

Aortic Dissection

What is an aortic dissection?

An aortic dissection is a tear in the inner layer of the aorta, the largest blood vessel in the body. This is a very serious problem. When blood leaks through the tear, it collects between the inner and outer layers of the aorta and causes them to separate. The separation often enlarges quickly. It can block other important blood vessels, change the way the heart works, or cause the aorta to burst.

How does it occur?

The most common causes are:

- chronic (long-standing) high blood pressure (hypertension)
- inherited diseases or birth defects that affect the strength of the aortic wall
- arteriosclerosis, a disorder that causes narrowing of arteries and reduces circulation.

Over time, continuing high blood pressure can cause the aorta to widen. This widening weakens the aortic wall, and the high blood pressure increases the stress on the wall. These conditions may make it easier for the wall to tear, but no one knows exactly what makes this happen.

Among the inherited diseases that cause an abnormal aortic wall are Marfan syndrome, Turner's syndrome, and Ehlers-Danlos syndrome. These fairly uncommon disorders all have a common feature. The middle layer of the aortic wall is made of weak tissue. People with these diseases have a high risk of dissection and sudden death.

What are the symptoms?

Symptoms may include:

- sudden, severe mid-chest, abdominal, or back pain
- dizziness or fainting
- shortness of breath
- weakness and sweating.

How is it diagnosed?

Your healthcare provider will review your symptoms, examine you, and ask about your medical history. He or she may do the following tests:

- chest X-ray

- electrocardiogram (ECG), which records electrical impulses of your heart
- CT scan (computerized X-rays)
- angiogram, which uses X-rays after a dye has been injected into an artery
- MRI
- cardiac ultrasound scan, which gives a moving image of the heart and blood vessels using sound waves
- blood tests.

How is aortic dissection treated?

Aortic dissection is a medical emergency. Treatment must be started as soon as possible. The choice of treatment depends mainly on the location of the dissection in the aorta. In some cases, you may be given a sedative and fast-acting IV medicine to lower high blood pressure. In other cases, you may need surgery to replace the weakened part of the aorta with a graft of man-made material. Sometimes bypass surgery and valve replacements are done at the same time.

How long will the effects last?

With successful medical or surgical treatment, there are usually no lasting effects. You can usually resume normal living.

How can I take care of myself?

- If you tend to have high blood pressure, carefully follow your healthcare provider's instructions for keeping it under control.
- If you or a close relative have Marfan syndrome or other inherited diseases, talk with your healthcare provider about tests to check your risk for aortic dissection.
- If you are a smoker, stop smoking.
- Lose weight if you are overweight. Maintain your ideal weight.
- Eat a healthy diet that includes:
 - avoiding salty foods and not adding salt to food
 - avoiding foods high in fat and cholesterol.
- Exercise according to your healthcare provider's instructions.
- Get enough rest and learn to use relaxation methods to help reduce stress.

How can I help prevent aortic dissection?

The best prevention is control of high blood pressure, even for people with the inherited forms of aortic wall weakness. For people with Marfan syndrome, taking drugs called beta blockers helps prevent aortic dissection.

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