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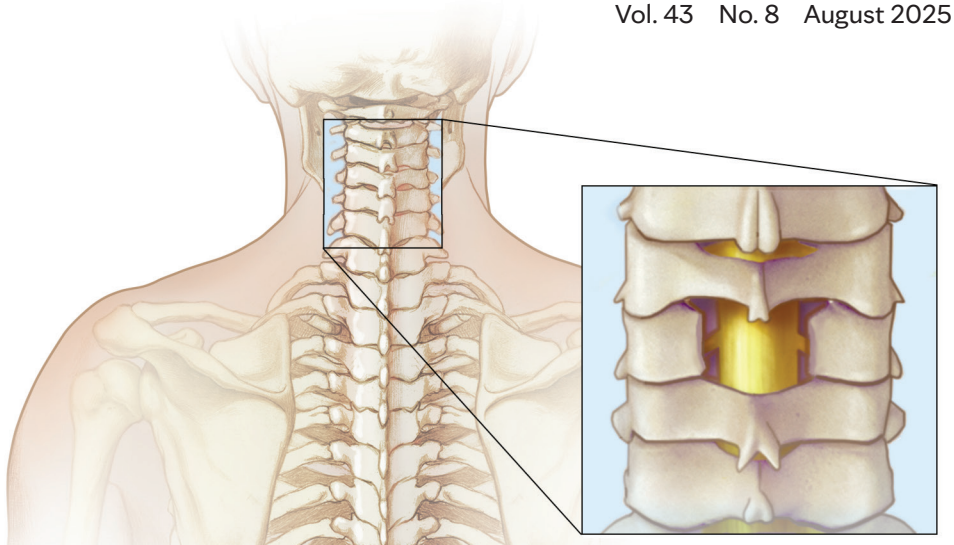
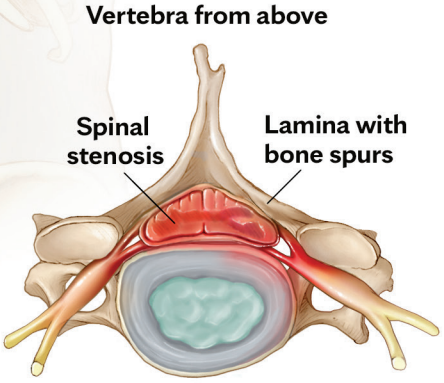
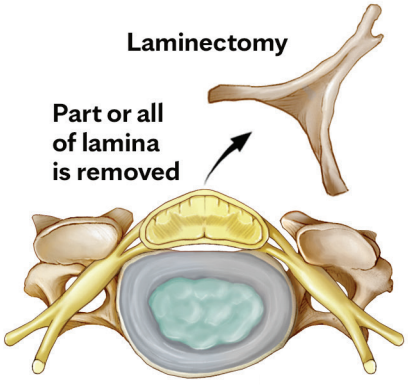


During a laminectomy, the back portion (lamina) of the vertebra is removed

Mayo Clinic Health Letter

Reliable Information for a Healthier Life





The most common procedure for spinal stenosis removes the back portion (lamina) of one or more vertebrae to create more space within the spine. This is called a laminectomy. Sometimes, vertebrae also may be fused to maintain the spine's strength. The purpose of surgery is to relieve pressure on the spinal cord or nerves.

Spinal stenosis

Discomfort that radiates

Paying for parking brings unexpected difficulty these days. When you fish in your pocket for spare change, you can't tell what's a quarter and what's a dime. Buttoning shirts also brings frustration, as your fingers don't work like they used to. These motor skill issues come with occasional feelings of numbness and tingling in your back and down your arms and legs.

All of these symptoms might be explained by spinal cord concerns related to a form of spinal stenosis. Cervical spinal stenosis occurs in the neck and affects about 5% of adults over 50 years old. It's a leading cause of spinal cord damage, also called myelopathy. A related condition, called lumbar spinal stenosis, is more common and occurs in the lower back.

Wherever it occurs, spinal stenosis most often results from wear and tear over time. In fact, by age 50, most people have at least some signs of age-related deterioration in their spines. Sometimes these changes can put pressure on the spinal cord and nerves.

For severe spinal stenosis, your healthcare team may recommend surgery. However, conservative, nonsurgical treatments typically are used first to help ease symptoms.

