

MAYO CLINIC HEALTH LETTER

Reliable Information for a Healthier Life

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Peripheral artery disease

Heart health for your legs

You've had countless blood pressure readings, but you've never had the blood pressure in your arms and legs measured at the same time. The results were an unpleasant surprise. Your doctor says you have clogged (occluded) arteries in your legs — a condition called peripheral artery disease (PAD).

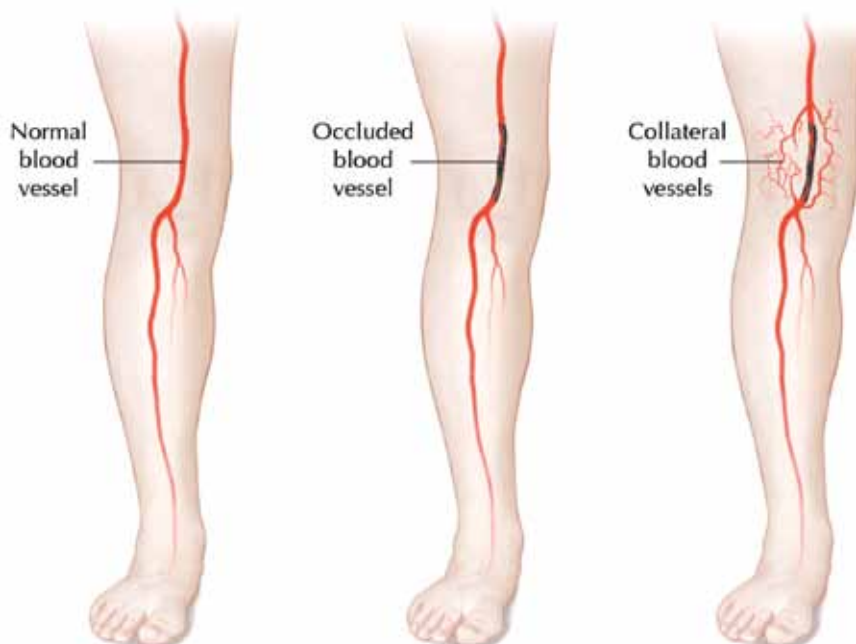
It's estimated that 15 to 20 percent of adults 70 and older have PAD, a condition that can cause leg pain or discomfort while walking that goes away with a brief rest. Without treatment, PAD can

worsen, with leg pain occurring at rest, leg wounds that won't heal, tissue death and even amputation. Moreover, there's a greatly increased risk of having artery disease in other areas, such as your kidneys, brain or heart.

Unfortunately, PAD often gets overlooked, as up to half of those with PAD have no noticeable symptoms, while others have vague symptoms. That makes testing for PAD an important consideration for older adults, as PAD can be stabilized — and even improved — primarily by taking steps to improve your cardiovascular health.

Artery health

The most common cause of PAD is the hardening and narrowing of arteries, which is a disease called atherosclerosis.



Symptoms of peripheral artery disease are primarily related to diminished blood flow to the legs due to narrowed or clogged leg arteries. The body can develop small (collateral) blood vessels to detour blood around a blockage.

Narrowed or blocked arteries reduce blood flow to organs or limbs. In the case of PAD, atherosclerosis occurs in the leg or arm arteries but is much more prominent in the legs.

In addition to aging, risk factors of PAD caused by atherosclerosis include smoking, having diabetes, being overweight, lack of exercise, high blood pressure and undesirable cholesterol levels.

Among these, smoking and diabetes — particularly poorly controlled diabetes — are probably the risk factors that put you at highest risk of complications, such as leg wounds or tissue death (gangrene) in a leg due to low blood flow.

Sneaky symptoms

Symptoms of PAD are primarily related to diminished blood flow to the legs due to narrowed or clogged leg arteries. Early on, the blood flowing through your narrowed leg arteries when you're at rest may be adequate to supply enough oxygen and nutrients to your leg muscles. In addition, the body can develop small (collateral) blood vessels to detour blood around a blockage.

However, if you start walking or exercising, demand for oxygen increases. If the diminished flow of blood to your legs isn't enough to keep up with demand, symptoms begin.

