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Proceeds support research efforts of Harvard Medical School.

## ASK THE DOCTOR

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

### Narrowed aortic valve with no symptoms

**Q** I was recently diagnosed with aortic stenosis after my doctor heard a slight heart murmur and referred me for an echocardiogram. I don't have any symptoms, so the cardiologist recommended that I get periodic echocardiograms to monitor the condition. Is there anything else I can—or should—do?

**A** Aortic stenosis—also called aortic valve stenosis—occurs when the one-way valve inside the heart's largest vessel, the aorta, stiffens and becomes clogged with calcium deposits. As a result, the valve doesn't open as easily. During a heart-beat, as the heart's main pumping chamber (the left ventricle) contracts, pressure builds up behind the aortic valve. This creates the turbulent blood flow that a doctor can hear through a stethoscope.

Often, the first symptom of aortic stenosis is a little shortness of breath during activity. For example, you might notice that it's a little harder to walk up a flight of stairs or carry groceries, especially if you don't exercise regularly. However, the symptoms tend to come on gradually, so people don't always recognize them. Also, some people unconsciously adapt their behavior to avoid exertion. So to be on the safe side, I recommend getting an exercise stress test with an echocardiogram (heart ultrasound) to make sure you're not experiencing early symptoms of aortic stenosis. During these tests, you're closely monitored while walking on a treadmill to see whether symptoms or signs of trouble occur during moderate exercise.

Repeat echocardiograms every six to 12 months will reveal if your left ventricle is growing larger or your heart function is worsening, so be sure to stick to the schedule your cardiologist recommends. And be alert to possible symptoms, which can include feeling tired after physical activity, fatigue, heart palpitations, chest pain, and fainting spells.

Unfortunately, neither lifestyle nor medications can slow or reverse aortic stenosis. The only treatment option is replacing the valve. Once, open-heart surgery was the only way to do this. But a procedure called transcatheter aortic valve replacement (TAVR) offers a less-invasive alternative with an easier, shorter recovery. The approach delivers a collapsed replacement valve through a thin, flexible tube (catheter) that the doctor inserts at the top of the thigh and slides up through the blood vessels into the aorta.

Currently, this specialized—and more expensive—procedure is approved only for people at high or intermediate risk for a bad outcome with valve surgery (for example, older, frail people with other health problems). Yet more people may qualify for TAVR in the future, including those at low risk from surgery. A large study is comparing TAVR with periodic echocardiograms and symptom monitoring in people with severe aortic stenosis without symptoms. ♥



Periodic echocardiograms help to monitor aortic stenosis.



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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.

# Getting the most out of your heart medications

*These drugs help prevent potentially life-threatening events. Make sure you're taking them correctly.*

Recently, a *Heart Letter* subscriber emailed us this query: “Does taking your blood pressure medication at night protect the heart more than if you take it in the morning? If so, why?”

Maybe you've wondered the same thing, or have other questions about the drugs you take to prevent or treat heart disease. In addition to blood pressure pills, these include drugs to lower cholesterol and to prevent blood clots.

Per FDA guidelines, all medications should be dispensed with a sheaf of papers that detail the prescribing instructions and side effects. However, people don't always take time to read all that fine print. But knowing the rationale behind the instructions sometimes makes people more likely to follow them.

“When I counsel patients, I tell them the specific reasons for the instructions. That way, they can say to themselves, ‘I'm doing this to increase the effectiveness of my medication,’” says Jessica Rimsans, a pharmacist at Harvard-affiliated Brigham and Women's Hospital.

## The sleep effect

With regard to blood pressure drug timing, the answer varies from person to person. Blood pressure tends to dip at night while people sleep, then starts to rise in the early morning and peaks around midday. “But after age 55, some people don't experience that nighttime dip,” Rimsans explains. These variations are another reason doctors encourage people to use home blood pressure monitors. If your morning blood pressure readings are high, your doctor may advise you to take your blood pressure pills at night or, if you take two pills, to take one at night, she says.

