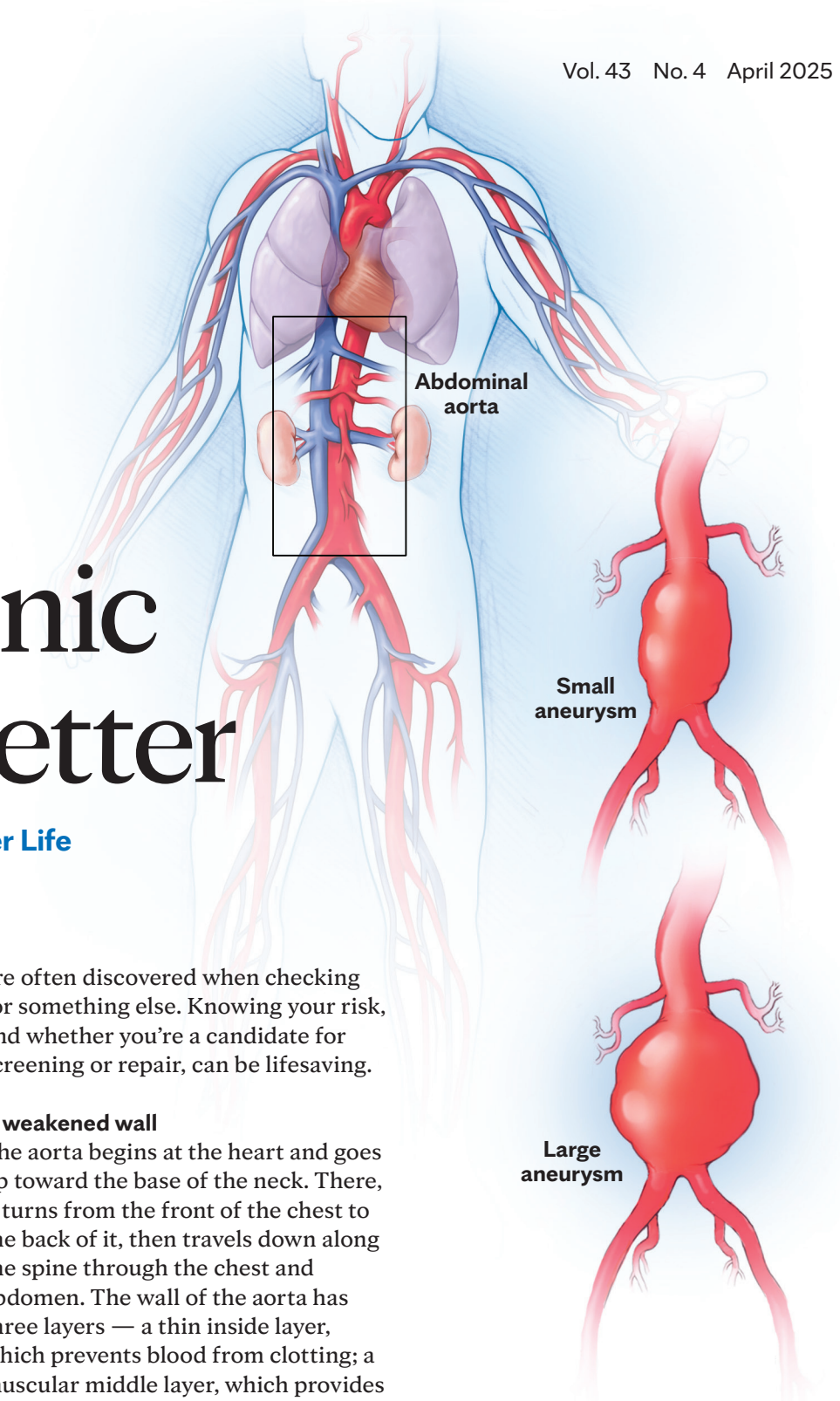
MAYO CLINIC

Vol. 43 No. 4 April 2025

Mayo Clinic Health Letter

Reliable Information for a Healthier Life



An abdominal aortic aneurysm develops when a lower part of the body's main artery (aorta) becomes weakened and bulges. This is usually due to a tear in the inner lining of the aorta. Treatment depends largely on the size of the bulge. A small or medium bulge likely will be monitored over time unless it's growing quickly. A large or quickly growing bulge usually requires immediate treatment.

Aortic aneurysm

Usually silent and sometimes serious

The aorta is large and, in some ways, in charge. It's the body's biggest artery, and it's central both in location and function. The aorta serves as the blood's highway as it journeys to feed and nourish organs, muscles and tissue throughout the body. Extending from the heart's left ventricle, this tubular structure measures a foot long and, at widest, is about twice the diameter of a garden hose.