Early symptoms of PAD are often associated with a condition called intermittent claudication. This involves the development of pain or discomfort in a leg — commonly in the calf muscle — that reliably occurs after a set amount of exercise or walking. The pain disappears after several minutes of standing. You may feel sensations other than pain, including aching, heaviness, tiredness, tightness, cramping, burning — or even just a sense that you're losing power — in the affected leg or legs. Sensations can occur in the thigh, hip and buttocks, in addition to the calf muscles.

Another set of early PAD symptoms is characterized as atypical. Pain or discomfort similar to that of intermittent claudication occurs with walking or exercise but not as consistently or reli-

ably. In addition, it may require a longer period of time — or even sitting down or shifting position — for the pain or discomfort to go away.

Finally, some with early PAD have no obvious symptoms. Adding to the potential for confusion, PAD can cause symptoms that are similar to common sources of back pain, such as spinal stenosis and radiating sciatic nerve pain, making it difficult to diagnose without testing.

If PAD progresses, leg pain or discomfort may begin to occur at rest and may be intense enough to prevent sleep or wake you from sleep. In addition, reduced blood flow to your legs may cause other signs and symptoms, such as leg numbness and weakness, sores on the legs or feet that won't heal, cold legs or feet, and changes in skin color or hair loss on the feet and legs. Eventually, death of tissue may occur, which may require amputation of the leg.

In many cases, it's difficult for you or your doctor to know if you have PAD based on how you feel or your medical history. That's why testing for PAD is recommended for adults age 65 and older and adults age 50 and older with a history of smoking or diabetes.

Screening can be done quickly in your doctor's office and includes taking the blood pressure in your arms and comparing it to the blood pressure in your legs using the ankle-brachial index.

Two-pronged treatment

One goal of PAD treatment is to improve cardiovascular health to reduce risk of PAD progression and risk of other cardiovascular problems such as heart attack and stroke. One study found that over 10 years, people with PAD had a risk of death from cardiovascular disease that was nearly six times that of someone of similar age who didn't have PAD.

Most people with PAD who improve their overall cardiovascular health can halt or even show improvement in the progression of PAD symptoms. Steps may include:

- Not smoking.
- Daily or near-daily exercise such as 30 to 60 minutes of walking. This may need to be modified if you develop pain while walking, but it remains an essential component of therapy.
- Maintaining a healthy weight.
- Eating a healthy diet of mostly plant-based foods that are minimally processed, including whole grains, fruits, vegetables, beans, legumes and nuts.

When it comes to managing diabetes or treating high blood pressure or undesirable cholesterol levels, your doctor also may prescribe medications. Anti-clotting medications such as aspirin also may be considered to reduce the risk of blood clots contributing to the blockage of narrowed arteries.

Another treatment goal is to reduce the leg pain felt while walking with:

- *A supervised walking program* — This involves walking until you feel pain

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or discomfort, resting, then walking again, and repeating this pattern. This helps condition your muscles to use oxygen more efficiently and can help in the development of collateral blood vessels. Improvements in walking time of 150 percent or more are common.

■ **Drug therapy** — Certain drugs may facilitate improvements in walking ability. Cilostazol (Pletal) — a drug that helps thin blood and relax blood vessels — appears to be the most effective, but its side effects may include headache and diarrhea.