Deterioration in the body's scaffolding

Your spine is the centerpiece of your back. In addition to supporting the weight of your upper body, it protects your spinal cord and nerves, which carry signals that control your body's movements and convey its sensations.

The bones that make up your spine are called vertebrae. These bones are stacked on top of one another, creating a channel called the spinal canal. This canal surrounds your spinal cord.

INSIDE: Butter versus oil — the latest evidence | Crohn's disease | Lowering drug costs | Lung nodules | Toe joint repair

Other essential parts include muscles and ligaments that support and stabilize your spine, facet joints that help with movement, and disks that sit between the vertebrae to cushion the bones.

Different conditions can reduce the amount of space within the spine, leading to spinal stenosis. The most common are age-related:

- *Osteoarthritis* — With this form of arthritis, the cartilage that cushions the ends of bones in the joints wears away. When osteoarthritis occurs in the spine, the spaces between the vertebrae narrow, bone surfaces rub together, and facet joints and areas around the cartilage become inflamed and painful. This can lead to bony growths, called bone spurs, which can narrow the spinal canal.
- *Disk degeneration* — With age, the disks that act as cushions between your vertebrae can flatten and bulge. Eventually, the tough outer covering of the disk may develop tiny tears. This can cause the jellylike substance in the disk's center to protrude and press on your spinal cord and nerve roots.
- *Thickened ligaments* — The tough cords that help hold the bones of your spine together can become stiff and thick. This can decrease the space within the spinal canal and irritate spinal nerves.

Symptoms differ by location

The neck and lower back are the most common parts of the spine affected by spinal stenosis. Spinal stenosis in the neck can cause clumsiness and lack of fine movements, especially in the fingers. It can cause pain or stiffness in the neck or shoulder as well as numbness, weakness or tingling in a leg, foot, arm or hand. It also can lead to imbalance when walking. When severe, it may affect nerves to the bladder or bowel and cause incontinence.

Spinal stenosis in the lower spine, called lumbar spinal stenosis, is much more common, affecting up to 50% of people over age 50. There may or may not be any lower back pain, but you may feel pain or cramping in your legs, especially when you walk or stand for long periods of time. These sensations often are relieved by sitting down or walking slightly bent forward, such as with a shopping cart. Numbness or tingling in the legs or buttocks also may occur. Later on, weakness can develop in one or both legs. Some people may experience foot drop, a problem in which the foot slaps the ground while walking. Severe lumbar spinal stenosis also can cause changes in bowel and bladder function.

Tests, symptoms guide diagnosis

Symptoms of spinal stenosis may be noted when your healthcare team takes your medical history and conducts a physical exam. Other tests often are needed to confirm a diagnosis and rule out other conditions. These tests may include:

- *Spinal X-rays* — This type of imaging allows your care team to view bones and other bony structures in your body. X-rays can reveal bone spurs or other age-related changes in your vertebrae as well as other issues, such as fractures.
- *Magnetic resonance imaging (MRI)* — An MRI often is the imaging test of choice for diagnosing spinal stenosis. An MRI uses a powerful magnet and radio waves to produce cross-sectional images of your spine that show the soft tissues. This can help reveal specifically where you have damage to your disks and ligaments and show places of pressure on your spinal cord or nerves.
- *Computerized tomography (CT) myelogram* — CT combines X-ray images taken from many different angles to produce detailed, cross-sectional images of your body. With a CT myelogram, a CT scan takes place after a contrast dye is injected into your spinal column. This outlines your spinal cord and nerves and can show whether you have herniated disks, bone spurs or tumors.
- *Electromyography (EMG)* — This diagnostic procedure tests the health of muscles and the nerve cells that control them (motor neurons). EMG results can reveal changes in muscle or nerve function or problems with nerve-to-muscle signal transmission. EMG is used to check whether specific nerve roots are being compressed. It may show whether other conditions, such as peripheral neuropathy, are contributing to symptoms.

First treatment options

Nonsurgical treatment almost always is the first line of treatment for spinal stenosis, whether the stenosis is occurring in your neck or back. Your healthcare team likely will recommend one or more options, including:

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- *Exercise and physical therapy* — Exercises can be used to strengthen your abdominal and back muscles. Keeping active also helps maintain the flexibility and stability of your spine. Some physical therapy treatments, including heat and ice, may help ease pain and allow you to stay or become more active.
- *Medications* — Acetaminophen (Tylenol, others) or nonsteroidal anti-inflammatory drugs, such as ibuprofen (Advil, Motrin IB, others) or naproxen sodium (Aleve, others), can help relieve pain. Some studies have shown that certain antidepressants, such as amitriptyline or duloxetine, and antiseizure drugs, such as gabapentin (Neurontin) or pregabalin (Lyrica), also may reduce pain associated with spinal stenosis.