But for some people, an evening dose might lower their blood pres-



People may be more likely to follow specific prescribing instructions for medications if they understand the reasons behind them.

sure too much. If they get up to use the bathroom, for example, they might feel lightheaded, possibly causing them to fall. Don't switch your dosing schedule without first checking with your doctor, Rimsans says.

## The stomach effect

One common phrase on drug labels—take with food—serves two purposes. For the blood pressure drugs known as beta blockers, such as propranolol (Inderal) and metoprolol (Lopressor), taking them with a meal will lessen unpleasant side effects. “You'll absorb the drug more slowly than you would on an empty stomach,” says Rimsans. Beta blockers sometimes make people feel tired, dizzy, and weak.

Taking certain drugs with food may also prevent nausea and stomach upset. One good example is metformin (Glucophage), a widely prescribed diabetes drug that many people with cardiovascular disease also take.

## The alcohol effect

Hundreds of common prescription drugs (including many cardiovascular drugs) interact adversely with alcohol.

But does this mean you just shouldn't have a drink soon after taking a pill—or that you should abstain completely?

“In general, it's a good idea to avoid alcohol when taking any type of medication,” says Rimsans. Alcohol affects how you absorb drugs, potentially increasing or decreasing the drug's effects. For example, in people who take ACE inhibitors (used to lower blood pressure and treat people with heart attacks), alcohol can cause blood pressure to drop too much. Common ones include enalapril (Vasotec) and lisinopril (Prinivil, Zestril). Alcohol also tends to intensify drug side effects, such as drowsiness, which can occur with most blood pressure drugs. A more worrisome but lesser known example is an increased likelihood of spontaneous bleeding that can occur when people drink alcohol and take anti-clotting drugs such as warfarin (Coumadin), dabigatran (Pradaxa), and rivaroxaban (Xarelto).

However, most adults—about 70%—drink alcohol, and telling them to stop drinking completely may backfire, causing them to stop taking their medications instead. “That's why doctors usually tell people to limit their drinking to special occasions,” says Rimsans. Binge drinking—four or five drinks within a few hours—poses a far greater risk than a glass of wine with dinner a few nights per week, she adds.

## The grapefruit effect

If you're among the millions of Americans who takes a cholesterol-lowering statin, another beverage you may want to avoid is grapefruit juice. This tangy fruit contains furanocoumarins, compounds that block an intestinal enzyme that normally breaks down statins. As a result, more statin gets into the bloodstream, possibly increasing the risk of unwanted side effects such as muscle aches. Although this problem is most likely to occur if you drink four or more cups of the juice, you may want to play it safe and avoid grapefruit in any form if you take a statin. ♥



# Radiation from heart imaging: What you need to know

*Certain tests involve small amounts of radiation. Here's some perspective on the benefits and risks.*

Cardiologists have many options for visualizing the heart, some of which involve exposure to radiation. Used appropriately, these tests can identify possibly life-threatening conditions, such as dangerous heart artery blockages. In recent years, the accuracy of many of these noninvasive tests has increased. They're also being used with increasing frequency.

Because ionizing radiation can damage cells, potentially raising the risk of cancer, experts acknowledge that imaging tests that involve radiation should be used judiciously. Earlier this year, the American College of Cardiology published a consensus statement on the best practices for safe and effective use of radiation in cardiac imaging tests.

"Every test we use to image the heart has both advantages and limitations, and choosing the right one depends on the individual patient and the question we're trying to answer," says Dr. Ron Blankstein, a cardiovascular imaging specialist and preventive cardiologist at Harvard-affiliated Brigham and Women's Hospital. Not all tests make sense for all people. However, some cardiac imaging tests don't involve any radiation exposure at all, he notes. These include a heart ultrasound (echocardiogram) and magnetic resonance imaging of the heart (cardiac MRI).