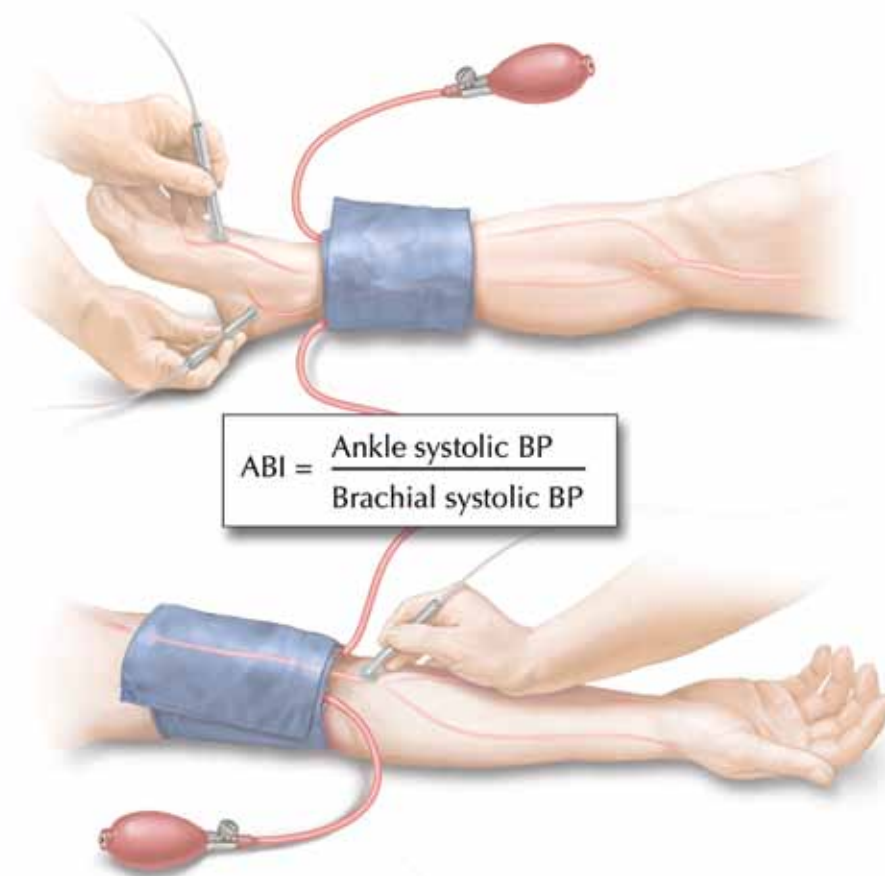
Going inside

If improvements in cardiovascular health aren't enough to slow PAD progression — or if lack of blood flow causes pain at rest or tissue death — surgery may be necessary. Options include:

■ **Angioplasty** — A balloon-tipped catheter is threaded through a blood vessel to the blocked or narrowed part of your artery. The balloon is inflated to reopen the artery and flatten the blockage into the artery wall, while stretching the artery open to increase blood flow. A mesh tube (stent) may be left in the artery to keep it propped open. Some catheters can remove buildup inside an artery by scraping it out or by destroying it with a laser.

■ **Bypass surgery** — Using a blood vessel from another part of your body or a synthetic tube, a bypass is made for blood to flow around the blocked or narrowed part of the artery.

■ **Thrombolytic therapy** — If you have a blood clot blocking an artery, your doctor may inject a clot-dissolving drug to break it up. □



Diagnosing peripheral artery disease usually includes using an ankle-brachial index (ABI). This compares the blood pressure (BP) in your ankle with the blood pressure in your arm. To get a reading, a regular blood pressure cuff and an ultrasound stethoscope are used. The systolic blood pressure reading in your ankle is divided by the systolic blood pressure reading in your arm to determine where you fall on the ABI.

Health tips

Preventing macular degeneration

You can take steps that may prevent macular degeneration:

■ **Have routine eye exams** — Ask your doctor how often you should plan for routine eye exams. A dilated eye exam and specialized photos of the eye can identify macular degeneration.

■ **Check your vision at home** — Use an Amsler grid or simply gaze at a door frame or window blinds to detect new areas of waviness in your vision. Remember to test each eye separately.

■ **Don't smoke** — Smoking not only increases the risk of macular degeneration, but it's also the most significant preventable risk factor for macular degeneration.

■ **Maintain a healthy weight and exercise regularly** — If you need to lose weight, reduce your calories and increase your activity. Regular physical activity is associated with lower risk of macular degeneration.

■ **Eat a healthy diet** — A healthy diet alone may be as effective as the use of supplements. Include in your diet lots of fruits and vegetables, lean protein sources, and whole-grain products. Include fish in your diet once or twice a week — epidemiologic studies support the value of fish in reducing the risk of macular degeneration. Oily fish may be the most beneficial. Go for a variety of fruits, vegetables and especially leafy greens as these foods contain vitamins and other antioxidants that may reduce your risk. □



News and our views

New steps to detect sleep apnea before surgery

If you're scheduled for surgery, don't be surprised if at a pre-surgical examination you're asked if you snore. Your answers to this and other questions — together with basic medical information — may be used to detect undiagnosed obstructive sleep apnea, a condition in which you may unknowingly stop breathing for brief periods while you sleep.