If conservative measures fail to ease pain that's severe enough to limit your daily living, your care team may recommend surgery. This is especially true if an MRI and your symptoms suggest that there's damage to the spinal cord. Surgery also is considered when complications develop. These include severe weakness or loss of bladder or bowel control.

The purpose of surgery is to relieve pressure on your spinal cord or nerves. The most common procedure, called laminectomy, removes the back portion (lamina) of one or more vertebrae to create more space within your spine. Sometimes, vertebrae also may be fused to maintain the spine's strength.

Most often, surgery helps reduce pain and improve function. However, if nerves were badly damaged before surgery, there may be remaining pain or numbness or sometimes no improvement. Surgery also comes with risks. The most common complication of spinal stenosis surgery is a tear in the membrane that covers the spinal cord. Infection and blood clots also can occur. The presence of other health issues can complicate surgery as well and affect whether you're a good candidate for a procedure. ■

NEWS AND OUR VIEWS

BUTTER VERSUS OIL — THE LATEST EVIDENCE

You've heard it before: For better health, reduce the amount of saturated fat in your diet. Try to eat more plant-based foods. Recently, a large, long-term study published in *JAMA Internal Medicine* added to the evidence behind that advice. Researchers looked at the eating habits of more than 220,000 people over 33 years to see how much butter they consumed as well as their intake of plant-based oils such as safflower, soybean, corn, canola and olive oils.

The study found that those who ate the most butter had a 15% higher risk of dying of any cause during the study compared with those who ate the least butter. Those who consumed the highest amounts of plant-based oils had a 16% lower risk of dying of any cause than those who consumed the lowest amounts of those oils. More specifically, higher intake of canola, soybean and olive oils offered a significantly reduced risk of death. This was not seen with corn or safflower oils.

Consuming higher amounts of plant-based oils also was linked to a lower risk of death from cancer and cardiovascular disease, while eating more butter was associated with a higher risk of dying of cancer.

There are a few caveats: The study didn't identify a specific cause-and-effect relationship between fat sources and risk of death, and it relied on participants' self-reported dietary intake, which is imprecise. But the researchers' overall findings — that replacing some of the butter in your diet with canola, soybean or olive oil may impart life-extending health benefits — are consistent with the current Dietary Guidelines for Americans. The guidelines recommend limiting saturated fat intake and replacing it with unsaturated fats.

Mayo Clinic experts say it's not necessary to avoid butter entirely to eat healthier. Instead, aim to reduce the amount of butter you consume. For example, if you usually saute foods in butter, try using a plant-based oil instead with just a little butter added to the pan. ■

TREAT MALE PARTNERS FOR BACTERIAL VAGINOSIS

Bacterial vaginosis (BV) is a common vaginal infection that affects roughly 1 in 3 women of reproductive age. It also can affect women after menopause. While BV isn't dangerous, it can be frustrating to manage. It's caused by an imbalance in the microorganisms naturally present in the vagina. When in balance, these organisms help keep the vagina healthy. But an overgrowth of certain types can disrupt the balance and cause symptoms such as thin, often discolored vaginal discharge, a vaginal odor, and vaginal itching. Treatment typically involves oral antibiotics, but symptoms often return after treatment.

New research now points to a potential solution: treating women's male partners as well. In a recent randomized clinical trial conducted in Australia, researchers investigated whether treating both a woman and her male partner could reduce the risk of BV recurrence. The study, published in *The New England Journal of Medicine*, included monogamous heterosexual couples in which the women had BV. All women received the standard oral antibiotic regimen. But in the intervention group, the male partners also took oral antibiotics and applied an antibiotic cream to the penis twice daily for one week.

The results were compelling: Only 35% of women whose partners were treated experienced a recurrence of BV within 12 weeks, compared with 63% of women whose partners received no treatment. The study was stopped early because the benefit of combined patient and partner treatment was so pronounced.