## CT scans of the heart

Imaging tests that rely on radiation fall into two main categories based on the source and type of radiation. One category uses specialized x-rays (known as computed tomography or CT scans) to create a three-dimensional picture of the heart. One such test is a coronary artery calcium scan, which reveals specks of calcium in the walls of the heart's

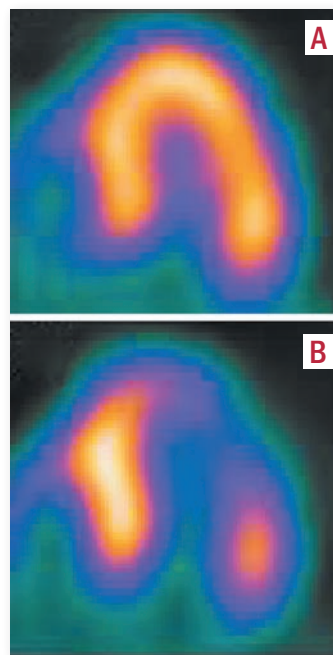
arteries. These specks, called calcifications, can be an early sign of cardiovascular disease. Doctors may recommend this test to identify possible coronary artery disease before a person has any signs or symptoms. This test may be helpful when deciding if and when to use certain preventive therapies, such as statins.

Another x-ray test, called a CT angiogram, helps assess people who have symptoms that may be due to narrowings in the heart arteries, such as chest, jaw, or arm pain. This test involves injecting a special dye that shows up on x-rays into an arm vein. The dye travels to the heart and circulates through it. The scanner takes multiple pictures over a period of several seconds. A computer then merges the images to create a detailed, three-dimensional view of the heart's arteries.

## Radioactive tracers

Tests in the second category use radioactive substances called tracers that are injected into a vein and then travel to your heart. The two main tests, SPECT and PET, are collectively referred to as nuclear medicine (or nuclear perfusion) tests. A special camera that records the radioactive particles emitted from the tracer circles around the body, taking images of the heart from multiple angles. A computer then combines these images to create a detailed picture of the blood flow to the heart.

The most common version is a nuclear stress test (see image above), in which pictures are taken in conjunction



A nuclear stress test shows areas of heart muscle that [A] receive good blood flow at rest, but [B] are starved of blood during exercise, due to insufficient blood flow.

with some type of stress placed on the heart—either exercise or a medication that simulates the effects of exercise.

## How much radiation?

The average person receives about 3 millisieverts (mSv) of background radiation per year from natural sources. A coronary artery calcium scan provides about 1 mSv, which is similar to the radiation from a mammogram. With modern techniques, the radiation from a CT angiogram ranges from 2 to 7 mSv, while

the radiation from nuclear medicine stress tests ranges from 4 to 10 mSv.

The theoretical increased risk of cancer from even several nuclear stress tests is very small, especially considering that radiation-induced cancers don't occur until decades after exposure, says Dr. Blankstein. People in their 60s and 70s are far more likely to die from other causes—including heart disease—before developing cancer from an imaging test, he adds. Still, it makes sense to avoid unnecessary radiation exposure whenever possible.

## Questions for your cardiologist

If your doctor recommends a cardiac imaging test, ask these questions:

- ▶ Why do I need this test? Make sure you understand what your doctor expects to learn from the test.
- ▶ Are there any alternatives? Check whether a standard exercise treadmill test, an echocardiogram, or cardiac MRI could be substituted.
- ▶ Could the results affect how I am treated? If the answer is no, the test might not be justified. ♥

# Does loneliness play a role in cardiovascular problems?

*Staying connected to friends, neighbors, and your community may protect your heart.*

The lonely hearts club may be larger than you realize. About a third of older adults say they frequently feel lonely, according to findings from the National Social Life, Health, and Aging Project. And only about half of Americans have meaningful in-person social interactions on a daily basis, such as having an extended conversation with a friend or spending time with family members, suggests a recent survey by the global health service company Cigna.