While the body is at rest, up to 5 liters of freshly pumped blood travel through each minute. That amount can more than double when you're exercising.

Any leak from this large pipe can be trouble. When a disruption happens, it's commonly associated with a bulge or enlargement called an aortic aneurysm. Until a leak occurs, most aneurysms cause no symptoms and are often discovered when checking for something else. Knowing your risk, and whether you're a candidate for screening or repair, can be lifesaving.

A weakened wall

The aorta begins at the heart and goes up toward the base of the neck. There, it turns from the front of the chest to the back of it, then travels down along the spine through the chest and abdomen. The wall of the aorta has three layers — a thin inside layer, which prevents blood from clotting; a muscular middle layer, which provides the structure of the vessel; and a tough fibrous outside layer, which holds everything in place.

An aneurysm develops when one or more areas along the wall of the aorta weaken or get damaged. With time, the weakened areas continue to enlarge or bulge. Most aneurysms occur in the abdomen, called abdominal aortic aneurysms, but they may develop in the

chest as well, where they are known as thoracic aortic aneurysms.

Most aneurysms start small and grow slowly. They rarely cause symptoms and are often discovered when an X-ray, an ultrasound or a computerized tomography (CT) scan of the chest or abdomen is done for another reason.

All aortic aneurysms are at risk of rupture, which allows blood to leak outside of the aorta and into the surrounding areas of the body. A ruptured aneurysm requires emergency care. It leads to death up to 80% of the time even with emergency treatment. Annually, up to 200,000 people die worldwide due to ruptured aneurysm.

The size of the bulge is the strongest predictor of the risk of rupture. For that reason, small aneurysms — as long as they're not growing quickly — are managed with a watch-and-wait approach. This means using imaging tests such as ultrasound or CT scans at regular intervals to monitor the aneurysm's size and rate of growth. Small aneurysms may only require testing every 2 to 3 years, but yearly or twice-a-year monitoring may be recommended for larger ones. The largest aneurysms require immediate care to reduce the risk of rupture.

Options for repair

Surgery is generally recommended for an aortic aneurysm once it reaches a large size. What exactly "large" entails can vary depending on other risk factors and your sex. Generally, surgery will be likely for men with abdominal aortic aneurysms of 5.5 centimeters (cm) or larger or for women with aneurysms that are 5 cm or larger.

Surgery also is advised for thoracic aortic aneurysms that are 6 cm or larger. However, if you have a genetic risk factor, including a rare disease called Marfan syndrome, surgical repair may be recommended for a smaller aortic aneurysm.

Surgery also may be recommended if the aneurysm appears to be growing quickly — if it expands by 0.5 cm over the course of six months or by more than 1 cm in a year. An aortic aneurysm that causes symptoms such as abdominal pain or chest pain also may warrant treatment.

An aortic aneurysm may be repaired in one of two ways — open surgery or endovascular exclusion. In open surgery, the damaged section of the aorta is replaced with a synthetic tube, called a graft.

Endovascular surgery doesn't involve opening the chest or the abdomen. Instead, the surgeon advances a synthetic graft through a thin tube (catheter), which is inserted through an artery in the leg. Under X-ray guidance, the graft is placed in the aorta and allowed to expand in the appropriate location. It creates a new lining inside the diseased aorta that lets the blood flow around the aneurysm. Endovascular surgery carries less risk than does open surgery, and recovery time is shorter. One downside is that endovascular repair requires lifelong follow-up with imaging tests to ensure that

SCREENING RECOMMENDATIONS

Screening for abdominal aortic aneurysms is important for people with significant risk factors. This includes those with a family history of aneurysm and those with related vascular conditions, such as peripheral arterial disease (PAD) and widespread hardening of the arteries (diffuse atherosclerosis).

For people without symptoms or a family history, there's not total agreement about who should be screened and at what age. Different medical and governmental bodies have slightly different recommendations.

There's one area of broad agreement: Men ages 65 to 75 who've ever smoked should have a one-time test for abdominal aortic aneurysm using abdominal ultrasound. In that same age group, nonsmoking men may be offered screening based on risk factors such as family history. The benefits of screening women ages 65 to 75 with a history of smoking or a first-degree relative (parent or sibling) who's had an abdominal aortic aneurysm are less clear.

Screening is advised for all adults over 75 with a history of smoking or a first-degree relative with an aneurysm who are in otherwise good health and have not yet been screened. Ask your healthcare team whether screening is appropriate for you given your health history and family history. Medicare often, but not always, covers screening.

Mayo Clinic Health Letter

Senior Editors
Joey Keillor
Jennifer Welch

Writers
Daniel Simmons
Kenna Simmons

Editor in Chief, Mayo Clinic Press
Nina Wiener

Administrative Assistant
Terri Zanto Strausbauch

Medical Editor
Daniel Roberts, M.D.

