

MAYO CLINIC HEALTH LETTER

Reliable Information for a Healthier Life

VOLUME 32 NUMBER 10 OCTOBER 2014

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Varicose veins

Simple treatments can help

You've always had a few silvery-blue spider veins tracing a small network across your calves, but lately you've noticed that some larger veins have become more noticeable. They're darker, resembling twisted cords lying just under the surface of your skin. It's clear you have varicose veins.

You were hoping you could avoid having this problem, but now it seems they're here to stay.

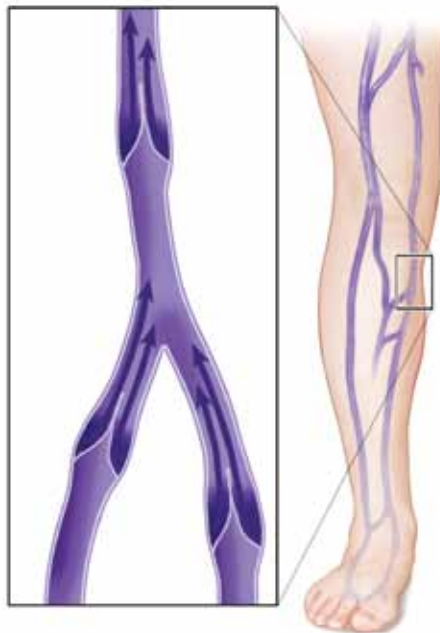
Varicose veins are all too common, and there's not much you can do to prevent them from occurring. Often they run in the family. Women tend to

get them more often than do men, possibly due to hormone changes during different life phases and increased pressure on veins during past pregnancies. Getting older can contribute, too.

Over time, wear and tear on your veins can weaken their structure and decrease their functionality. Too much body weight, a sedentary lifestyle and trauma to your lower legs can also increase your chances of developing varicose veins.

However, with simple lifestyle changes, you can keep varicose veins from getting worse. And if they start to cause you pain or more-serious symptoms, or you just want to improve the appearance of your legs, there are a number of minimally invasive procedures that can effectively close off or remove varicose veins. ♦

Normal veins



Varicose veins



Varicose veins develop when your veins lose elasticity, causing them to stretch out, similar to an overfull balloon. They most often form in the legs.

Of veins and valves

There are basically two types of blood vessels that handle the blood flow through your body — arteries and veins. Arteries transport red, oxygen-rich blood from your body's main distribution center — the heart — to the rest of your body's tissues and organs. Veins bring oxygen-depleted blood — which is darker and bluish red — back to your heart and lungs where vessels route the blood through an oxygen-replenishing path and back out to the body.

Varicose veins develop when your veins lose elasticity, causing them to stretch out, similar to an overfull balloon. They can occur anywhere, but they most often form in the legs. That's because getting blood to flow back to the heart from the legs requires a near-constant fight against gravity.

To get blood to flow up, contractions of the muscles in your legs help squeeze the blood toward the heart. In addition, inside your leg veins are tiny one-way valves that open as blood flows toward your heart and close to stop blood from flowing backward.

But when leg veins become stretched out, the one-way valves may not work properly, so blood that should be moving toward your heart flows back to your legs. It pools in your veins, further stretching and swelling the veins as they become varicose.

Beyond appearances

Most of the time, varicose veins and spider veins — a common, mild variation of varicose veins — don't cause any medical problems. For some people, though, varicose veins can create aching pain and discomfort. Others may experience throbbing, cramping or mild swelling in their lower legs — especially after standing for long periods of time.

More-serious complications are less common. Varicose veins can sometimes lead to an itchy skin rash (dermatitis) and bleeding if you scratch the area. Open sores (skin ulcers) may develop and require treatment.

Occasionally, blood clots may occur in a vein and cause pain, tenderness and swelling. Any sudden swelling, especially in just one leg, warrants prompt medical attention, since it may indicate a clot in a vein deep inside the leg (deep vein thrombosis, or DVT). The danger is that the clot will break loose and travel to the lungs, a rare but potentially life-threatening condition. In addition, if a blood clot is blocking the flow through a deep vein, blood may reroute to superficial veins, worsening the signs and symptoms of varicose veins.

Changes you can make

If your symptoms are fairly mild, your doctor may recommend taking steps on your own to decrease the discomfort that varicose veins can cause. These same measures can help prevent or slow the development of varicose veins, as well. They include:

■ **Exercise** — Get moving. Walking is a great way to encourage blood circulation in your legs. Your doctor can recommend an appropriate activity level for you.