Relatively recent research indicates that medical complications associated with surgery are two to three times more common in those with obstructive sleep apnea compared with those who don't have it. Complications include low oxygen levels, large fluctuations in blood pressure, heart trouble, delirium, pneumonia, need for care in the intensive care unit, longer hospital stays and rarely, death. Obstructive sleep apnea may affect around 10 to 25 percent of the general population. However, many people with moderate to severe obstructive sleep apnea have never been diagnosed.

Catching undiagnosed cases of obstructive sleep apnea has become a priority at certain medical centers — including Mayo Clinic. If you're thought to be at risk of having obstructive sleep apnea — or if you already know you have it — extra pre-surgical steps may be taken, such as making sure that you are properly using a continuous positive airway pressure (CPAP) device for at least a week prior to surgery. Having or possibly having obstructive sleep apnea also may lead to modifications of care during surgery.

Mayo Clinic doctors feel that the extra screening preoperatively and special precautions postoperatively may have a significant impact on surgical risk for many people. □

Beyond experimental — delaying fertility with frozen eggs

After decades of research and refinements, the breakthrough process of preserving a woman's fertility by using her own frozen unfertilized eggs (oocyte cryopreservation) has graduated from experimental to standard practice. The American Society for Reproductive Medicine and the Society for Assisted Reproductive Technology declared as much last year in updated practice guidelines. The status change was based on data that showed similar rates of fertilization and pregnancy are achievable with no increase in birth defects when using either fresh eggs or eggs that have been frozen and thawed.

Advances in assisted reproductive technology — such as frozen embryos and in vitro fertilization — have played significant roles in preserving fertility for people facing a health crisis or medical condition that might otherwise result in infertility. A new diagnosis of cancer is the most common reason for undergoing fertility preservation. But increasingly, healthy women are seeking fertility preservation for personal reasons, such as to allow them to complete their education, or expand their professional or personal pursuits.

Oocyte cryopreservation enables women to preserve their own eggs during their peak reproductive years without the necessity of a current male partner or sperm donor. It's expected that the number of women using frozen egg technology to bridge the gap between their reproductive prime and actual motherhood will increase significantly.

Reproductive specialists at Mayo Clinic are seeing increased interest as women are becoming more proactive in preserving their fertility options. □

Chronic viral hepatitis

Treatment progress, hope for cures

When blood tests from your annual exam showed some liver enzyme elevations, your doctor recommended further testing. It turns out the cause was the hepatitis C virus.

More than 75 percent of adults infected with hepatitis C are baby boomers, which is why a blood test for the virus is recommended for those born during 1945 and through 1965.

The high rates of hepatitis C in baby boomers isn't completely understood, although it's believed most became infected in the 1970s and 1980s when rates of hepatitis C were the highest.

Most people who live with the virus have no idea they're infected because they don't look or feel sick. Symptoms of liver damage due to hepatitis C may not become evident for decades.

Family of infections

Hepatitis C is one of a family of viral infections that affect the liver. Each of the most common types — hepatitis A, B and C — can cause short-term (acute) viral hepatitis. People who have hepatitis A usually get over the virus and have no lasting liver damage. But the same can't be said of hepatitis B and C. Both — and especially hepatitis C — can cause long-term (chronic) hepatitis that may lead to liver scarring (cirrhosis), liver failure or liver cancer. Hepatitis C is a leading cause of liver cancer. It's also the main reason for liver transplants in the U.S.

As efforts to identify chronic viral hepatitis are being stepped up, new and potentially simpler treatment regimens are being studied and show promise for considerably higher cure rates.

Millions of people in the U.S. are living with chronic viral hepatitis. An estimated 1.2 million people have

chronic hepatitis B. Although there's a vaccine to prevent hepatitis B infection, up to 10 percent of adults who aren't vaccinated and acquire the virus go on to develop chronic hepatitis B. Hepatitis B is transmitted through contact with infected blood, semen and other body fluids. Common ways it may be acquired include:

- Unprotected sexual contact with an infected partner whose blood, saliva, semen or vaginal secretions enter your body
- Accidental needle sticks or the use of shared needles and syringes contaminated with infected blood
- Transmission during childbirth from an infected mother to her baby

Your risk of hepatitis B also may be greater if you've received hemodialysis treatments over a long period of time.