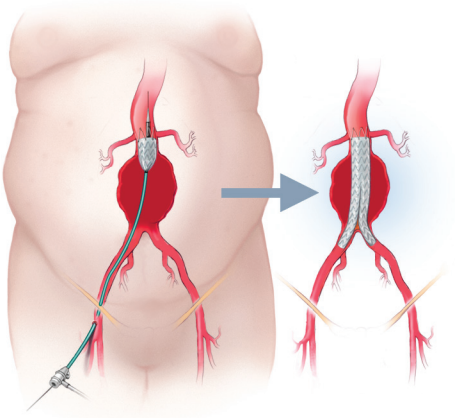
Associate Medical Editor
Amindra Arora, M.B., B.Chir.

Medical Illustration
Catherine Delphia, M. Alice McKinney, Caitlin Vander Wert

Copy Editing
Miranda Attlesey, Hoyt Finnamore, Julie Maas, Nancy Wright

Mayo Clinic Health Letter (ISSN 0741-6245) is published monthly by Mayo Clinic Press. Subscription price is $32 a year, which includes a cumulative index published in January.

Periodicals postage paid at Rochester, Minn., and at additional mailing offices. POSTMASTER: Send address changes to *Mayo Clinic Health Letter,* Subscription Services, P.O. Box 9302, Big Sandy, TX 75755-9302.



With endovascular surgery, your surgeon inserts a catheter with a synthetic graft through an artery in your leg and threads it up into the aortic aneurysm.

the graft is functioning properly. An aneurysm repaired this way also must have specific characteristics such as a well-functioning aorta above and below the diseased portion. For this reason, it isn't an option for every aneurysm that needs repair.

Researchers continue to explore drug-based treatment options that may one day slow or even reverse small aneurysm growth and eliminate the need for repair procedures.

Smoking, genetics are risk factors

Aortic aneurysms are more likely in men and in all adults over age 60. A family history also puts you at increased risk. Genetic connective tissue disorders such as Marfan syndrome, Ehlers-Danlos syndrome and Loeys-Dietz syndrome increase your risk of aneurysm. Some autoimmune conditions, such as giant cell arteritis, also can cause aneurysm.

However, other health risks can be managed. Doing so may slow the growth of an existing aneurysm and reduce the chance of a rupture. These risk factors include:

- *High blood pressure* — The increased force on the artery walls caused by high blood pressure (hypertension) may weaken and damage them over time. Medications are usually prescribed to manage hypertension.
- *Smoking* — Smoking weakens and damages the linings of the arteries. People with a history of smoking are 3 to 5 times more likely to develop an aortic aneurysm.
- *High cholesterol and hardening of the arteries* — A buildup of plaque and hardening of the arteries, known as atherosclerosis, impact the strength of the aorta's walls. People with atherosclerosis are likely candidates for cholesterol-lowering drugs that help fight plaque and improve blood flow. Moderate exercise typically is encouraged too.

If you have an aortic aneurysm, your healthcare team may advise you to manage any risk factors you have. If you smoke, talk with your team about strategies to help you quit. Lifestyle changes — such as a healthier diet and exercise — and medications to help reduce your blood pressure and cholesterol also may be suggested.

Be aware of warning signs

Typically, a rupture causes a sudden onset of severe chest, back or abdominal pain, often radiating into the groin. The sensation may feel like ripping or tearing. Other warning signs may include fainting, difficulty breathing, sudden weakness on one side or clammy skin.

Seek emergency care immediately if you notice any of those symptoms. Emergency aortic repair is the only way to survive an aortic rupture. The sooner the repair is done, the better the odds of survival. ■

HEALTH TIPS

FALL-FIGHTING STRATEGIES YOU MIGHT OVERLOOK

Many falls at home are preventable. You can remove clutter, add grab bars in the shower, keep items within reach and use brighter lighting. But there may be other factors contributing to fall risk that you haven't considered. Take these actions to further prevent falls:

- *Focus on your eyes* — Get your eyes checked at least every year. Eye diseases, such as glaucoma and macular degeneration, raise the risk of both falls and fractures. The limited vision caused by cataracts also increases your risk of falling and breaking a bone, and studies show that cataract surgery reduces fall risk by 34%. If you wear bifocals and spend a lot of time outdoors, the safest choice when outside may be single-lens glasses.
- *Do a sound check* — Tell your healthcare team if you're having trouble hearing. Hearing loss more than doubles your risk of falls. The exact mechanism isn't known, but a brain that's fatigued from working harder to hear may be linked to balance and posture issues. Research shows that wearing hearing aids each day significantly cuts your fall risk.
- *Love your heart* — Talk with your care team about ways to maintain your heart health. Cardiovascular disease causes fall risk to spike by 40% to 60% due to medicine use, low blood pressure, irregular heartbeat, fainting (syncope) or reduced blood flow.
- *Restore balance and strength* — You're less likely to fall if you have strong leg muscles. Work with a physical therapist or trainer on an exercise plan that includes strength and balance exercises. Or consider tai chi, a gentle exercise that improves balance and strength and reduces fall risk by up to 50%.
- *Check your medicines* — Ask your care team or a pharmacist for a medicine review. Some medicines can make you dizzy, confused or dehydrated, all of which could contribute to a fall. Common culprits include medicines for high blood pressure, anxiety, diabetes, depression, pain and sleep.
- *Don't forget your feet* — Talk with your healthcare team about foot care, especially if you have diabetes. Pick shoes with safety in mind. Wear sturdy, flat shoes with nonskid soles even when inside your home. Replace your shoes regularly. ■