■ **Watch your weight, and your diet** — Shedding excess pounds takes unnecessary pressure off your veins. What you eat can help, too. Follow a low-salt diet to prevent swelling caused from water retention.

■ **Watch what you wear** — Avoid high heels. Low-heeled shoes work calf muscles more, which is better for your veins. Don't wear tight clothes around your waist, legs or groin. Tight panty-leg girdles, for instance, can cut off blood flow. Instead, your doctor may recommend that you wear compression stockings. These elastic stockings work by squeezing your legs, helping veins and leg muscles move blood more efficiently. They're effective, but you need to put them on first thing in the morning and wear them until you go to bed at night.

■ **Elevate your legs** — To improve the circulation in your legs, take several short breaks daily to elevate your legs above the level of your heart. For ex-

ample, lie down with your legs resting on three or four pillows.

■ **Avoid long periods of sitting or standing** — Make a point of changing your position frequently to encourage blood flow. Try to move around at least every 30 minutes or so.

■ **Herbal supplements** — Studies show some herbal supplements containing horse chestnut could help with symptoms of varicose veins.

Minimally invasive treatments

If varicose veins don't respond to lifestyle changes or become bothersome, your doctor may suggest a minor outpatient procedure to get rid of the problem veins. Insurance is generally more likely to cover the cost when the procedure is done to address symptoms, rather than for cosmetic reasons.

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Mayo Clinic Health Letter (ISSN 0741-6245) is published monthly by Mayo Foundation for Medical Education and Research, a subsidiary of Mayo Foundation, 200 First St. SW, Rochester, MN 55905. Subscription price is \$31.52 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.

Before a particular treatment can be recommended, your doctor or a vascular surgeon may want to look at your leg veins with an ultrasound device to assess blood flow and look for blood clots. Several procedures may be considered to remove or cut out varicose veins. After varicose veins are removed, blood flows instead through deeper veins in the leg.

Many of the following procedures can be done in your doctor's office or in an outpatient setting:

■ **Sclerotherapy** — In this procedure, your doctor injects small- and medium-sized varicose veins with a solution that scars and closes those veins. In a few weeks, treated varicose veins should fade. Although the same vein may need to be injected more than once, sclerotherapy is effective if done correctly. Sclerotherapy doesn't require anesthesia and can be done in your doctor's office.

■ **Laser surgeries** — Doctors are using new technology in laser treatments to close off smaller varicose veins and spider veins. Laser surgery works by sending strong bursts of light onto the vein, which makes the vein slowly fade and disappear. No incisions or needles are used.

■ **Endovenous thermal ablation** — In one of these treatments, your doctor inserts a thin tube (catheter) into an enlarged vein. The tip of the catheter is heated up. As the catheter is pulled out, the heat destroys the vein by causing it to collapse and seal shut. This procedure is usually done for larger varicose veins.

■ **Vein stripping** — This procedure involves tying shut and removing large varicose veins through small cuts in the skin. Vein stripping was commonly used in the past but requires general or spinal anesthesia and a longer recovery period. Now it's mostly recommended for people who aren't good candidates for endovenous thermal ablation.

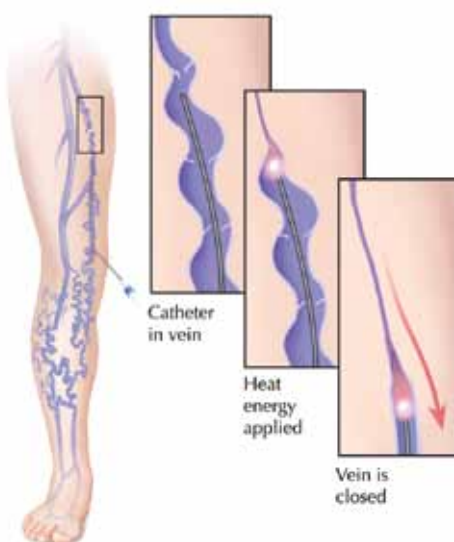
■ **Ambulatory phlebectomy** (*fluh-BEK-tuh-me*) — Your doctor removes smaller varicose veins through a series

of tiny skin punctures. Only the parts of your leg that are being pricked are numbed by a local anesthetic in this outpatient procedure. Scarring is generally minimal.

