



What Is Aortic Dissection (AD)?

The **aorta** is the largest artery of the body. It delivers oxygenated blood from the heart to the rest of the body.

Aortic dissection (AD) is a rare but serious injury to this artery. It is life-threatening and requires immediate medical attention. About 24 people out of every 1 million experience AD every year in the U.S.

AD is caused when the inside layer of the aortic wall tears and then peels away from the next layer of the aorta. This tear allows some blood to continue to travel in one direction while it creates a new area where some blood stays still.

Serious problems can happen upstream or downstream from the tear. There may be a large decrease in blood flow to various organs and tissues. Branches of the aorta that may be affected include:

- The kidneys, also called the renal arteries
- The gut, also called the mesenteric arteries
- Arteries to the brain
- Arteries to the arms or legs

The tear may also affect blood flow to the heart. This can cause a heart attack. In some cases, AD can result in internal bleeding around the heart, causing loss of consciousness or death.

- Family history of AD
- Certain heart conditions like a bicuspid aortic valve
- Although rare, AD may also occur as a complication of open-heart surgery or heart catheterization.

Symptoms

Location of pain:

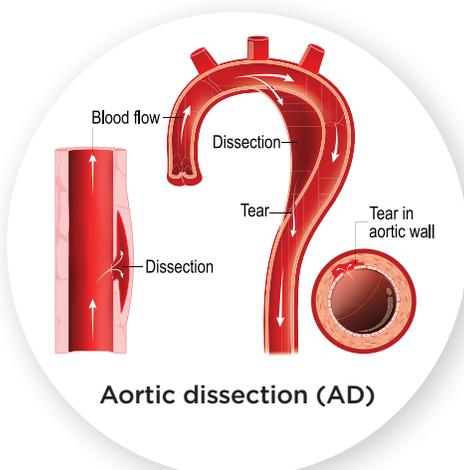
- Chest
- Back
- Flank (sides of your body)
- Abdomen
- Legs

Quality of pain:

- Pain that is tearing or sharp
- Sudden onset of pain
- Pain that moves or radiates

Conditions that affect brain, spinal cord, or nerve function:

- Coma/altered consciousness
- Paralysis
- Difficulty with speaking or slurred speech
- Light-headedness/fainting
- Difficulty breathing/shortness of breath
- Numbness in arms or legs



Risk Factors

The main preventable risk factor for AD is high blood pressure (hypertension). Over time, **hypertension** weakens the aortic wall. This makes a sudden tear of the inner lining of the aorta more likely to happen. The tear exposes the middle of the aorta to very high aortic blood pressure.

Other risk factors for AD are:

- Marfan or Ehlers-Danlos syndrome. These are genetic disorders of blood vessels and connective tissues.
- An aortic aneurysm or enlargement of the aorta

PREVENTION

If you have high blood pressure, work with your health care team to reach a blood pressure goal of less than 130/80 mmHg. The National Institutes of Health recommends:



Losing excess weight



Getting at least 30 minutes of exercise each day



Eating heart-healthy foods like whole grains, berries, and leafy green vegetables



Quitting smoking



Reducing sodium intake



Limiting alcohol



Taking medication for high blood pressure, if prescribed

Next Steps if Your Doctor Suspects You Have AD

Diagnosis

No blood tests can diagnose AD. When a doctor suspects AD, an imaging test will evaluate the aorta. There are three primary tests used to diagnose it:

- CT scan
- MRI scan
- A **transesophageal echo (TEE)**

A TEE is a special type of ultrasound test where a small probe is passed through the mouth and into the stomach and esophagus to take detailed pictures of the heart and aorta.

Treatment

In all cases, the first treatment for patients with AD is getting control of blood pressure with medications,

usually given through an intravenous (IV) line. Patients with AD are usually monitored in the intensive care unit.

A team of experts care for patients with this condition, including:

- Emergency medicine physicians
- Cardiac and vascular surgeons
- Cardiologists
- Radiologists
- Internal medicine specialists

Treating AD depends on several factors, including:

- Patient's symptoms
- Where the tear is in the aortic wall
- How much of the aorta is involved
- The effects of the dissection on the branch vessels of the aorta and the passage of blood through the organs

For patients with AD who require invasive treatment, surgery to repair the dissected portion of the aorta is generally recommended. In some cases, placing stents during a minimally invasive procedure can treat AD.

For all patients who have AD, long-term follow-up with a physician is an important part of treatment. Blood pressure and heart rate need to be monitored and controlled with medications and changes to lifestyle. For many patients, CT or MRI scans will be repeated at regular intervals (such as every six months or every year) to monitor the size of the aorta and whether the problem is staying the same, getting better, or getting worse.

For more information, review these related flyers:

- Lifesaving Tips About ... High Blood Pressure and PAD
- What Is an Abdominal Aortic Aneurysm?

Questions for Your Doctor

It is important to work closely with your health care provider about your diagnosis and treatment. You can bring this form with you to help talk to your medical provider about any questions and concerns you may have.