People whose main social contacts were at their place of work often feel that loss acutely after they retire. Many older adults are also at risk for isolation and loneliness because they're divorced or have lost a partner. But a lack of caring companionship (including from family, friends, or a romantic partner) may make you more vulnerable to a number of health woes. In fact, several studies suggest that isolated and lonely people face a slightly higher risk of heart attack or stroke than people with stronger social networks.

## The stress of loneliness

One reason may be that loneliness can be stressful, in part because solitary people don't have anyone to help them regulate their emotions, says Dr. Robert Waldinger, professor of psychiatry at Harvard Medical School. "We all need help managing stress, and we use different things to help us when we're feeling upset," he says. Say you're having a lousy day—maybe you're worried about a problem or fear you've made a mistake. Confiding in another person, whether it's your spouse, a friend, a colleague, or a neighbor, can help you put it into perspective. "Sometimes, you can actually feel your body calming down," says Dr. Waldinger.



Heart disease may be more likely among people who are lonely or socially isolated.

Emotional stress has well-known physical effects. Elevated levels of stress hormones such as cortisol are thought to trigger low-level inflammation. That, in turn, can damage various systems in the body—including the blood vessels and heart.

A long-running study of health and well-being that began 80 years ago, the Harvard Study of Adult Development ([www.adultdevelopmentstudy.org](http://www.adultdevelopmentstudy.org)), supports the notion that close relationships play a vital role in health. Dr. Waldinger, the study's fourth director, notes that healthy social relationships at

age 50 seem to be a better predictor of people's physical health at age 80 than their midlife cholesterol levels.

## Making new connections

Finding and nurturing new acquaintances and friends takes planning and effort. It can be especially hard if you live alone or are introverted. "The path of least resistance is to stay home with the TV on," says Dr. Waldinger. But if you're lonely, do your heart a favor and take the first step. Here are some suggestions for getting started:

### Invite neighbors over for coffee or tea.

Get to know people who live nearby with a casual get-together at your home.

**Sign up for a class.** Take a dance, exercise, or adult education class.

**Join a group.** Join a congregation of worship, a chorus, or a book club. Take up a hobby that you can share with others, such as a sport or a game (chess, mah-jongg, cards, Scrabble).

**Volunteer.** Helping others has been shown to boost your mood and well-being in addition to expanding your social network. Choose something you enjoy doing and really care about. Shy people might want to focus on one-on-one opportunities, such as teaching reading, English, or a special skill you may have. For ideas, inquire at local hospitals, nursing homes, daycare centers, humane societies, or national organizations (see "Volunteer suggestions"). ♥

## Volunteer suggestions

You can explore a range of volunteer opportunities at these organizations:

- ▶ **Volunteer Match** ([www.volunteermatch.org](http://www.volunteermatch.org)) connects people with local volunteer opportunities that match their interests and expertise with such choices as helping animals, assisting immigrants and refugees, working with computers and technology, and numerous others.
- ▶ **Senior Corps** ([www.seniorcorps.gov](http://www.seniorcorps.gov)) is a large national volunteer network for people ages 55 or older. They support a range of nonprofit local community organizations that mentor and tutor at-risk youth, rebuild communities struck by natural disasters, and help seniors live independently.
- ▶ **Experience Corps** ([www.aarp.org/experience-corps](http://www.aarp.org/experience-corps)) recruits and trains older adults to tutor children from kindergarten through third grade who are struggling to read. They work in lower-income districts in 22 cities throughout the country.

# Aldosterone overload: An overlooked cause of high blood pressure?

*This hormone, which helps the body manage water and sodium, is a focus of growing interest among researchers.*

High blood pressure—which has no symptoms or warning signs—can harm your blood vessels, heart, brain, eyes, and kidneys. An estimated 46% of adults in the United States have this stealth condition. A combination of unhealthy habits, such as smoking, a poor diet, and lack of exercise, can contribute to a rise in blood pressure. While kidney disease may cause high blood pressure, for most people the underlying cause is unknown.