Mayo Clinic experts say that although the study was small, it suggests a new option for women with recurrent BV. If your symptoms keep returning, talk with your care team about whether treating your partner could help stop the cycle. ■

Crohn's disease

Medications and diet key to managing symptoms

Diarrhea, cramping and fatigue may seem like symptoms of a simple stomach bug. But if they don't go away — or if they come with issues such as night sweats, joint pain or mouth sores — they might point to a more serious underlying condition. For more than a million people in the U.S., that condition is Crohn's disease.

Crohn's disease is a type of inflammatory bowel disease (IBD). That means it causes long-lasting inflammation in the digestive tract — most often at the end of the small intestine and the beginning of the large intestine.

While the disease is long-lasting, its symptoms may not be constant. For many people, symptoms come and go, with periods of calm, called remission, in between. The severity and location of the disease can vary from person to person.

What happens when you have Crohn's

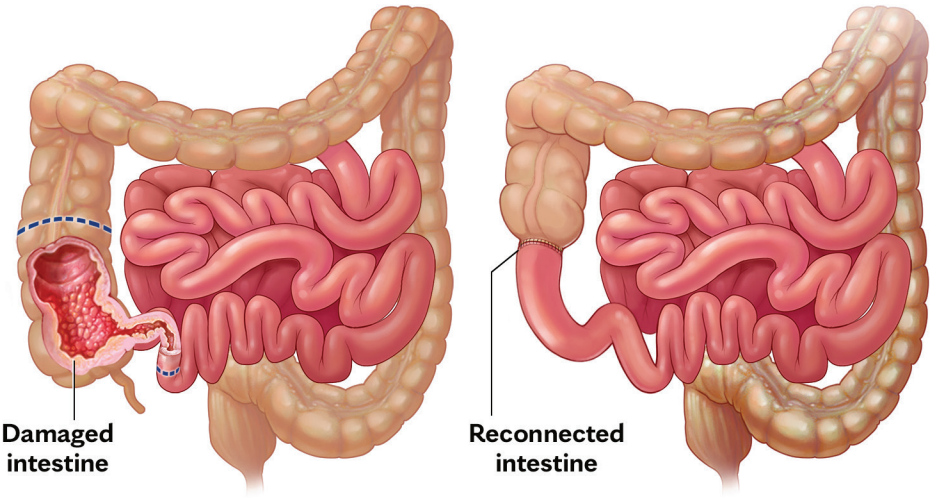
Symptoms of Crohn's disease differ depending on where the inflammation occurs and how severe it is. Common symptoms include:

- Diarrhea.
- Fever.
- Fatigue.
- Abdominal pain and cramping.
- Blood in the stool.
- Mouth sores.
- Reduced appetite and weight loss.
- Pain or drainage near or around the anus.

Crohn's also can cause complications outside the GI tract. These may include joint pain and arthritis, eye inflammation, and skin bumps or rashes. Liver or bile duct conditions, inflammation involving the blood vessels (vasculitis), kidney stones, and iron deficiency anemia also are possible.

In addition, Crohn's disease can lead to serious intestinal complications, due to scarring and narrowing of the intestines or the development of ulcers along the digestive tract. One such complication is bowel obstruction. Another is when ulcers extend through the intestinal wall and create connections that shouldn't be there, such as between the intestine and the skin or between the intestine and another organ. These are called fistulas.

Over time, Crohn's may contribute to osteoporosis, liver disease, eye conditions and blood clots. The disease and its treatments also may increase your risk of certain cancers, including colorectal cancer. That's why routine screenings and ongoing medical care are essential.



With resection, the damaged portion of the intestine — small intestine or large intestine — is removed and healthy sections are reconnected.

Who's at risk?

Crohn's disease can develop at any age, but it's most often diagnosed in young adulthood. Several factors increase the risk. These include having a family history of the disease and being of Eastern European (Ashkenazi) Jewish descent. Tobacco use is the most controllable risk factor. Smoking can increase your likelihood of developing the disease and worsen its course. Scientists believe that imbalances in the mix of good and bad bacteria in the digestive system — and an impaired immune system — also may play a role.

Diagnosing Crohn's can be challenging, as its symptoms often resemble those of other digestive conditions. Doctors typically use a combination of tools to confirm the diagnosis. These may include:

- A physical exam and discussion of your symptoms.
- Blood tests to detect anemia, inflammation or infection.
- Stool tests to check for blood, infection-causing organisms or calprotectin, a protein released by white blood cells when there is inflammation in the intestines.
- Imaging studies, such as CT scans or MRIs, to assess inflammation, narrowing of the bowel (strictures) or pockets of pus where there is infection (abscesses).
- Endoscopy, a procedure that uses a thin, flexible tube with a camera to look inside the digestive tract. A related option is capsule endoscopy, which involves swallowing a capsule containing a tiny camera. The camera transmits pictures from inside the digestive tract.