■ **Endoscopic vein surgery** — You might need this operation only in an advanced case involving leg ulcers. Your surgeon uses a thin video camera inserted in your leg to visualize and close varicose veins, and then removes the veins through small incisions. This procedure is performed on an outpatient basis but often requires a longer recovery time than do other procedures.

Complications from these procedures are uncommon, but might include temporary bruising, swelling or aching. Right after the procedure, you'll likely be instructed to wear compression bandages or stockings to assist with healing and reduce swelling. Your doctor will probably ask you to avoid strenuous activity for at least a week after treatment, although you can usually return to your normal routine the next day.

In general, the success rates of these procedures are very high. Just keep in mind that eliminating problem veins doesn't guarantee that other veins won't become varicose in the future. □



In endovenous thermal ablation, a catheter is used to destroy a vein by causing it to collapse and seal shut.

Health tips

How to swallow pills

Having trouble swallowing those pills or tablets? Often, the obstacle is a mental one. It's not uncommon to fear gagging on a pill. Or perhaps the thought of the last time you tried to swallow a pill brings back bad memories and makes your throat tighten up.

With the right approach and a little bit of practice, most people can learn how to swallow pills with little to no problem. Here's how to do it:

■ **Relax** — Before you take your pills, try to prep your mind by taking a deep breath and reminding yourself that the pill or tablet is smaller than the last piece of bread or steak you swallowed. If you're concerned that the pill will go down the "wrong pipe," don't worry. A normal swallowing reflex will temporarily block the entry to your airway so that you don't aspirate the pill into your lungs.

■ **Practice** — Do trial runs with something other than the pill, such as small pieces of candy. Start with sprinkles, then gradually increase the size of candy up to an entire jelly bean.

■ **Let gravity help** — Sit up straight. Take a sip of water, put the pill on the back of your tongue, then take another sip of water, and let the pill go down with the water.

■ **Look to the side** — Turning your neck may allow your throat to open a little more, making it easier for the pill to go down.

■ **Disguise it** — Your body is used to swallowing foods such as yogurt or applesauce without chewing them first. Try putting your pill in a spoonful of soft food and swallowing it that way. □

News and our views

New colon cancer test to be available soon

One of the reasons people avoid having a colonoscopy — even though it's one of the best ways to detect and prevent colorectal cancer — is because of the often uncomfortable preparation involved in cleansing the colon beforehand. Mayo Clinic researchers have been searching for a simpler screening alternative that also achieves high sensitivity for cancer detection. Such an option — in the form of a new stool DNA test developed in part at Mayo Clinic — received Food and Drug Administration approval in August.

In a study published earlier this year in the *The New England Journal of Medicine*, researchers compared the new stool DNA test with a fecal immunochemical test (FIT), a slightly older noninvasive screening test that looks for signs of hidden bleeding — possibly from a tumor — in stool samples that are collected at home. The new stool DNA test (Cologuard) similarly looks for signs of hidden bleeding but also for genetic changes associated with colorectal cancer.

The researchers analyzed the stool samples of close to 10,000 adults who were at average risk of colorectal cancer and scheduled to undergo colonoscopy. The new stool DNA test detected 94 percent of the earliest and most curable stages of colorectal cancer, a detection rate comparable to that of colonoscopy, while FIT detected only 70 percent. The stool DNA test also detected nearly 70 percent of polyps at greatest risk of progressing to cancer, compared with 45 percent by FIT.

Mayo Clinic experts hope that this new stool test will lead to increased screening participation because of its user-friendly features, and to improved effectiveness due to its high accuracy. The stool DNA test may become a good first line test to identify people with colorectal cancer or precancerous polyps. If stool DNA test results are abnormal, a colonoscopy would be the next step in confirming the diagnosis and moving toward treatment. □

Taking a multivitamin doesn't help with cognitive decline

If you're looking for reduced risk of cognitive decline, dementia or Alzheimer's disease from a multivitamin supplement, you're not likely to find it, at least according to a recent study published in *Annals of Internal Medicine*.

In the study, researchers randomly assigned nearly 6,000 male physicians 65 and older to take either a daily multivitamin (Centrum Silver) or an inactive substance (placebo). Over the 13-year study, the men were assessed three or four times with a battery of cognitive function tests. It was determined there was no difference in cognitive decline between the multivitamin and placebo group, and the mean level of cognitive function also was the same.