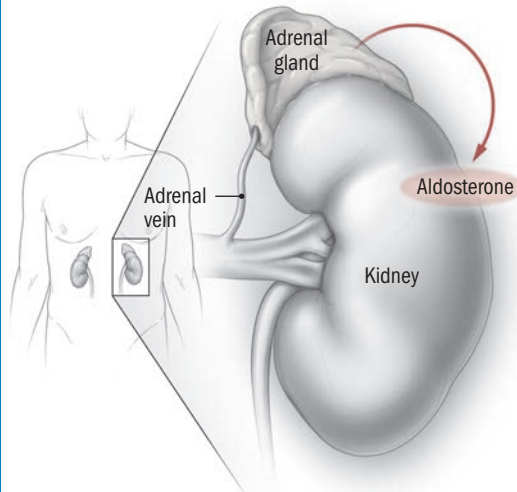
However, for about one of every 15 people with high blood pressure, an imbalance of the hormone aldosterone may be to blame. This problem may be even more common among people with poorly controlled high blood pressure (also called resistant hypertension). “Among those people, up to one in five may have too much aldosterone,” says Dr. Gail Adler, chief of cardiovascular endocrinology at Harvard-affiliated Brigham and Women’s Hospital.

Aldosterone is a key regulator of sodium and potassium in the body, she explains. If you’re out in the desert, your body needs aldosterone to retain sodium and water to maintain your blood pressure. But too much aldosterone makes the kidneys retain too much sodium and water, and that extra fluid ends up in the bloodstream, leading to increases in blood pressure, says Dr. Adler.

## Causes of excess aldosterone

The triangle-shaped adrenal glands, which perch atop each of the kidneys, produce several key hormones, including aldosterone (see “Anatomy of an adrenal gland”). When these glands produce too much aldosterone, the condition is known as primary

## Anatomy of an adrenal gland



The adrenal glands, located atop each kidney, secrete many hormones, including aldosterone. Aldosterone helps the kidneys manage water, sodium, and potassium. Too much aldosterone can cause the kidneys to retain water and sodium and flush potassium.

aldosteronism. A common cause is a benign (noncancerous) growth in one adrenal gland, known as Conn’s syndrome. Some people have idiopathic hyperaldosteronism, an overactivity in both glands with no known cause.

Overactive adrenal glands were once thought to be a relatively rare cause of high blood pressure. “But we’re now recognizing that primary aldosteronism may be just the tip of the iceberg,” says Dr. Adler. There may be a continuum leading up to the problem, including larger numbers of people with less obvious symptoms.

## Beyond blood pressure

A resurgence of interest in aldosterone over the past decade led to the discovery of receptors for aldosterone not just in the kidneys but in blood vessels, white blood cells, fat cells, and heart muscle cells (cardiomyocytes). And there is

growing evidence that excess aldosterone may affect the heart in ways other than via high blood pressure.

For example, high aldosterone levels may promote the thickening and scarring of heart muscle tissue, known as cardiac fibrosis. High aldosterone levels also may contribute to coronary microvascular disease, which is characterized by damage to the walls of the small arteries in the heart. This condition, which may be more prevalent in women and people with diabetes, causes symptoms of heart disease such as chest pain, shortness of breath, and fatigue. Recent research by Dr. Adler and colleagues found that spironolactone (Aldactone), an older blood pressure drug that blocks aldosterone, improves blood flow through the heart’s arteries in people with diabetes.

In addition, some statins may also lower aldosterone levels. This potential decrease in aldosterone (in addition to statins’ cholesterol-lowering effects) may help reduce heart disease, says Dr. Adler.

## Who should be tested?

One sign of hyperaldosteronism is low blood potassium levels, which may (but not always) cause symptoms such as weakness, heart rhythm abnormalities, and muscle cramps. People with high blood pressure and low potassium may need a blood test for aldosterone and for renin, a protein made by the kidneys.