Chronic itching

More than an annoyance

Everyone gets an occasional itch. But sometimes itching can last for days or weeks. Severe or persistent itching can become annoying, distracting and even torturous. And it can lead to other, serious health concerns, including insomnia, anxiety and depression — all of which interfere with your health and quality of life.

It's fine to scratch an itch every now and then. But ongoing scratching can intensify the itch, a process known as the itch-scratch cycle. Constant scratching over the same area for a prolonged time also may cause the skin to become thick and leathery, a condition known as lichen simplex chronicus or neurodermatitis. This can make the itch more challenging to treat.

Rash-related causes

Chronic itching could be triggered by health conditions or by your environment. If you have an itch that persists for a few weeks or longer, see your healthcare team to determine the cause and decide on a treatment.

For a diagnosis, a member of your care team checks the appearance of your skin. A rash may include redness or other skin color changes, bumps, scaling, blisters, or hives. Possible causes of itching with a rash include:

- *Dry skin* — The most common cause of itching in older adults is dry skin. Dry skin often has an ashy appearance. Small white flakes or scales also are sometimes visible. The condition can be worsened by frequent bathing — especially with hot water and excessive soap — and dry air, especially in the winter.
- *Skin diseases* — Itching may be caused by psoriasis, various forms of dermatitis or skin inflammation, hives, skin infections, or skin cancer.
- *Infection-related conditions* — Fungal infections may occur, often in moist or warm areas such as in body folds or on the feet. Shingles, chickenpox, scabies or lice also can cause itching.
- *Allergic reactions and irritation* — Skin may become inflamed and irritated after contact with things such as poison ivy, cosmetics, metals, wool, perfumes and cleaning products. This condition is known as contact dermatitis.

When there's not a rash

It's possible for itch to occur without a rash. It can affect many or all areas of the body at once. This form of chronic itching is more likely to be caused by:

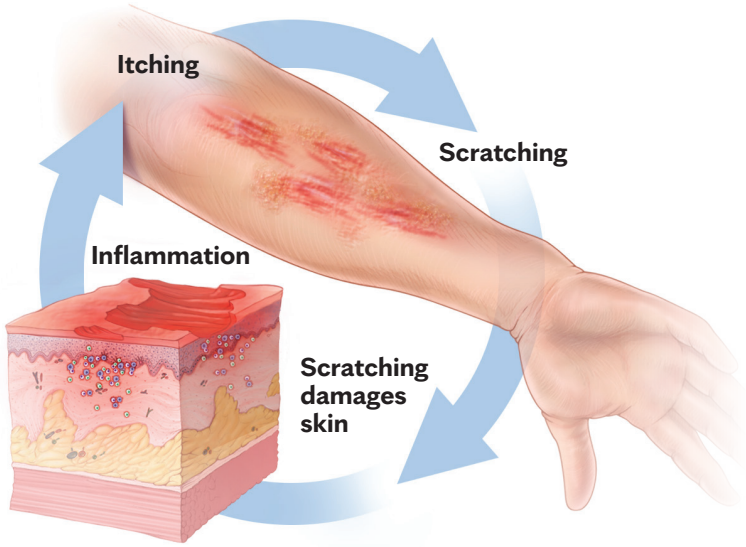
- *Underlying disease* — This can include liver or kidney disease, iron deficiency anemia, thyroid conditions, cancers such as leukemias or lymphomas, and autoimmune diseases such as scleroderma.
- *Side effects of drugs* — Certain medications, such as opioids for pain, may trigger chronic itching.
- *Nerve issues* — A pinched, damaged or irritated nerve may cause itching, in a widespread or focused area. It can develop after a shingles episode or a stroke, or with nerve damage due to diabetes.

