

Patient information from BMJ

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Aortic dissection

Aortic dissection is a type of damage that can happen to the aorta, which is the main artery that sends blood around the body. This damage causes symptoms including sudden severe chest pain, as if something is tearing or ripping.

Aortic dissection is a medical emergency that requires urgent treatment. If you think that you or someone you are with has symptoms, seek medical help straight away.

What is aortic dissection?

The **aorta** is the body's main artery. Arteries are one of two types of blood vessels in the body.

- **Arteries** carry blood from the heart to various organs around the body.
- **Veins** take the blood back to the heart.

The wall of the aorta is made up of several layers, a bit like the layers in an onion. With aortic dissection, the inner layer tears and blood leaks into the space between some of the layers.

If the leak is large, then there can be a big drop in the amount of blood that can carry oxygen and nutrients from the heart around your body.

If someone loses enough blood in this way they can bleed to death, just as they could from an external injury.

With treatment, most people with aortic dissection will recover. But without treatment, more than half of people will die within 24 hours.

Aortic dissection is not very common. But certain things can make it more likely to happen. Doctors call these **risk factors**. Risk factors for aortic dissection include:

- Having existing heart problems
- Having a condition called Marfan syndrome, which causes weakening in some of the body's tissues, such as arteries
- Smoking
- Having close relatives who have had similar problems

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- Having high blood pressure
- Being male, and
- Being over 50 years old.

What are the symptoms?

The main symptom of aortic dissection is **severe pain**. This pain:

- Comes on suddenly
- Affects the chest, back, or abdomen (tummy), and
- Feels as if something is ripping or tearing.

Less common symptoms can include:

- Weakness
- Numbness and tingling, and
- Being unable to move your legs.

If your doctor thinks that you might have aortic dissection, they will examine you physically, and you will probably have tests, including blood tests and scans.

What treatments are available?

Treatments for aortic dissection are aimed at keeping you stable in the short term, and then repairing your aorta.

Your short-term treatments might include:

- Oxygen to help you breathe more easily
- Fluids to keep you hydrated
- Medicines to regulate your heartbeat and blood pressure, and
- Pain relief.

Treatment to repair your aorta will depend on how severe the damage is.

If the damage is not too serious, you might just be given medicines to control your pain, heart rate, and blood pressure while the tissues in the aorta get stronger over time. You will need to keep taking these medicines for the long term.

If the damage is more serious, you will need **surgery** to repair the aorta.

What to expect in the future

After having any treatment for aortic dissection, your doctor will advise you to avoid certain types of exercise. This helps to reduce pressure on your aorta, which could damage it again.

For example, you should **avoid heavy lifting**, which can put a lot of sudden pressure on your blood vessels.

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Other types of exercise should be fine after a little while. For example, **aerobic exercises** such as jogging, swimming, and cycling, should be okay, as long as you don't push yourself too hard. But talk to your doctor before starting to exercise again.

Aortic dissection can be followed by other problems with your heart and blood vessels in the future. So your doctor is likely to want to check on you every few months, at least for the first year or so. This might mean having scans and blood pressure tests.

Your doctor will also strongly advise you to stop smoking (if you smoke) and to think about whether you need to eat a more healthy diet.

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