An MRI or CT scan of the abdomen can reveal an abnormal growth on an adrenal gland. Blood samples taken from both the right and left adrenal veins can identify which adrenal is making too much aldosterone. Minimally invasive surgery to remove the affected gland often completely corrects both high blood pressure and low potassium.

Overactivity in both glands is usually treated with spironolactone or a related drug, eplerenone (Inspra). Both drugs block aldosterone’s action in the kidneys and elsewhere. ♥



## Lower-sodium swaps ... from p. 1

**5 Soups.** Some varieties of canned soup have as much as 940 mg of sodium per serving.

*Smart swaps:* Look for low-sodium and reduced-sodium varieties (see “Reading food labels”). Or make a large batch of homemade soup, adding just enough salt to enhance the taste, and freeze it in individual serving containers for convenience.

**6 Burritos and tacos.** Like pizza, these popular Mexican dishes combine a number of high-salt ingredients, such as white-flour tortillas (an eight-inch one might contain about 400 mg of sodium), cheese, and seasoned, salty beans and meat.

*Smart swaps:* Use whole-grain corn tortillas (just 5 mg of sodium each) and fill with grilled chicken or a mild white fish. Choose low-sodium canned beans; if they're not available, rinsing regular ones removes about one-third of the sodium, says Krivitsky. Sauté beans with onion, garlic, and spices for added flavor. Top burritos and tacos with chopped vegetables and salsa.

**7 Savory snacks.** This includes chips, popcorn, pretzels, snack mixes, and crackers.

*Smart swap:* Choose low- or reduced-sodium versions of these snack foods.

**8 Chicken.** This popular protein is often prepared in commercial kitchens, which means added salt. Rotisserie or

fried chicken from a grocery store or restaurant contains up to four times the sodium of plain chicken prepared at home.

*Smart swap:* Roasting an entire chicken takes a while, but you can bake or sauté plain chicken breasts seasoned with salt-free herb blends in far less time.

**9 Cheese.** The amount of sodium in cheese varies widely, even among the same varieties, so check the labels carefully. Feta and blue cheese are among the saltiest varieties, while goat cheese, ricotta, and Neufchâtel (which is similar to cream cheese) tend to be far lower in sodium.

*Smart swaps:* Try low-sodium cheddar cheese, or substitute small amounts of finely grated, savory hard cheeses such as Parmesan or Romano as a replacement for other cheeses.

**10 Eggs and omelets.** An egg contains only 62 mg of sodium, so this category again reflects other ingredients and cooking methods. For example, most fast-food egg breakfast sandwiches are made with cheese and ham on an English muffin, and omelets are also often full of cheese, bacon, and ham.

*Smart swaps:* Make your own poached or soft-cooked eggs. Many grocery stores now carry hard-boiled eggs, which are even more convenient. For a healthier breakfast choice, have a bowl of whole-grain, ready-to-eat cereal (make sure it contains less than 140 mg of sodium per serving). ♥

## Vegetable of the month



### Tomatoes

Vine-ripened, locally grown tomatoes are abundant in farmers' markets in August. Scientifically speaking, these vivid red (and sometimes yellow, brown, purple, or green) orbs are fruits. But the USDA, which issues the Dietary Guidelines for Americans, includes tomatoes in the red-orange vegetable group. Aim for about five to six cups per week of the foods in this group, which also includes carrots, squash, and sweet potatoes.

When good fresh tomatoes aren't available, canned tomatoes are a good substitute, especially in soups, stews, and pasta sauces. Eating tomatoes and tomato products may help lower cholesterol and improve blood vessel function, according to a 2017 article in *Atherosclerosis*.

**Nutritional info:** Tomatoes are rich in lycopene, an antioxidant that helps eliminate cell-damaging free radicals in the body. Crushing and cooking tomatoes (especially with olive oil) allows lycopene to be more easily absorbed into the body. Tomatoes are also a good source of potassium and vitamins C and A.