Cold packs, creams can boost comfort

Regardless of underlying causes, dry skin often is a factor in chronic itching. Gentle skin care and moisturizers often are beneficial. Your care team may recommend additional steps for faster relief. For example, a nonprescription corticosteroid cream such as hydrocortisone may calm inflamed skin. A cold pack or lotions containing menthol, camphor or calamine may provide cooling relief. Other effective anti-itch ingredients include pramoxine and capsaicin. With capsaicin, it's best to try a small amount at first, since it may initially cause a burning or stinging sensation.

Other potential treatments include:

- *Prescription creams or ointments* — Higher potency options may be recommended to manage itch and other symptoms caused by conditions such as dermatitis. Products include corticosteroid creams and ointments such as triamcinolone or fluocinonide and calcineurin inhibitors such as tacrolimus or pimecrolimus.



TIPS FOR DRY SKIN SELF-CARE:

- *Bathe short and warm* — Hot water can deplete natural oils in your skin. Take baths or showers at about 90 degrees Fahrenheit. Also limit bathing time to less than 10 minutes.
- *Cleanse gently* — Consider limiting soap use to the face, underarms, genitals, hands and feet. Wash gently and use mild, superfatted or glycerin soaps or dry skin cleansers.
- *Dry gently* — Brush off excess water with your hands. Pat or blot your skin with a towel, leaving it moist.
- *Moisturize* — Before your skin dries, apply a cream or ointment to trap moisture. A product with petrolatum as one of the top ingredients is likely to be best. Reapply often.
- *Use a humidifier* — This is particularly helpful during the winter months in cold climates.

- *Wet dressings* — This measure can enhance the effectiveness of topical corticosteroids. The process involves applying the corticosteroid to the affected areas and then covering the areas with damp dressings to help your skin absorb the medicine while also cooling and hydrating the skin.
- *Antihistamines* — An allergy medicine can help with itching. This type of pill might be especially beneficial before bedtime if your itchy skin disrupts your sleep. However, beware of drowsiness that can happen with some antihistamines.
- *Drugs to act on the nervous system* — Topical drugs that act on nerves may be recommended when the itching appears to be caused by a nerve dysfunction. Oral drugs that act on the nervous system — such as antidepressants and antiseizure drugs — also may be effective.
- *Phototherapy* — This therapy involves repeatedly exposing your skin to specific wavelengths of ultraviolet light. These treatments are useful for conditions such as psoriasis and eczema (atopic dermatitis). They also may be effective for some types of itching where there is no visible rash.
- *Emotional support* — Techniques such as relaxation and habit reversal training may be used to cope with chronic itching. Cognitive behavioral therapy (CBT) also can help break the itch-scratch cycle.

Remember that your itch, as unpleasant as it may be, is rarely untreatable. Working closely with your care team, you typically can find solutions that end the itch and let you get back to living well. ■

NEWS AND OUR VIEWS

LEG STRENGTH TO POWER ARTHRITIS PREVENTION

Regular exercise improves both mental and physical health. Exercise is one area of health where there's near-universal agreement among experts: Do it. But some debate exists when it comes to osteoarthritis — the most common type of arthritis — which occurs when joints such as the knees gradually wear down with use and age. Should people who have or are at risk of osteoarthritis routinely exercise? If so, how much? And what exercises are safe?

A large new study addressed some of these questions, finding that leg strength plays a major role in reducing the risk of osteoarthritis and its associated symptoms, including knee pain. Researchers in the Netherlands looked at a group of about 5,000 older adults who did regular exercise, including a combination of weight-bearing exercise — walking or running — and non-weight-bearing exercise such as swimming or biking.

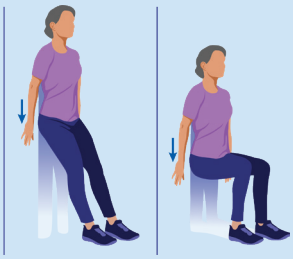
Over a six-year period, 8.4% of participants were diagnosed with osteoarthritis. People who had medium or high muscle mass in their legs were at lower risk of developing osteoarthritis, even if they engaged in weight-bearing exercises. Those with the lowest muscle mass in their legs had the highest risk of osteoarthritis, particularly if they engaged in weight-bearing exercises.

The study builds on earlier research that suggests a link between regular exercise and osteoarthritis. What's somewhat new is the implication that leg strength, shown to correlate with thigh mass, plays a central role in affecting osteoarthritis risk in people who participate in weight-bearing exercises.

It's believed that leg strength helps stabilize and protect joints. Further, muscle flexibility helps you achieve full range of motion. Regular exercise has the added benefits of promoting a healthy weight and improving flow of blood and oxygen to your joints and tissues. Being overweight increases risk of osteoarthritis. ■

EXERCISES TO STRENGTHEN YOUR LEGS

Chair stands — Sit on the edge of a chair or sofa with your feet facing forward and knees bent at about a 90-degree angle. Slowly rise to a standing position. Then slowly sit back down. Try to do these actions without using your arms for assistance. Repeat 10 to 20 times.