Study authors acknowledge that the participants were all highly educated, well-nourished men, and that it's possible that a population of mixed education level or sex could have produced different results. Moreover, multivitamin ingredients vary across products and change over time, and perhaps a different formulation would have led to different results.

Mayo Clinic experts say that this was otherwise strong research, and likely provides accurate guidance regarding multivitamins and cognitive function. It matches recent research that indicates supplements don't lead to much, if any, health benefit. □

Is sitting the new smoking?

New science, old habit

If you've heard the new phrase "Sitting is the new smoking," you may have dismissed it as an exaggeration. After all, a mere sampling of the ill effects of smoking includes increases heart disease and stroke risk by two to four times, as well as greatly increasing risk of lung disease and cancer.

Is sitting as bad as that?

If you spend a lot of your day sitting it may be. Most people don't smoke, but everybody sits — and most sit for too long each day. Many U.S. workers sit for 15 hours a day. In the past 15 years, a wave of research has shed new light on sitting as a serious health risk factor that's snuck up on modern society.

Throughout most of human history, sitting or lying down has been a way to rest in between long bouts of movement, whether for work, transportation or recreation.

For many people today, the equation has been reversed. Cars, home entertainment, computers, email, office work and labor-saving devices have made for a life of sitting that's interrupted by small bouts of movement, and sometimes exercise.

One study of 2,286 adults age 60 and older found that this group spent nine hours a day on average being sedentary — meaning sitting or lying down — during an average 14 hours of wake time.

If you're not very active, it makes sense that health risks are higher, since you're more likely to be overweight and generally unfit. However, a lot of sitting appears to be just as harmful to those who aren't overweight and who



are generally healthy — and nearly as harmful even among those who routinely exercise.

The health toll

There's a reason why sitting and reclining feels restful. When you sit, muscle activity effectively stops. If your body needs rest, that's a great thing. However, when you get too much muscle rest, bad things start to happen.

Although the biology of sitting and its effects on the body isn't fully understood, it appears that a key function of your muscles is to soak up blood sugar and blood fats for energy use.

When you move around or even just stand, the largest muscles of your body are actively working to keep you upright and moving, and sucking up fats and sugar from your bloodstream.

When you sit for too long, blood sugar and blood fat levels don't return to normal as readily. Over time, this may contribute to undesirable cholesterol levels, development of diabetes, storage of excess energy as body fat, damage to blood vessels that leads to cardiovascular disease such as stroke and heart disease, and other unwanted biological changes. Thirty-four chronic conditions and illnesses have been associated with excess sitting.

One recent study compared adults who spent less than two hours a day watching television with those who spent more than four hours a day doing so. After statistically adjusting for factors such as smoking, obesity, age, diabetes and other factors, those with greater screen time during the four-year study had:

- A 52 percent greater risk of dying during the study
- Over two times the risk of having a cardiovascular event, such as chest pain (angina), heart attack, heart failure or stroke

In a review of research related to sitting and cancer, each two-hour-a-day increase in sitting time was related to:

- An 8 percent increased risk of colon cancer

- A 10 percent increased risk of endometrial cancer

- A 6 percent increased risk of lung cancer

These associations remained largely unchanged when study authors statistically adjusted for smoking and obesity. However, the previously mentioned studies are preliminary and will need to be validated by future research that provides a clearer view of the risks associated with sitting.

Exercise negated

It's recommended that adults get at least 30 minutes of moderately intense exercise — such as brisk walking — on most days. That's great advice, but what about the other 14 to 18 hours you're awake during the day? It turns out that sitting too much can largely negate many of the health benefits of moderate exercise.

One study compared adults who spent less than one hour a day watching television with those who spent seven or more hours a day watching television. Data from the 8.5-year study was statistically adjusted for factors such as smoking, diet quality, age and sex and other factors. People who watched the most television had a 68 percent greater risk of dying during the study than did those who watched the least.

This same data was then recalculated taking into account exercise habits. For those who spent seven or more hours watching television daily, doing what study participants called "an hour a day of moderately intense exercise" hardly budged the increased risk of death. Their risk remained 61 percent greater than in those who watched the least television. Calculated a different way, study authors estimated that one hour of continuous sitting negated the benefit of 15 minutes of moderately intense exercise.

Again, the studies mentioned above are preliminary and will need to be validated by future research, but the message is clear — while daily exercise is important for health and maintaining

independence, you also need to be mindful of your sitting.