**Easy recipe: Bruschetta.** Combine several diced, fresh tomatoes in a bowl with a teaspoon of olive oil, a dash each of salt and black pepper, and a few leaves of chopped fresh basil. *Optional:* Add a splash of balsamic vinegar and some finely grated fresh garlic. Let sit for 10 minutes, then spoon onto slices of toasted or grilled whole-wheat French or Italian bread.



## Reading food labels: Checking for sodium

To assess a food's sodium level, check the back and sides as well as the front of the package or container. The label may offer a clue (see below for a translation of what the terms mean). But the actual amount is listed in the Nutrition Facts panel found on the product's back or side.

IF THE LABEL SAYS:	IT MEANS:
Sodium-free or salt-free	Less than 5 mg sodium per serving
Very low sodium	Less than 35 mg sodium per serving
Low sodium	Less than 140 mg sodium per serving
Light in sodium	At least 50% less sodium than original product
Reduced sodium	At least 25% less sodium than original product



## RESEARCH WE'RE WATCHING

### Heart-healthy diet linked to bigger brain volume

The same diet that doctors recommend for dodging heart disease also may help preserve brain tissue, a new study finds.

Researchers scrutinized diet surveys from more than 4,200 people with an average age of 66 and ranked the quality of their diets on a scale of 0 to 14. A score of 14 was healthiest and included lots of fruits and vegetables, whole grains, nuts, dairy, and fish, but limited sugar. The volunteers provided data on other factors that might affect brain size, such as blood

pressure, physical activity, and smoking. They also underwent brain scans to measure their brain size.

After adjusting for the factors unrelated to diet, researchers found that higher diet scores were linked to greater brain volumes. Brains of people with the healthiest diets were about 2 milliliters larger in volume than brains of people who ate fewer healthy foods. Brain volume usually shrinks as people age, and this shrinkage may be connected to problems with thinking and memory.

The findings, which were published online May 16 by the journal *Neurology*, cannot prove cause and effect, only an association. However, earlier research noted the same trend in people who followed a similar, heart-healthy Mediterranean diet.



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### Duration of atrial fibrillation and risk of stroke

Episodes of atrial fibrillation (afib)—a chaotic, irregular heart rhythm—can last for minutes, hours, days, or much longer. The condition encourages blood clots to form in the heart; the clots can then escape and lead to a stroke. New research suggests that even intermittent bouts of afib (which were previously considered to be low risk) may increase a person's risk of stroke.

The study included nearly 2,000 people who wore a small skin patch that continuously monitored their heart rates for 14 days. All of them had paroxysmal (intermittent) afib and were

not taking anti-clotting medications. Researchers then tracked the participants' incidence of stroke over the following five years. They found that afib that lasted more than 11% of the total monitoring time was associated with a threefold increase in stroke risk.

The findings suggest that the amount of time spent in afib (known as afib burden) is related to the risk of stroke. Measuring that burden may help doctors to assess better a person's need for stroke prevention strategies, say the authors. The study was published online May 16 by *JAMA Cardiology*.

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### Exercise: Better starting later than never

Exercising regularly throughout life is the best way to keep your heart healthy. But starting to exercise even in late middle age may lessen the risk of heart failure, according to a report in the May 15 issue of *Circulation*. Heart failure, a gradual decline in the heart's ability to pump enough blood to meet the body's needs, affects about 6.5 million people in the United States.

The study involved more than 11,000 people who were part of a long-running project begun in the late 1980s, the Atherosclerosis Risk in Communities Study. Every six years, participants got medical

testing and filled out questionnaires about their physical activity.

People who followed federal recommendations for physical activity (see [www.health.harvard.edu/pab](http://www.health.harvard.edu/pab)) for the first 12 years of the study had the lowest risk of heart failure—31% lower than people who didn't exercise at all. But people who increased their physical activity levels starting around age 60 over a period of just six years lowered their risk by 12%. ♥



## What's coming up:

- ▶ How strength training may help your heart
- ▶ Sex-specific risks for cardiovascular disease
- ▶ The latest advice on seafood and heart health
- ▶ What is lipoprotein(a)?