Medications and other treatments

The goal of drug therapy for Crohn's disease is to achieve and maintain remission. While medications can help manage your disease, none offers a cure. Medications for Crohn's disease include:

- *Corticosteroids* — Corticosteroids, including prednisone and budesonide,

are often used to manage flare-ups because they act quickly to reduce inflammation. Due to potential side effects such as bone loss, high blood pressure and high blood sugar, these medications are recommended only for short-term use.

- *Immunosuppressant medications* — Drugs such as methotrexate, azathioprine and mercaptopurine are used to keep the disease in remission after corticosteroids are stopped.
- *Biologics* — These medicines target specific immune proteins that drive inflammation. They are typically given by injection or IV infusion. Drugs that block tumor necrosis factor (TNF) are known as TNF inhibitors. These include infliximab (Remicade), adalimumab (Humira) and certolizumab pegol (Cimzia). Other biologics include natalizumab (Tysabri) and vedolizumab (Entyvio), which stop immune cells from reaching the gut lining; and ustekinumab (Stelara), risankizumab (Skyrizi), and mirikizumab (Omvoh), which target interleukins. Nearly identical versions of these drugs — known as biosimilars — may be more affordable.
- *Janus kinase (JAK) inhibitors* — These newer oral medications, known as small molecules, reduce inflammation by targeting parts of the immune system. They may be used when other options haven't worked. The U.S. Food and Drug Administration has approved upadacitinib (Rinvoq) for Crohn's disease.

Other medicines include antibiotics to help treat fistulas and abscesses; fiber supplements such as psyllium (Metamucil) or methylcellulose (Citrucel); loperamide (Imodium A-D) for diarrhea; and specific vitamins or supplements to help with nutrient absorption. For pain, acetaminophen (Tylenol, others) is probably a better choice over nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen or naproxen sodium. That's because NSAIDs may irritate your bowel and worsen symptoms.

Nutrition and diet

There is no special "Crohn's diet" that helps everyone. But many people identify specific foods that trigger symptoms. A registered dietitian can help you create a tailored plan to maintain good nutrition and avoid flares.

You may find that you benefit from:

- A low-fiber diet during flare-ups.
- A lactose-free diet if you can't tolerate dairy products.
- A diet low in spicy, greasy or highly processed foods.

Tube feeding of a liquid-only diet may be used to reduce inflammation. Called enteral nutrition, this approach may promote healing without the side effects of corticosteroids.

Surgery

If diet and medications don't control your symptoms — or complications arise — your healthcare team may suggest surgery. About half of people with Crohn's disease need surgery at some point, though it doesn't cure the condition.

Surgery typically involves removing the damaged part of the digestive tract and reconnecting the healthy sections. It also may be used to close fistulas or drain abscesses.

Mental health and support

Crohn's disease affects your emotional well-being as much as it affects your physical health. People with IBD are more likely to experience anxiety and depression. This is often due to the uncertainty of flare-ups, the demands of chronic illness, or body image concerns.

Support groups, therapy, mindfulness techniques and open communication with loved ones can help manage these emotional challenges.

Living with Crohn's disease

Although Crohn's is a lifelong condition, many people manage their disease effectively and lead full, active lives. Advances in treatment and a deeper understanding of the disease continue to improve outlook and quality of life. ■

HEALTH TIPS

LOWERING DRUG COSTS

The cost of prescription drugs is a common concern. Nearly 1 in 4 people age 65 and older report that they can't afford their medicines. But some research and some questions can help you pay less without putting your health at risk:

- *Go generic* — Ask your healthcare team to prescribe a generic drug. Generic drugs have the same active ingredients and work as well as brand-name drugs but cost less.
- *Research financial assistance* — Several charitable organizations, drug companies and pharmacies offer financial assistance. Visit www.rxassist.org to access a database of programs that offer free and low-cost medicine help.
- *Compare Medicare plans* — Compare prescription drug plans online with the Medicare Plan Finder or a State Health Insurance Assistance Program (SHIP). During open enrollment, you can switch your plan for the next year. Also, adults with limited income may be eligible for an additional Medicare Part D program called Extra Help.
- *Bulk up* — Ask your insurance provider or pharmacy if your plan allows you to fill a larger supply, such as three months instead of one month, to save on fewer copays. If you're starting a new prescription, your healthcare team may want to prescribe a smaller quantity and monitor how well you can tolerate the drug. After this initial period, you may be able to get a prescription for a larger quantity. Also ask if there's a higher strength pill that you can safely split.
- *Know your options* — Ask your prescription insurer for a list of covered (formulary) medications to share with your care team. You also can ask if your plan has preferred or in-network pharmacies, which may include mail-order pharmacies, for you to use to get the best copay. ■

Lung nodules

Common and likely not cancerous

You have a CT scan of your chest. A spot is found on your lung. It sounds alarming, but it turns out that spots on the lungs — called pulmonary nodules or lung nodules — are quite common. They're found in up to half of adults who get a chest CT scan, and they aren't usually an indication of cancer. One study estimated that when nodules are found on imaging tests taken for a purpose other than lung cancer screening, only 5% turn out to be cancerous.

Still, learning that you have something in your lung can be worrisome. Even when cancer has been ruled out, it's important to stick to a recommended follow-up schedule.

Is it a cause for concern?

Lung nodules are areas of increased density in your lungs that tend to have a round shape. They are sometimes described as spots or shadows that show up on an imaging test. Most nodules are simply scar tissue from a past lung infection. They don't usually cause any symptoms.

To determine whether your lung nodule is cause for concern, your care team considers factors such as:

- The presence of a single nodule versus multiple nodules.
- The size of the nodule.
- How it looks on the scan — for example, its shape and density.
- Your age.
- Your smoking history, including how many packs a day you currently smoke or smoked in the past and for how long.
- Whether you have a family history of lung cancer.
- Whether you have handled asbestos in the past.

If you've had past chest X-rays or CT scans, your healthcare team may want to look at those to see if the nodule was present and, if so, whether it has grown.

Avoiding unnecessary testing

Considering these factors, your care team determines what follow-up, if any, to recommend. If your nodule is smaller than 6 millimeters (mm) — just under a quarter of an inch — and you have never smoked, you likely won't need any additional testing. That's because the risk of such nodules being cancerous is so low.

However, additional steps may be needed:

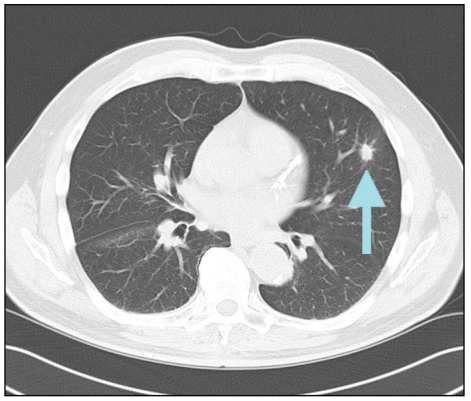
- *If you smoke or have a history of smoking* — In this case, your care team may recommend that you have a follow-up CT in one year.
- *If your nodule is larger than 6mm, or if you are at higher risk of lung cancer* — Your care team may recommend that you have a repeat scan in several months to a year to see if the nodule has changed in size.

In some situations, your care team also might recommend a positron emission tomography (PET)-CT scan to get additional information about the lung nodule.

If the nodule doesn't grow over the course of two years, your team may determine that you don't need any further testing. But if the nodule becomes larger, biopsy or surgical removal may be recommended.

In a biopsy, a piece of the nodule is removed and sent to a lab for testing to see if it's cancerous.

Waiting months between scans can be stressful. It may be helpful to know that most lung cancers are slow growing. The waiting process — a medical approach known as watchful waiting or active surveillance — aims to avoid unnecessary biopsies or surgery for nodules that are ultimately noncancerous. If your nodule does turn out to be cancerous, a small nodular cancer is likely to be at an early stage, when treatments are more likely to be successful. ■



Lung nodules (see arrow) are sometimes described as spots or shadows that show up on an imaging test.

USED TO SMOKE? LUNG CANCER SCREENING MAY BE RECOMMENDED

A lung cancer diagnosis is not the dire news it once was. In its 2024 "State of Lung Cancer" report, the American Lung Association noted that the survival rate has notably increased over the previous five years. While the overall five-year survival rate for lung cancer is still relatively low at 28.4%, that figure increases to nearly 65% if the lung cancer is diagnosed before it has spread to another part of the body.