Stand up for yourself

Activities to reduce the amount of time you spend sitting — and break up stretches of continuous sitting — don't have to be physically strenuous. It's more about habit change, such as finding ways to stand up, shuffle around, do light activity and walk around more often throughout the day.

You might try:

- *Getting on your feet during screen time* — Take a lap around the house during a commercial or get up for a glass of water. Do a chore while watching television. Stand at your computer. Get up and pace when you're thinking. Watch some shows while on a treadmill at the gym, even if you're only walking very slowly.

- *Making sitting tasks walking tasks* — Walk around when you're on the phone. Read the paper standing at the counter. Stand while doing chores. Meet friends for a walk-and-talk rather than sitting for coffee. Wash your car by hand rather than sitting through a car wash.

- *Make things inconvenient* — Keep your television remote in a place that you have to get up and walk to reach. Arrange an office so that you have to get up to throw things away, answer the phone or reach a file cabinet.

Hang your laundry out on a line to dry. Get a small wastebasket so that you have to take the trash out more often. Park at the back of a parking lot and walk. Get off the bus or train one stop early or one stop late and walk the remainder of the way.

In addition, rather than hitting the lounge chair after a meal, get up and do something active. About 20 to 30 minutes after a meal, blood glucose begins to spike as food is digested. Taking a 10- to 15-minute walk at this time — or simply being on your feet doing something — puts your muscles into glucose absorption mode, thus flattening the blood glucose spike. □

Monoclonal antibodies

Immune system tinkering

Your immune system is a powerful weapon, on constant patrol against germs, abnormal cells and other entities that would otherwise cause harm or even death. But sometimes the immune system can be outwitted, such as by a sneaky virus or cancer cells. And sometimes parts of the immune system can go haywire, attacking and damaging healthy tissue, such as with the joint destruction that occurs with the autoimmune disease rheumatoid arthritis.

Over the past three decades, a new class of therapeutic drugs called monoclonal antibodies (MAbs) has emerged. These laboratory-engineered molecules are similar to a natural component of your immune system — immunoglobulins or antibodies — which normally help protect against infection. MAbs are derived from biological rather than sources. MAbs are usually second or third line therapy, rather than first line treatment, because of expense and the potential for serious side effects.

Biological warfare

Natural antibodies float through your blood and tissue fluids, seeking out and attaching to receptors on the surface of invaders that are foreign to the body. Once attached, they may neutralize the invader or rally other components of the immune system to destroy it. Sometimes, natural antibodies mistakenly recognize healthy tissue as foreign. This results in an autoimmune disease such as rheumatoid arthritis.

MAbs function similarly to natural antibodies in their ability to bind to cells or molecules. The key difference lies in the fact that they are engineered to specifically manipulate certain components of the immune system. This is done to either correct abnormal function that results in disease or deliver a

specific payload (toxin) that can kill cancer cells or cells that are infected by viruses. They're usually administered by injection. The mechanisms by which MAbs work include:

■ *Identifying a target for the immune system to attack* — Cancer cells sometimes develop strategies to “hide” from the immune system. MAbs can be engineered to identify cancer cells by recognizing specific molecules on the surface of the cell that enable the MAb to bind to it. Once attached, the monoclonal antibody marks the cancer cell to be destroyed by the immune system.

The MAbs rituximab (Rituxan) and ofatumumab (Arzerra) attach to a specific protein found only on a certain type of immune cells (B cells). The B cells are a type of immune cell affected by myeloma and a number of blood cancers, including lymphoma and leukemia.

Engineered MAbs can specifically mark B cells for destruction, though this causes the loss of both normal and cancerous B cells, since it doesn't discriminate between the two.

■ *Depleting, neutralizing or interfering with part of the immune system* — MAbs exert their therapeutic effect in three ways. The first is by removing a subset of the immune system, such as B cells. The second is by blocking the function of certain biologically active molecules (proteins) that are made by immune cells in excess in certain diseases. The third is by interfering with signaling pathways that cells use to communicate with each other.

MAbs are used quite widely in organ and bone marrow transplantation, along with another group of agents called polyclonal antibodies (PAb). MAbs recognize a single and highly specific target. PAb can recognize multiple targets because they're a mixture of antibodies rather than a single antibody. Their role in organ and bone marrow transplantation is to prevent the body from rejecting the transplant.

