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Vasovagal Syncope

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What is vasovagal syncope?

Vasovagal syncope is a condition that leads to fainting in some people. It is also called neurocardiogenic syncope or reflex syncope. It's the most common cause of fainting. It's usually not harmful nor a sign of a more serious problem.

Many nerves connect with your heart and blood vessels. These nerves help control the speed and force of your heartbeat. They also regulate blood pressure by controlling whether your blood vessels widen or tighten. Usually, these nerves coordinate their actions so you always get enough blood to your brain. Under certain situations, these nerves might give an inappropriate signal. This might cause your blood vessels to open wide. At the same time, your heartbeat may slow down. Blood can pool in your legs which leads to a drop in blood pressure, and not enough of it may reach the brain. If that happens, you may briefly lose consciousness. When you lie or fall down, blood flow to the brain resumes.

Vasovagal syncope is quite common. It most often affects children and young adults, but it can happen at any age. It happens to men and women in about equal numbers. Unlike some other causes of fainting, vasovagal syncope does not signal an underlying problem with the heart or brain.

What causes vasovagal syncope?

Several triggers can cause vasovagal syncope. To help reduce the risk of fainting, you can stay away from some of these triggers such as:

- Standing for long periods
- Excess heat
- Intense emotion, such as fear
- Intense pain
- The sight of blood or a needle
- Prolonged exercise
- Dehydration
- Skipping meals

Other triggers include:

- Urinating
- Swallowing
- Coughing
- Having a bowel movement

What are the symptoms of vasovagal syncope?

Fainting is the defining symptom of vasovagal syncope. Often you may have certain symptoms before actually fainting such as:

- Nausea
- Warmth
- Turning pale

Getting sweaty palms

Feeling dizzy or lightheaded

Blurred vision

If you can lie down at the first sign of these symptoms, you will often be able to prevent fainting. When it happens, this type of fainting almost always happens in a sitting or standing position. Not everyone notices symptoms before fainting, however.

When a person does faint, lying down restores blood flow to the brain. Consciousness should return fairly quickly. You might not feel normal for a little while after you faint. You might feel depressed or fatigued for a short time. Some people even feel nauseous and may vomit.

Some people have only 1 or 2 episodes of vasovagal syncope in their life. For others, the problem is more chronic and happens with no warning.

How is vasovagal syncope diagnosed?

Your doctor will review your medical history and do a physical exam. This will probably include measuring the blood pressure while lying down, seated, and then standing. Your doctor will likely do an electrocardiogram (ECG) as well, to evaluate the heart's rhythm. For many children and young adults, this may be all that is needed. Usually, the doctor can safely assume that the fainting is due to vasovagal syncope, and not some form of syncope that is more dangerous.

Sometimes the doctor needs to check for other possible causes for fainting. Because some causes of fainting are dangerous, the doctor will want to rule out these other causes. Your doctor might use tests such as the following:

Continuous portable ECG monitoring, to further analyze heart rhythms

Echocardiogram, to examine blood flow in the heart and heart motion

Exercise stress testing, to see how your heart works during exercise

Blood work, only if your doctor is suspicious for an abnormality

If these tests are normal, you might need something called a "tilt table test." For this test, you lie down on a padded table. Someone measures your heart rate and blood pressure while you are lying down and then tilted up for a period of time. Sometime medicine is also given to trigger a fainting response. If you have vasovagal syncope, you may faint during the upward tilt.

How is vasovagal syncope treated?

Watch for the warning signs of vasovagal syncope, like dizziness, nausea, or sweaty palms. If you have a history of vasovagal syncope and think you are about to faint, lie down right away. Tensing your arms or crossing your legs can help prevent fainting. Passively raising or propping up your legs in the air can also help.

To immediately treat someone who has fainted from vasovagal syncope, help the person lie down and lift his or her legs up in the air. This will restore blood flow to the brain, and the person should quickly regain consciousness. The person should lie down for a little while afterwards.

If you have had episodes of vasovagal syncope, your doctor might make some suggestions on how to help prevent fainting. These might include:

- Avoiding triggers, such as standing for a long time or the sight of blood
- Moderate exercise training
- Discontinuing medicines that lower blood pressure, like diuretics
- Eating a higher salt diet, to help keep up blood volume
- Drinking plenty of fluids, to maintain blood volume
- Wearing compression stockings or abdominal binders

Occasionally, you may need medicine to help control vasovagal syncope. However, research on these medicines has revealed uncertain benefits in vasovagal syncope. These are usually only considered when a person has multiple episodes of fainting. Some of the medicines your doctor may advise a trial of include:

- Alpha-1-adrenergic agonists, to increase blood pressure
- Corticosteroids, to help increase the sodium and fluid levels
- Serotonin reuptake inhibitors (SSRIs), to moderate the nervous system response

If these medicines are ineffective, doctors sometimes try orthostatic training. This method uses a tilt table to gradually increase the amount of time spent upright. Rarely, in cases where a significant slowing of the heartbeat or pausing is detected, a heart pacemaker is needed.

What are possible complications of vasovagal syncope?

Vasovagal syncope itself is generally not dangerous. Of course, fainting can be dangerous if it happens at certain times, like while driving. Most people with rare episodes of vasovagal syncope can drive safely. If you have chronic syncope that is not under control, your doctor may advise against driving. This is especially likely if you don't usually have warning signs before you faint. Ask your doctor about what is safe for you to do.

When should I call my healthcare provider?

See a doctor right away if you have recurrent episodes of passing out or other related problems.

Key points about vasovagal syncope

Vasovagal syncope is the most common cause of fainting. It happens when the blood vessels open too wide and/or the heartbeat slows, causing a temporary lack of blood flow to the brain.

It's generally not a dangerous condition.

To prevent fainting, stay out of hot places and don't stand for long periods.

If you feel lightheaded, nauseous, or sweaty, lie down right away and raise your legs.

Most people with occasional vasovagal syncope need to make only lifestyle changes such as drinking more fluids and eating more salt.

Some people may need medicine or even a heart pacemaker.

Next steps

Tips to help you get the most from a visit to your healthcare provider:

Know the reason for your visit and what you want to happen.

Before your visit, write down questions you want answered.

Bring someone with you to help you ask questions and remember what your provider tells you.

At the visit, write down the name of a new diagnosis, and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you.

Know why a new medicine or treatment is prescribed, and how it will help you. Also know what the side effects are.

Ask if your condition can be treated in other ways.