Out of the shadows

Hepatitis C is the most common chronic bloodborne infection in the U.S., affecting an estimated 3.2 million people. The virus is spread usually through contact with blood from an infected person.

Efforts to develop a preventive hepatitis C vaccine have yet to be successful. Among those newly infected with hepatitis C, 60 to 80 percent will develop chronic infection.

At present, new transmissions of hepatitis C are primarily from sharing contaminated needles, syringes or other injection drug paraphernalia. Much less commonly, hepatitis C may be acquired during sexual contact with an infected partner or from inadvertent needle sticks.

Blood supply screening began in the U.S. in 1992. Before that, hepatitis C was more commonly spread through transfusion of blood or blood components and organ transplants. Risk of having hepatitis C may also be greater if you received a blood product for clotting problems that was made before 1987. As with hepatitis B, your risk of getting hepatitis C is greater if you're on long-term hemodialysis.

If you think your risk of hepatitis B or hepatitis C may be high — or if you were born during 1945 through 1965 — talk with your doctor about getting screened. Even if you generally feel well, liver damage from either of these chronic viruses often begins before it causes signs or symptoms. Diagnosis may include:

- *Blood tests* — These detect whether you've been exposed to hepatitis virus and how your body has reacted. In the case of hepatitis B, blood tests can determine if you have an active infection that can easily be passed to others or if you're immune to the virus due to vaccination or a prior hepatitis B infection from which you recovered. A simple antibody test can detect exposure to hepatitis C virus — antibodies are produced from exposure to infection.

In addition, another blood test can evaluate the genetic makeup of the hepatitis C virus infecting you, which helps in deciding what treatment options are most appropriate. Other blood tests check liver function as well as certain enzymes that are indicators of liver damage. Blood work can also measure how much of the virus is in your blood (viral load).

- *Diagnostic imaging* — Various techniques may be used to visualize your liver's condition, such as ultrasound, computerized tomography (CT) scans, magnetic resonance imaging (MRI) and magnetic resonance elastography (MRE). For many, MRE can be done instead of a liver biopsy, providing a noninvasive assessment of liver scarring (fibrosis).

- *Liver biopsy* — A small piece of tissue is removed from the liver using a special needle. A liver biopsy can help determine the severity of the disease and guide treatment decisions.

Treatment decisions

Once chronic viral hepatitis is diagnosed, ask your doctor what management or treatment steps are best suited to your overall health situation. Depending on your liver's condition,

treatment may not be needed right away. Instead, regular monitoring for signs of liver disease may be sufficient for a time.

You can help take care of your liver by not drinking alcohol, which causes additional liver damage. Talk with your doctor before taking new medications, including prescription or nonprescription drugs or supplements. If you have hepatitis C, your doctor may recommend vaccinations for the hepatitis A and B viruses to help protect your liver from additional liver injury. Likewise, if you have hepatitis B, your doctor may recommend vaccination for hepatitis A virus.

If immediate treatment is necessary, your doctor may recommend a combination of antiviral medications — possibly including injectable as well as oral drugs. It's often necessary to take these over many months. Treatment side effects — such as influenza-like symptoms, anemia, depression and other psychiatric symptoms — can be difficult and even potentially severe, to the point that treatment has to be stopped.

Treatment advances

Late in 2013, the Food and Drug Administration approved two new drugs to treat chronic hepatitis C — sofosbuvir (Sovaldi) and simeprevir (Olysio). For the most common type of hepatitis C virus in the U.S., these medications will need to be taken with injectable pegylated interferon (PegIntron, Pegasys) and oral ribavirin (Copegus, Rebetol, others). Treatment courses will be shorter — perhaps 12 to 24 weeks — and cure rates may be as high as 80 to 90 percent.

More treatments for chronic hepatitis C are on the horizon. The next generation of oral, shorter and safer therapies are in late stages of clinical trials. It's anticipated that an all-oral regimen — one that won't require the use of injectable pegylated interferon — will be available later in 2014 or 2015 for the most common type of hepatitis C. □

Long QT syndrome

Electrical miscues of the heart

You've had pre-surgical tests before, and they've never been a cause for concern. However, this time something odd turned up related to your heart. The electrocardiogram (ECG) — which measures electrical impulses generated by your heart — indicated that your QT interval is prolonged. Basically, the electrical activity of your heart takes longer than it should to return to normal after a heartbeat.