Cancer cells often express several receptors on their surfaces that permit responses to growth factors. An exam-

ple is HER2 protein, which is on the surface of certain types of breast and stomach cancer cells. When HER2 is activated, it stimulates cancer cells to grow. Trastuzumab (Herceptin) is an MAb that can bind to and neutralize the growth factor HER2, thereby preventing the growth of these tumor cells.

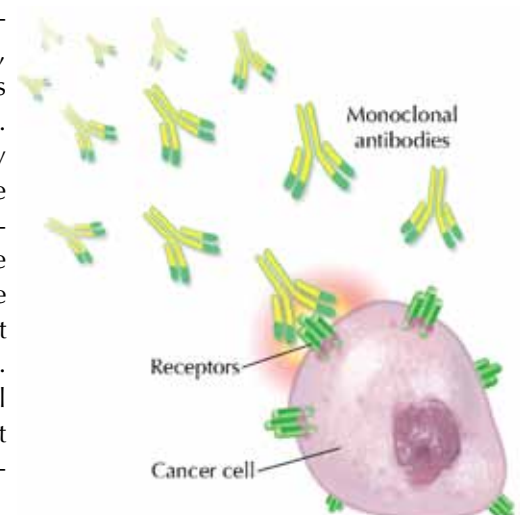
Another feature of cancer cells is their ability to create their own nutritional supply by sending growth factor signals to blood vessels, which supply oxygen and nutrients for tumor growth. Blood vessel overgrowth is also seen in other conditions, such as certain forms of eye macular degeneration.

Several MAbs have been developed to intercept and block signals from growth factors, thus limiting blood vessel growth. These include bevacizumab (Avastin) for cancer and ranibizumab (Lucentis) for macular degeneration.

■ *Delivering drugs or radiation to specific cells* — Some MAbs can be used to bring radiation or chemotherapy directly to targeted cancer cells. These drug combinations have the advantage of sparing normal cells from destruction and reducing collateral damage. This also reduces unpleasant side effects.

Limitations of MAb therapy

Monoclonal antibody drugs are generally very costly and can cause significant side effects because of their potent action. Nonetheless, continued advances in biological engineering are likely to increase therapeutic benefits while reducing side effects. □



FRAX

A tool to estimate fracture risk

One of the changes that occurs as you age is that your bones tend to become less dense and more fragile because you lose bone tissue faster than you form it. For many people, this type of negative bone balance doesn't result in serious problems.

But for millions of other people, so much bone is lost that a simple slip and fall can result in broken bones. When bone density is this low, it's referred to as osteoporosis.

According to the National Osteoporosis Foundation, about half of women and a quarter of men older than 50 will break a bone due to osteoporosis. In older adults, fractures are a major cause of hospital stays, disability and loss of independence.

Fortunately, lifestyle changes and medications can help prevent excessive bone loss and resulting complications. But because osteoporosis doesn't really cause any symptoms until a bone is broken, most people don't know they're at risk until it's too late.

Recently, the World Health Organization developed a simple questionnaire — known as the Fracture Risk Assessment Tool (FRAX) — to estimate the risk of fracture over the next 10 years for men and postmenopausal women between the ages of 40 and 90.

Using this tool can help you and your doctor determine when might be a good time for you to start taking osteoporosis medications.

Predicting risk

Doctors have traditionally relied on bone density testing to assess risk of fracture. A bone density test uses low-dose X-rays to measure the mineral content of your bones. The higher your mineral content, the denser your bones are. The denser your bones, the less likely they are to fracture. If your bone

mineral density (BMD) is low, your doctor can recommend treatment to keep it from getting even lower, and even strengthen the bones.

Bone density testing is considered the gold standard for determining how susceptible your bones are to fracture. However, it requires specialized equipment, incurs a certain amount of expense, and requires time to schedule the appointment, go through testing and follow up with the results.

Bone mineral density also doesn't tell the whole story. Other factors — such as age, prior fractures or a family history of hip fracture — also impact your risk of fracture independent of bone mineral density.

The FRAX questionnaire, which is available online, takes into account several factors. These factors include age, sex, race, prior broken bones, a family history of hip fracture, tobacco use and steroid medication use. It also takes into consideration medical conditions such as rheumatoid arthritis or other diseases — such as celiac disease — known to affect bone health.

Based on this easily available information, a computer-based algorithm estimates your chances of having any major fracture due to osteoporosis, as well as specific chances of a hip fracture in the next 10 years. Ideally, you or your doctor can enter results from a bone density test of your femur neck (T-score) to increase the accuracy.