Medical professionals have more and better options for treating lung cancer today. They also have better options for diagnosing lung cancer. Researchers continue to develop new treatments and advanced diagnostic tools.

A key contributor to early detection, though, remains screening for people who are at high risk. The American Cancer Society recommends that you have a low-dose CT scan each year if you are between 50 and 80 years old and smoke or used to smoke, with a 20 pack-year smoking history. For example, you smoked a pack of cigarettes a day for 20 years, or two packs a day for 10 years. Getting screened regularly could be the key to finding lung cancer at an early stage, when the chances are better for successful treatment.

Toe joint repair

Surgical options

The big toe carries a lot of weight and responsibility. As you walk, the small joint at the big toe, called the first metatarsophalangeal joint, bears forces that are many times your body weight.

This joint, which connects the bones of the big toe to the rest of the foot, can stiffen over time as the cartilage breaks down. Bony growths called spurs or osteophytes can form. This growth is often called a dorsal bunion. Eventually, the cartilage can wear away entirely, the ends of the two bones begin to rub and the joint loses its ability to move. This severe form of arthritis is named hallux rigidus, Latin for "stiff big toe."

For relief, a range of treatment options can help. Sorting out what's right depends on the severity of the condition and many other factors. If surgery is needed, it's important to understand the two main options, both of which offer benefits and some risks.

Trouble afoot

Hallux rigidus is fairly common. It's the cause of roughly 1 in 4 foot complaints in people ages 50 and older. The condition can be caused simply by a past injury or other conditions that affect the dynamics of the foot, including bunions and flatfeet. Women are twice as likely as men to develop hallux rigidus. Genetics can play a role too. It's estimated that 2 of 3 people have a family member with the condition.

Along with an inability to bend the toe, symptoms can include joint pain and swelling while walking. Pressure on the dorsal bunion from shoes also can cause pain. Your healthcare team can do tests such as X-rays to determine whether you have this condition. It is graded on severity, based largely on range of motion and pain.

Simple changes can help

Treatment might begin by changing your shoes. This may involve working with a foot doctor, called a podiatrist. A supportive shoe with a sturdy outer sole can reduce pressure on the inflexible joint. A carbon-fiber plate fitted inside the shoe can help as well. Rocker-bottom shoes have soles with the profile of a rocking chair runner, allowing the foot to roll more easily with each step. Shoes that have a deep toe box with no seams reduce friction and pressure on prominent or swollen joints.

Nonprescription medications, including nonsteroidal anti-inflammatory drugs such as ibuprofen, can reduce pain. A topical diclofenac sodium gel (Voltaren, others) also is available without a prescription.

If discomfort becomes severe, your healthcare team might suggest an injection of a corticosteroid, such as cortisone. This mimics a naturally occurring hormone in your body that reduces inflammation. An injection can bring relief for several weeks to months. However, cortisone injections can cause damage to cartilage so you shouldn't get more than three or four a year.

Repair options

If conservative treatment approaches don't provide adequate pain relief, discuss surgical treatment options with your healthcare team. A procedure called cheilectomy removes bone spurs that block toe movement. This is typically done when the condition is less severe. Cheilectomy can make the joint more flexible and reduce pain.

When hallux rigidus is causing pain that interferes with daily activities, more-involved surgery generally is considered. These are the main approaches:

- *Fusion* — Also called arthrodesis, this procedure is usually the first option considered for treating severe hallux rigidus. It is done either under general or local anesthesia. Your surgeon removes the joint space cartilage, then permanently joins the bones together with screws or a combination of plates and screws. Each of the methods has a success rate over 90% after a year. The procedure usually restores alignment in the big toe, providing more strength at push-off on each stride. A full return to activities is generally possible, although people who have this fusion surgery will no longer be able to participate in high-impact activities, such as sports that include jumping. Most people also won't be able to wear shoes with a raised heel of more than 1 inch. This is because the toe no longer bends. Compared with joint replacement (see below), fusion generally offers better outcomes for pain relief and foot function.
- *Replacement* — Toe joint replacement surgery, also known as arthroplasty, has been done since about the 1980s, although significant improvements in the materials used have occurred in the last decade. The surgeon removes the existing, damaged joint and replaces it with a small prosthesis made of metal, plastic or ceramic. One advantage of this procedure is that it tends to allow greater movement in the toes, which allows a wider choice of footwear. This includes shoes with higher heels worn occasionally or regularly. However, this procedure is not commonly done due to relatively high complication rates. The main issue is that the prosthesis loosens and no longer provides the intended support, requiring another surgery to fix. This is called a revision surgery. Some medical centers, including Mayo Clinic, perform a "salvage surgery," typically using the fusion technique, in people whose toe joint replacement surgeries resulted in complications. ■