Wall sits — Stand with your back against a wall. Slowly lower yourself, bending your knees in front, with the goal of getting to a 90-degree angle. If you don't feel strong enough, lower your body until it feels challenging. Keep your back straight and against the wall. Hold the pose for 10 to 30 seconds. Repeat after a short break.

Step-ups — Stand on a staircase, holding on to a railing if needed. Step up a stair with one leg. Shift your weight to that leg, and raise your other leg to meet it. Step down again so both feet are back on the lower step. Repeat 10 to 15 times leading with one leg and then the other.

Cancer myths vs. facts

Fish out reality from a sea of untruths

In previous generations, a cancer diagnosis may have seemed like a death sentence. But long-term survival rates across all types of cancer have significantly improved, from about 49% in the 1970s to close to 70% today. Giant leaps have been made in how medical professionals understand cancer, a term used to describe a group of more than 200 diseases that share certain common features. This knowledge has resulted in major improvements in screening, early detection and treatment.

Because of these breakthroughs, people diagnosed with most types of cancer have much better odds of living longer than in previous generations. People with cancer also are better able to remain healthy enough to enjoy life during and after treatment. However, that hopeful picture is still accompanied by a flood of myths, misinformation and too-good-to-be-true products, affecting people's understanding. Below, learn about common myths — and get the facts.

MYTH

Using a smartphone increases the risk of brain cancer and other cancers.

Fact: There's no evidence to support this claim. While cellphones do emit radiation, the frequency and energy of that radiation is comparatively very low and not at a level that can affect human DNA. Researchers have noted that in this era when seemingly everyone has a smartphone, the cancers predicted to be associated with them haven't increased. If you remain concerned about radiation, consider using headphones, ear pods and other devices that allow you to use your phone without pressing it against your head.

MYTH

Ingredients in antiperspirants and deodorants can cause breast cancer.

Fact: Some reports have suggested that these products contain harmful substances such as aluminum compounds and parabens that can be absorbed through the skin or enter the body through nicks caused by shaving. But the evidence to date suggests that these products don't cause cancer.

MYTH

Cancers of the colon and rectum mostly are a concern for older adults.

Fact: Colorectal cancer represents the second-highest cause of death among all cancer types in the U.S. Although the risk of colorectal cancer is higher as people age, the rate of new colorectal cancer cases is increasing in people under 50. In fact, the rates of colorectal cancer in people under 50 have doubled since 1990. In light of this, it's now recommended that colorectal cancer screening begin at age 45 for people at average risk.

In people over 65, the diagnosis rates have been decreasing. This is possibly because of colorectal cancer screening starting earlier, which may lead to higher rates of diagnosis for younger people.

MYTH

Microwaving food in plastic containers and wraps releases cancer-causing substances.

Fact: There's no clear evidence that you should avoid microwaving plastic containers and wraps labeled as microwave safe. However, it is important to avoid microwaving plastic containers that were never intended for the microwave, such as margarine tubs, takeout containers or whipped topping bowls. Evidence suggests that plastic containers not intended for use in the microwave could melt and potentially leach chemicals into your food.

MYTH

Cancer is contagious, and it's best to stay away from someone who has it.

Fact: You don't need to avoid someone who has cancer. You can't catch it. It's OK to touch and spend time with someone who has cancer. Your support may never be more valuable.

Though cancer itself isn't contagious, some contagious viruses do lead to certain cancers. Examples include human papillomavirus (HPV) leading to cervical cancer and both hepatitis B and C leading to liver cancer. Talk to your healthcare team about vaccines and other ways to protect yourself.

MYTH

Smart people would never fall for bogus cancer products or services.

Fact: It's increasingly difficult to avoid exposure to convincing ads for unproven, untested products — and to at least consider them if not outright fall for them. That's because companies hawking these supposed cures are sophisticated in their marketing efforts. And they're targeting people with a frightening disease who may be vulnerable.

The Food and Drug Administration lists common sales pitches used to market sham cancer cures. Watch out for these phrases:

- "Treats all forms of cancer."
- "Miraculously kills cancer cells and tumors."
- "Shrinks malignant tumors."
- "Selectively kills cancer cells."
- "More effective than chemotherapy."
- "Attacks cancer cells, leaving healthy cells intact."

Also be wary of products that point to conspiracy theories, often characterized by language such as "what the government won't tell you about ..." When encountering products with any of these claims, do your best to avoid them and steer others away too. ■

Uterine fibroids

Options beyond hysterectomy

Up to 80% of women will have uterine fibroids — noncancerous growths of the uterus — over the course of their lives. Most commonly, fibroids cause symptoms among women in their 30s and 40s.