An ECG measures the heart's electrical waves — named after the letters Q through T — and maps them to a graph to show the electrical activity in your heart's lower chambers. The time between the start of the Q wave and the end of the T wave — the QT interval — is how long it takes your heart to contract and then refill with blood.

For some, a prolonged QT interval is due to a genetic heart rhythm disorder. Others may develop (acquire) the syndrome due to an underlying medical condition, a change in electrolytes or from taking certain medications.

Long QT syndrome can cause fast, chaotic heartbeats that result in fainting, seizures and even sudden death. However, many people who have it never experience a symptom. Consequently, the syndrome can go undiagnosed. Sometimes, it shows up in results of an ECG done for an unrelated reason.

Mapping it out

The heart's pumping action is controlled by electrical impulses that originate in the upper right chamber and travel through your heart causing it to beat. After each heartbeat, the heart's electrical system recharges to prepare for the next go-round. If you have long QT syndrome, it takes your heart muscle longer than normal to recharge.

This can set the stage for potentially dangerous heart rhythms.

Unexplained deaths in children and young adults — such as drowning — may be the first clue to inherited long QT syndrome. Acquired long QT syndrome may come about in several ways. Dozens of medications can lengthen QT interval — even in otherwise healthy people. Many are commonly used drugs, including certain antibiotics, antidepressants, antihistamines, diuretics, anti-arrhythmic medications, diabetes medications, antifungals and antipsychotic drugs. Subtle genetic heart defects can make some people more prone to medication-related heart rhythm disruptions.

Medical conditions also may cause long QT syndrome. Examples include eating disorders, illness that causes severe diarrhea or vomiting, some thyroid disorders, and diabetes.

Sometimes, QT interval lengthens from a combination of factors, such as an undiagnosed underactive thyroid (hypothyroidism) that interacts with a medication you take. But once the thyroid problem is treated, taking the same medication may cause no problems.

The most common sign of long QT syndrome is fainting. Sometimes, fainting spells are associated with intense emotions — such as being excited or angry — or with exercise. Fainting usually occurs without warning. Fainting is also a strong predictor of potentially more dangerous — even deadly — long QT spells.

If the heart continues beating erratically, seizures may occur as the brain becomes depleted of oxygen. Generally, the heart returns to its normal rhythm, either spontaneously or with the use of an external defibrillator. But if that doesn't happen, the outcome can be sudden death.

If you suddenly faint during physical exertion, from emotional excitement or after using a new medication, talk to your doctor. If you have immediate family members who have long QT syndrome, tell your doctor.

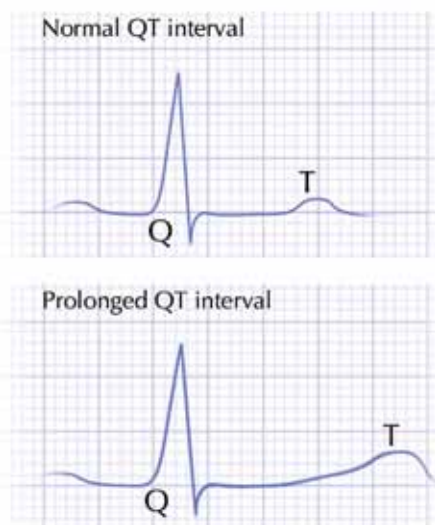
Sorting it out

If long QT syndrome is suspected, several tests may be needed, usually starting with an ECG. Bicycle, treadmill or chemical stress testing of the heart also may be done. If congenital long QT syndrome is suspected, genetic testing may be done. If long QT syndrome is caused by a drug, your doctor may switch you to a medication that doesn't disturb the QT interval. Treatment for congenital long QT syndrome includes:

■ **Medications** — Beta blockers are first line therapy drugs. They slow the heart rate and make it less likely for the heart to go into a dangerous rhythm. Your doctor also may suggest potassium supplements. If you have a particular form of long QT syndrome, the anti-arrhythmic drug mexiletine also may be given in combination with the beta blocker propranolol (Inderal LA, Inno-Pran XL). Ask your doctor or pharmacist what drugs can be safely taken.