Fused toe joint

Second opinion

Q My friends call me a weekend warrior because I don't exercise much during the week but do a lot on weekends. Is that enough exercise for health benefits?

A If full weekdays leave you with little time for exercise, you're not alone. Luckily, packing your weekly exercise into one or two days can still provide big rewards. Science shows that weekend workouts can be just as powerful and healthy as daily exercise.

That is, they're as effective if you get the recommended 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity exercise each week. Studies suggest that the total minutes you move during a week might matter more than how often you exercise.

Whether you take part in a sport, an exercise class or a solo pursuit, weekend exercise provides many benefits:

- *Lower risk of death* — A recent study of more than 93,000 adults who wore fitness trackers found that weekend warriors had lower risks of dying during the study period than did those who didn't exercise. Weekend warriors had a 32% lower risk of death from all causes, a 31% lower risk of death from cardiovascular disease and a 21% lower risk of death from cancer. Surprisingly, weekend warriors had higher survival rates than did people who spread their workouts throughout the week.
- *Lower risk of future diseases* — Another study of nearly 90,000 adults with fitness trackers showed that weekend warriors had a lower future risk of more than 200 conditions than did people who did not exercise. Weekend warriors had a 20% reduced risk of high blood pressure, a 40% reduced risk of diabetes and sleep apnea, and a 50% reduced risk of obesity. People who exercised during the week saw the same benefits.
- *A mental health boost* — Exercise reduces the risk of anxiety and depression. Two specific studies confirmed that adults who only exercise on the weekends have the same lower risk of anxiety and depression as do those who exercise steadily throughout the week.

Even if your weekdays are jam-packed, you can still benefit from any exercise you can get, even if it's only 15 minutes. All movement is medicine for your body. Walking, doing yoga or using hand weights all contribute to help your cardiovascular system, joints, brain and muscles. Remember to warm up before activity and stretch to help prevent injuries. ■

Q I've had anal itching for a few months. It's an embarrassing topic that I'm reluctant to bring up. Do you have any self-care tips?

A Yes, there are things you can do to help relieve or cure this condition, known as pruritus ani or anal itch. Best described as intense itching inside and around the opening of the anus, it tends to more commonly affect older adults and men of all ages.

Anal itching has many possible causes. These may include dry skin, infections, abrasions from clothing or from wiping too hard or too often, sweating, sticky stools, frequent diarrhea, or fecal incontinence. Rare but more serious, cancer occasionally can cause these symptoms. Experts believe that diet contributes to the condition, with some evidence that it's worse when diets have more coffee, tea, carbonated drinks, tomatoes and citrus fruits. Eating a diet high in fiber can help promote regular passing of stool.

When no specific cause is found, self-care steps successfully eliminate itching about 90% of the time. For relief, take a sitz bath twice daily by sitting for several minutes in about 3 inches of warm water. Also, gently clean the area with water and a mild, fragrance-free soap after you pass stool. This may involve taking a quick shower or using a soft washcloth or squeeze bottle. Don't scrub, and avoid using moist towelettes or wipes, abrasive cloths, or moist toilet paper. Make sure toilet paper is scent-free and dye-free, as chemicals can worsen itch. After sitz baths and cleansing, pat the area dry with a cloth or use a hair dryer on the fan-only setting. Using heat could further irritate this delicate area.

Wear relatively loose-fitting cotton underwear to keep the area cool and dry. Apply zinc oxide or petroleum jelly to the anal area to provide a moisture barrier. If the itch is persistent, a cream of nonprescription 1% hydrocortisone applied 2 to 3 times a day can be used for a week or two.

Finally, avoid scratching to minimize further irritation. It may help to wear cotton gloves to bed so that you don't unknowingly scratch while sleeping.

Usually, self-care works. But if the problem is severe or prolonged, an evaluation by your healthcare team may be necessary. ■

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:

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