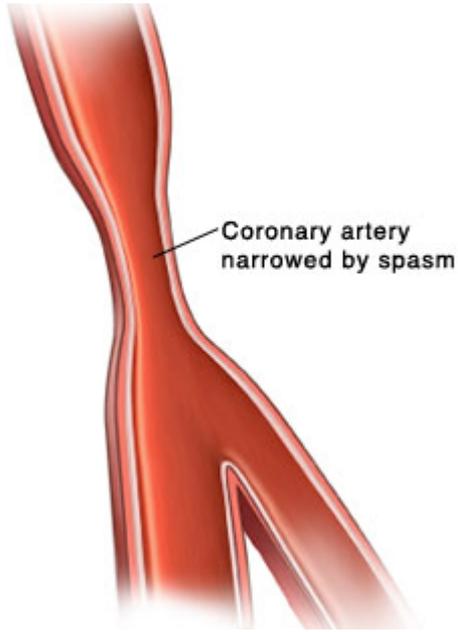


Coronary Artery Spasm

Coronary artery spasm is a cause of angina. Angina is pain that is caused when the heart muscles doesn't get enough blood. A sudden spasm or narrowing of a blood vessel that supplies the heart can cause angina. Coronary artery spasms often cause pain. Sometimes severe spasms can lead to irregular heartbeats. They can even cause heart attack, and sudden death. Coronary artery spasm is also called vasospastic, variant, or Prinzmetal angina.



Coronary artery spasm occurs when the wall of an artery contracts suddenly, narrowing the artery.

How is a coronary artery spasm different from other anginas?

This condition differs from other types of angina. Other types of angina commonly occur when the person is active. They also tend to occur in people with coronary artery disease (CAD). With CAD, arteries in the heart have a buildup of a fatty substance called plaque. The plaque narrows the coronary arteries and reduces blood flow to the heart muscle causing angina. Angina with CAD is often brought on by an increased the workload on the heart muscle, such as during exercise. In contrast, coronary artery spasm most often occurs during rest. In fact, it often occurs at night during sleep, usually between midnight and early morning.

Symptoms of coronary artery spasm

The main symptom is a squeezing, crushing, or burning feeling in the chest. It is temporary, often lasting 5 to 30 minutes. Loss of consciousness may also occur. In some cases, there are no symptoms (a “silent” spasm).

Risk factors for coronary artery spasm

Risk factors are things that make you more likely to have a certain condition. Coronary artery spasm has several key risk factors. These include:

- Smoking. This is the main risk factor.

- Plaque buildup in the arteries
- Genetics
- Insulin resistance

But coronary artery spasm often occurs in people without these risk factors.

Triggers for coronary artery spasm

Triggers are things that can prompt a spasm to occur. These can include:

- Smoking
- Use of stimulant medicines and drugs such as cocaine, some anti-migraine medicines, and amphetamines
- Changes in heart rate regulation by the nervous system
- Magnesium deficiency
- Emotional stress
- Alcohol use
- Exposure to cold
- Migraines
- Use of medicine that causes narrowing of the blood vessels
- Undergoing heart procedures such as coronary angiogram and coronary artery stenting
- Botulism. This is a bacteria that can be found in food.

Diagnosis of coronary artery spasm

Your healthcare provider will take a health history and ask you to describe your symptoms. You'll have a physical exam and certain tests may be done. These include:

- **Electrocardiogram (ECG).** This test records the electrical activity of your heart. An ECG can detect an abnormal pattern, particularly during the chest pain episode. It can also detect an irregular heart rhythm associated with coronary artery spasm.
- **Echocardiogram.** This is an ultrasound of the heart that examines its valves, pumping mechanism, and blood flow. It can detect problems in heart strength and function.
- **Coronary angiography.** This is a special type of X-ray. It creates pictures of your coronary arteries. These pictures show any narrowing or blockage in these blood vessels. This is the gold standard for confirming the diagnosis of coronary artery spasm.

Treatment of coronary artery spasm

There are 2 main types of treatment or prevention for coronary artery spasm. They are medicine and lifestyle treatment. Coronary spasm is not treated or prevented using bypass procedures or invasive procedures in the coronary arteries such as angioplasty or coronary artery stents.

- Medicine, the main treatment, include:
 - **Calcium channel blockers.** These can help prevent spasms. Medicines called long-acting nitrates may be prescribed for use with calcium channel blockers.
 - **Nitroglycerin.** This can help ease the pain of a spasm. This should not be taken if you take sildenafil for erectile dysfunction. This combination can cause a dangerous drop in blood pressure.

If you are prescribed these or any other medicines, follow your healthcare provider's instructions on how and when to take them.

- **Lifestyle changes** can also help prevent spasms. Start by staying away from the triggers listed above. Also talk with your healthcare provider about what you can do to reduce your risk for CAD. This may include eating a healthy diet and starting an exercise plan. If you smoke, talk with your provider about ways to stop.

Signs of a heart attack

Because of your risk, you need to watch for signs of heart attack. Don't be afraid to **call 911**, even if you're not sure you are having a heart attack. Never drive yourself to the hospital if you think you are having a heart attack because of the risk of losing consciousness and causing an accident. Below are some common symptoms of heart attack:

- Pressure, squeezing, or pain in your chest, neck, jaw, shoulders, arms, or back
- Severe shortness of breath
- Dizziness or faintness
- Nausea and vomiting
- Rapid or irregular heartbeat
- Sweating
- Indigestion

Other possible symptoms that occur more often in women include:

- Abdominal pain
- Heartburn
- Clammy skin
- Severe tiredness
- Anxiety

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