These growths, also called leiomyomas, often are small and don't cause any symptoms. But for some women, fibroids cause heavy or long-lasting menstrual bleeding and pelvic pain or pressure. Most often these discomforts get better with menopause.

Although uterine fibroids are one of the most common reasons women undergo hysterectomies, there are treatment options that don't involve removing the uterus. Depending on the size and location of your fibroids, as well as your personal preferences, these might be options for you.

Common symptoms

The size, location and number of fibroids can affect what symptoms you may have. Common symptoms include:

- Heavy vaginal bleeding or periods that can last longer than a week.
- Pelvic pain, pressure or heaviness.
- A need to urinate frequently.
- Constipation.
- Backache or leg pain.
- Pain during sex.

Larger fibroids are more likely to cause "bulk symptoms" such as pain and pressure and can press on other organs, including the bladder and colon.

Studies show that Black women are more likely to have fibroids and more-severe symptoms with fibroids compared with women in other racial or ethnic groups. Because of these stronger symptoms, Black women also are more likely to have fibroids treated surgically and at younger ages.

Many treatments for relief

If you have fibroids but your symptoms are mild and not bothersome, then you may decide to forgo treatment. But if fibroids are affecting your life, talk with your healthcare team about the many treatment options available.

Medications for fibroids

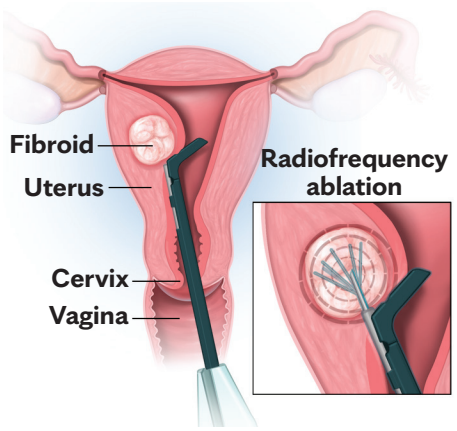
Medications can reduce symptoms. Some may shrink fibroids, although they don't get rid of them completely. Most medications work by affecting hormones. They include:

- *Low-dose birth control pills or a progestin-releasing intrauterine device (IUD)* — These options can reduce bleeding.
- *Tranexamic acid* — This nonhormonal medication treats heavy bleeding and is taken only during your menstrual period.
- *Gonadotropin-releasing hormone (GnRH) agonists* — These drugs stop menstruation and shrink fibroids. Because they cause side effects similar to those of menopause, including hot flashes and bone loss, the drugs are generally only prescribed for a short time to shrink fibroids before surgery or when close to menopause.
- *Gonadotropin-releasing hormone (GnRH) antagonists* — These newer tablets lighten menstrual bleeding in women with fibroids and relieve pain and some bulk symptoms. But they only mildly shrink fibroids. These drugs can be taken for years.

Procedures that don't involve surgery

Certain procedures may reduce heavy menstrual flow and shrink fibroids, helping relieve pain and pressure. These treatments tend to have faster recovery times and fewer complications compared with traditional surgeries such as hysterectomy. Procedure options include:

- *Uterine artery embolization* — Tiny particles are injected into arteries to block the supply of blood to the fibroids, which causes them to shrink.
- *Focused ultrasound surgery (FUS)* — This outpatient procedure uses an MRI machine to guide treatment. An ultrasound device then delivers high-intensity sound waves to destroy fibroids.



Radiofrequency ablation is a procedure that uses small needles to heat up a fibroid and destroy it.

- *Radiofrequency ablation* — This procedure uses small needles to heat up a fibroid and destroy it. It can be done through the vagina or through small incisions in the abdomen.

Surgery to remove fibroids

There are two main types of surgeries:

- *Myomectomy* — This type of surgery removes just the fibroids. Depending on the size, type and number of fibroids, it can be done through the vagina or through the abdomen — either through small incisions or through a larger, open incision.
- *Hysterectomy* — With this procedure, the entire uterus is removed. A hysterectomy is the only treatment that ensures fibroids won't grow back, but it also ends the ability to bear children. It's the most aggressive treatment for fibroids, and it typically has a longer recovery period. For younger women, it may increase the risk of heart disease, even if the ovaries are not removed. However, for women who are close to menopause and who have large fibroids or fibroids that have grown back, this treatment may the best option.

If fibroid symptoms are affecting you, you may have options beyond hysterectomy. Talk with your care team for an individualized approach that's right for you. ■

Second opinion

Q Last year, I had an abnormal mammogram that ended up being fine. The whole process was frightening. Do I need to go through this worry with mammograms every year?

A Regular mammogram screenings can find breast cancer early, when it's easier to cure. But these screenings do have potential downsides, including false positives. A false positive means that something is found on a mammogram, but after more testing, it turns out to not be cancer. False positives are fairly common — more than half of all women will have at least one false-positive result in 10 years of annual screening mammograms.