■ **Medical devices** — An implantable cardioverter-defibrillator (ICD) can stop a potentially fatal arrhythmia. An ICD is typically implanted if you've survived a long QT-triggered abnormal heart rhythm or are considered at high risk.

Occasionally, a relatively minor surgical procedure can be done to alter the nerves going to the heart. □



The time between the start of the heart's electrical Q wave and the end of the T wave — the QT interval — is how long it takes your heart to contract and refill.

Digestive malabsorption

Problems processing nutrients

Normally, you'd be excited about losing some weight. But this time you haven't made any dietary or activity changes that would have caused it. Moreover, you're having frequent loose stools that you suspect may be related to this weight loss.

There are many possible causes of weight loss and loose stool, and one of them is malabsorption. This is an inability of your body to properly digest or absorb one or more nutrients. Treating an underlying cause can often solve the problem. When an underlying problem can't be adequately corrected, supplementation is usually an effective way to get the nutrients you need.

Breaking it down

Although digestion begins with chewing and breakdown of foods in the stomach, the majority of further digestion and nutrient absorption occurs in the small intestine. There, various enzymes that chemically break down nutrients are introduced. Nutrients pass through the small intestine, the inner lining of which is like a shag carpet of nutrient-absorbing projections (villi). Nutrients pass from the villi to the bloodstream, where they nourish the body.

Malabsorption can occur when any of the many steps of digestion are disrupted. A diagnosis of malabsorption is only the beginning of a process to find out what's causing it.

Causes of malabsorption fall into sometimes overlapping categories. These causes include:

■ *Difficulty with digestion* — This means food isn't getting broken down properly. Disease or damage to the pancreas or liver may diminish production of certain digestive enzymes and bile necessary for digestion. An over-

growth of bacteria in the small intestine may interfere with digestion. Deficiency in production of enzymes to break down lactose in dairy products may make you unable to absorb lactose. The stomach can stop producing a protein called intrinsic factor that aids in the absorption of vitamin B-12. This can lead to pernicious anemia.

■ *Difficulty with absorption* — This generally occurs when the small intestine is injured or damaged. Celiac disease or Crohn's disease may damage the small intestine. Infections, certain drugs and excessive alcohol consumption also can damage the small intestine, as can radiation therapy for cancer. Uncommon diseases such as amyloidosis and Whipple's disease also may cause damage. Some forms of obesity surgery may shorten the amount of small intestine available to absorb nutrients.

A final category of malabsorption is difficulty moving nutrients from the villi to the bloodstream. Blocked lymph vessels — such as by lymph cancer (lymphoma) — is one cause.

Varying symptoms

Malabsorption may be present with signs and symptoms that include weight loss, chronic diarrhea or loose stools, more stool volume than usual, and abdominal bloating and gas. Excess fat in stools also is common, sometimes making stool look pale, extra foul-smelling, and seeming to be bulky and greasy. Other symptoms may be specific to deficiencies in certain vitamins or minerals. In older adults, signs and symptoms can be subtle and more difficult to recognize.

Diagnosis of malabsorption begins with looking for obvious causes, such as intestinal surgery or radiation therapy. In addition, blood tests to screen for nutrient deficiency and testing for excess fat in stool and other tests can help establish the fact that your body isn't absorbing nutrients properly. If the diagnosis of malabsorption is confirmed, then testing branches out along varying paths to determine the cause.

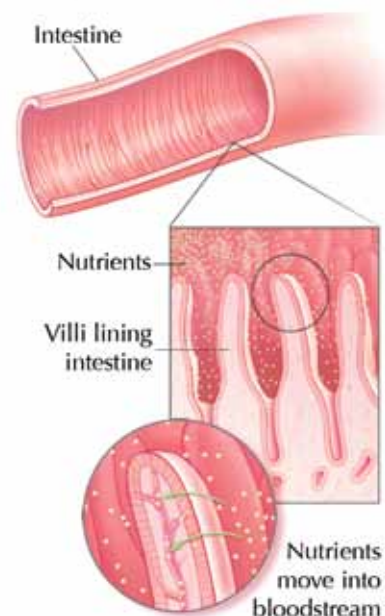
Treatment

Treatment or management of malabsorption varies significantly by cause but often includes one or more of the following steps:

■ *Addressing the cause, if possible* — Some causes of malabsorption, such as disorders of the pancreas, damage to the lining of the small intestine or bacterial overgrowth in the small intestine, may be directly treated. With insufficient pancreas enzyme production, taking digestive enzyme replacements with food will aid digestion. Other problems, such as celiac disease or lactose intolerance, are treated by making dietary changes. A gluten-free diet restores absorption to normal and allows the gut lining to heal.