The FRAX calculator was developed based on data from several multi-thousand patient studies performed in different parts of the world. It's been validated in 11 countries so far.

Putting it into practice

The main goal of FRAX is to help people and their primary care doctors decide at what point screening tests and medical therapies can be beneficial in reducing the risk of fracture. In the U.S., experts have developed several recommendations based on FRAX results. For women age 50 and older, FRAX might be used to see if screening

should be done before age 65. All women should be screened by age 65.

If you've already been screened and you know you have low bone density (osteopenia, defined as a T-score between -1 and -2.5), FRAX results can help you and your doctor decide when to start preventive therapy.

Studies have found that treatment is beneficial and cost-effective and is therefore recommended for adults with osteopenia when their 10-year risk of a hip fracture is 3 percent or greater, or their risk of any major fracture is 20 percent or greater. □

How to access FRAX

You can use the FRAX calculator to estimate your own 10-year risk of fracture due to osteoporosis. Go to <http://www.shef.ac.uk/FRAX/index.aspx>, select Calculation Tool, the country in which you were born and enter your information. For the U.S. version, you can also enter your race.

If you don't have computer access, your local librarian may be able to assist you, or your doctor may be able to provide you with a paper copy of the calculator.

Keep in mind, the calculator isn't a perfect risk predictor. Some factors carry more weight than others. For example, two prior fractures and recent fractures indicate a greater risk than does a single fracture or fractures that occurred more than five years ago, but the calculator doesn't account for this. It's also not meant for use by people who are already on treatments for osteoporosis.

It's best to discuss the results with your doctor, who can make recommendations based on the context of your individual circumstances and preferences.

Second opinion

Q I recently had an abscess on my leg. My doctor drained it but didn't prescribe any antibiotics. Was that an oversight?

A Probably not. Treatment for a skin abscess — a pus-filled bump that develops under the skin — usually involves your doctor piercing it with the tip of a scalpel after applying a local anesthetic. After the pus drains out, often the abscess is rinsed out with saline solution and loosely packed with gauze.

If you're in good health and you have no other problems related to the abscess, your doctor likely may not prescribe any antibiotics. Antibiotics aren't particularly helpful in treating uncomplicated abscesses. One study compared a group that was prescribed an antibiotic after abscess incision and drainage with a group that was prescribed a sugar pill (placebo). The study found no difference in healing between the two. Other studies have come to similar conclusions. In addition, anti-

biotics can cause side effects and some are expensive.

Another concern is that overprescribing antibiotics might promote resistance among different strains of bacteria. Germs that are resistant to antibiotics are much harder to treat and can mean longer lasting illnesses, more doctor visits or extended hospital stays, and the need for more expensive and toxic medications. Some resistant infections can even cause death.

An example of the dangers of antibiotic resistance is the spread of methicillin-resistant *Staphylococcus aureus* (MRSA). MRSA was once a concern only for people in the hospital, but a newer form of MRSA is causing infections in healthy people (community-acquired MRSA), and it predominately causes skin abscesses. Wise use of antibiotics is important for preventing the spread of MRSA. But even if you have an MRSA abscess, as long as there isn't more than an inch or so of redness surrounding the abscess — suggesting a skin infection called cellulitis — antibiotics aren't necessary. □

Q Is too little sleep a cause of weight gain?

A It may be. Although the evidence isn't conclusive, some studies suggest that sleeping less than five hours — or more than nine hours — a night increases the likelihood of weight gain.

In one study, sleep deprivation in men increased their calorie intake the next day. In another study, women who slept less than five hours or more than nine hours a night were more likely to

gain 11 pounds over a period of five to seven years compared with women who slept seven hours a night. A more recent study of middle-aged women found an association between short sleep duration and being overweight, but not between short sleep and subsequent weight gain.

One explanation may be that sleep duration affects hormones, including those that regulate hunger and stimulate the appetite. Other contributing factors may be that lack of sleep leads to fatigue and results in less physical activity or that longer awake hours lead to more eating. Factors such as sleep apnea or high blood pressure may confound the relationship between the two.

A good night's sleep may help you feel more in control of your day and better able to make healthy choices, including eating well and exercising. An added bonus of sleeping well may be maintaining a healthy weight. □

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:

Managing Editor, *Mayo Clinic Health Letter*,
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MC2019-1014
101014

Printed in the USA