If a concern is found on a screening mammogram, radiologists typically recommend additional tests. These may include a diagnostic mammogram, which focuses on the area for a more precise view, or breast ultrasound. After this imaging, if the area of concern is still worrisome, a biopsy is ordered. If the biopsy indicates that cancer isn't present, the original screening result is considered a false positive.

Many women feel reassured when results ultimately indicate that there's no cancer. But false-positive results can cause anxiety, stress and frustration. A recent study revealed that the experience may stop some women from keeping to their routine screening mammogram schedules. Over a 12-year period, researchers found that only 61% of women chose to return to their screening schedules after having follow-up diagnostic mammograms. Similarly, only 67% resumed screening as recommended after having biopsies.

A false positive could be a marker of increased risk of future breast cancer. So it's important to follow the screening mammogram schedule you've planned with your healthcare team. A 29-year Swedish study showed that 11.3% of nearly 498,000 women with false-positive test results developed breast cancer over the next two decades. In comparison, the rate of cancer among women who didn't have previous false-positive results was 7.3%.

Feeling anxious about continuing your screening mammogram schedule is understandable. Share your concerns with your healthcare team. Your team can answer your questions and offer support. Before you decide not to have your next screening mammogram, remember that screening mammograms are proven to save lives. ■

Q My neighbor said that she credits her bulldog, Gonzo, for saving her life because Gonzo alerted her that she had cancer. I love dogs, but can they really sniff out cancer in people?

A While Gonzo sounds like a heroic pooch, it's unlikely that he alone can claim the full biscuit of credit for his owner's diagnosis. Dogs can't speak, conduct blood tests or imaging, or read lab reports. Those important pieces of a cancer diagnosis fall to the humans on a healthcare team.

However, researchers are studying whether Gonzo and his brethren may be able to play a role in detecting cancer and other medical conditions. This line of research is believed to have begun from a single case in 1989, when a woman's dog persistently barked and sniffed at a mole on her thigh. She saw her doctor and was diagnosed with malignant melanoma. This advanced form of skin cancer may be fatal if caught too late.

The theory is that cancer cells produce specific "odor signatures" that are usually too subtle for the human nose to detect. These odors can be present in breath, blood, urine and sweat. Enter the refined, highly sensitive sniffing snouts on dogs. Their sense of smell can be up to 10,000 times greater than that of humans.

A handful of small studies over the past two decades have shown promising results in dogs' abilities to detect cancers early based on scent. For example, a golden retriever underwent scent detection training for a year in Germany. The dog was then presented with hundreds of urine and breath samples from people with diagnosed lung cancer and those with no known cancer. Using either a urine or breath sample, the dog had very high detection rates of 87% or higher. When given both types of samples, the retriever correctly identified a staggering 98%. In a separate study, beagles trained in scent detection had similar high rates of accurately finding lung cancer.

While the findings are inconclusive, and much more study is needed, it may not be totally irrational to heed the Gonzos in your life if they seem to be pleading with you to look into a potential problem with your health. They may have sniffed something out. ■

Have a question or comment? We appreciate every letter sent to Second Opinion but cannot publish an answer to each question or respond to requests for consultation on individual medical conditions. Editorial comments can be directed to:

Senior Editor, *Mayo Clinic Health Letter*, 200 First St. SW, Rochester, MN 55905, or send email to *HealthLetter@service.MayoClinic.com*

For information about Mayo Clinic services, you may visit *www.mayoclinic.org* or telephone any of our three facilities:
- Rochester, Minnesota: 507-284-2511
- Jacksonville, Florida: 904-953-2000
- Scottsdale, Arizona: 480-301-8000

Purpose To help our subscribers achieve healthier lives by providing useful, reliable, easy-to-understand health information that's timely and of broad interest. *Mayo Clinic Health Letter* supplements the advice of your personal physician, whom you should consult for personal health problems.

Correspondence
Mayo Clinic Health Letter
Subscription Services
P.O. Box 9302
Big Sandy, TX 75755-9302
Phone: 800-333-9037 Fax: 903-636-9009
Email: *customerservice@mayopublications.com*

Customer Services Print subscriptions are $32 in the U.S. and $45 in Canada. Call Customer Services at 800-333-9037. A digital e-magazine is available for $10 with worldwide email delivery. Visit *MCPress.MayoClinic.org* for more information. Single copies are available within the U.S. and Canada for $4 plus shipping, handling and taxes. For bulk orders of 25 issues or more, email Corporate Sales at *SpecialSales@mayo.edu*

Printed in the USA
MC2019-0425 • 100425

COMING NEXT MONTH: Jaw pain | Achilles tendon problems | Hair loss | Special Report: A new future for stroke survivors