■ *Supplementation* — This can take several forms. With certain uncorrectable problems such as a surgically shortened small intestine, oral vitamins and minerals may provide a sufficient boost in nutrient intake to correct or ward off vitamin and mineral deficiencies. If you're unable to absorb vitamin B-12 with pernicious anemia, injections of the vitamin may be required.

■ *Management of persistent diarrhea* — If diarrhea persists despite optimal management of the cause of your malabsorption, your doctor may consider looking for other causes, such as microscopic colitis or Crohn's disease. □



Second opinion

Q I tend to get a lot of wax in my ears. What can I do to keep earwax from building up?

A If you've not had ear surgery and your eardrum doesn't have a tube or a hole in it, there are some steps you can take to avoid earwax buildup:

■ *Soften the earwax* — Use an eye-dropper to apply a few drops of baby oil, mineral oil, glycerin or hydrogen peroxide in the affected ear canal twice a day for no more than four to five days. If earwax buildup is a recurring problem, you might try a nonprescription wax removal product, such as carbamide peroxide (Debrox, Murine Ear Wax Removal Drops, others). But remember, if you've had a perforated eardrum or ear surgery — including ear tubes — don't use this type of product or flush your ears with water.

■ *Use warm water* — After a day or two when the wax is softened, use a rubber-bulb syringe to gently squirt body-temperature water into your ear canal. Tilt your head and straighten your ear canal by pulling your outer ear up and back. When finished irrigating, tip your head to the side to let the water drain out.

■ *Dry your outer ear* — When finished, gently dry your outer ear with a towel or hand-held dryer.

You may need to repeat these steps several times. If the buildup doesn't improve after a few treatments, see your doctor. Note that ear candling — a technique that involves placing a lit, hollow, cone-shaped candle into the ear canal — is not a safe earwax removal method and shouldn't be done. Candling may

result in serious injury, such as burns and eardrum perforation. Using cotton-tipped swabs likewise isn't recommended, as it can harm the ear or pack the wax in deeper. □

Q How do I choose jewelry that doesn't cause an allergic reaction on my skin?

A Allergic contact dermatitis is an itchy rash that appears when your skin touches a usually harmless substance, including metal jewelry. Although just about any type of metal can cause contact dermatitis, it's much more common with certain kinds. A doctor, dermatologist or allergist can help you determine which kinds to avoid.

Among metals, nickel is the most common cause of contact dermatitis. About 15 percent of the population is sensitive to nickel. Nickel can be used alone or mixed with many types of metals, including white gold, gold plating, certain types of silver and solder. It can be found in any type of jewelry — particularly body piercings — and can also be in jewelry clasps, watchbands, clothing fasteners, belt buckles and eyeglass frames.

Cobalt is another low-cost metal that's a common cause of contact dermatitis. Cobalt is commonly used in costume jewelry and may be mixed into other metals, such as stainless steel.

Among precious metals, gold and palladium — which is often a component of white gold — stand out as causes of contact dermatitis. Still, they're not nearly as likely as nickel or cobalt to cause problems. In fact,

18-karat gold — or a lower karat gold that's nickel-free — is a good choice for avoiding contact dermatitis. Other metals that are less likely to lead to contact dermatitis include platinum, titanium, copper, fine silver and sterling silver. Stainless steel may contain some nickel, cobalt or chromium, but it's tightly bound up in the metal and isn't as likely to cause contact dermatitis.

Commercially available testing compounds can allow you to determine whether nickel is present in a piece of jewelry. The best preventive measure is to avoid allowing these metals to contact your skin. Still, you may be able to wear a favorite piece of jewelry for short periods by creating a barrier between the metal and your skin. For example, you may be able to put a plastic sheath over an earring stud or use clear nail polish or a piece of tape on the jewelry to form a barrier. □

Have a question or comment?

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