Acute Aortic Syndromes

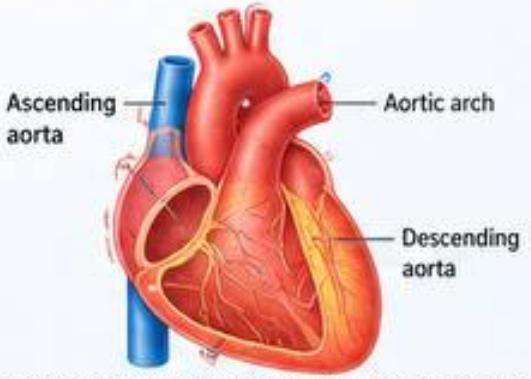
Information for Patients and Families

Serious conditions affecting the main artery from the heart (aorta)

What are acute aortic syndromes?

Acute aortic syndromes are serious conditions that affect the aorta, the main blood vessel that carries blood from the heart to the rest of the body.
They include:

- Aortic dissection (a tear in the aortic wall)
- Intramural haematoma (bleeding within the wall)
- Penetrating aortic ulcer (an ulcer that damages the aortic wall)
- Aortic rupture (complete tear, often fatal)



The aorta carries blood from the heart to the rest of the body

How does it happen?

The wall of the aorta can become weak and tear. Blood then flows between the layers of the aortic wall (dissection) or through a hole (rupture). This can reduce blood flow to vital organs.

Risk factors include:

- High blood pressure
- Aortic aneurysm
- Connective tissue disorders (e.g. Marfan syndrome)
- Bicuspid aortic valve
- Family history
- Smoking
- Older age
- Rarely, after trauma or certain medical procedures

Who is at higher risk?

- People with high blood pressure
- People with a known aortic aneurysm
- People with genetic conditions (e.g. Marfan syndrome, Ehlers–Danlos syndrome)
- People with a bicuspid aortic valve
- People with a family history
- People who smoke
- Older people (usually over 60)
- Men are more commonly affected
- Rarely, younger people (e.g. in pregnancy or after trauma)



Sudden, severe chest pain is the most common symptom

Common symptoms

- Sudden, severe chest, back or abdominal pain (often described as a "tearing" pain)
- Pain between the shoulder blades
- Collapse or fainting
- Shortness of breath
- Weakness or numbness (if blood flow to the brain or limbs is affected)
- Different blood pressure in each arm
- New or worsening heart murmur
- Signs of stroke (e.g. difficulty speaking, weakness on one side)
- In some cases, no symptoms until serious complications occur



Acute aortic syndromes are medical emergencies



CT scan showing aortic dissection (courtesy of Radiopaedia.org)

Seek urgent medical attention if you have:

- Sudden, severe chest, back or abdominal pain
- Pain that does not go away
- Shortness of breath
- Fainting or collapse
- Signs of stroke (e.g. weakness, difficulty speaking)
- Loss of feeling or movement in an arm or leg
- Any other sudden, severe or unusual symptoms

Call 999 immediately or go to the nearest A&E department.

Key messages

- Acute aortic syndromes are life-threatening.
- Early diagnosis and treatment improve outcomes.
- If you have sudden, severe chest or back pain, seek urgent medical help.
- Control your blood pressure and stop smoking.
- Attend all follow-up appointments.
- Contact your healthcare team if you are concerned about any symptoms.

Acute Aortic Syndromes

Diagnosis, Treatment, Recovery and Looking After Yourself

How is it diagnosed?

- **Clinical assessment** – your symptoms, blood pressure and examination findings.
- **Imaging tests:**
  - CT scan (main test)
  - MRI scan (if needed)
  - Transoesophageal echocardiogram (ultrasound)
  - Sometimes X-ray or ultrasound
- **Blood tests** – to assess organ function.



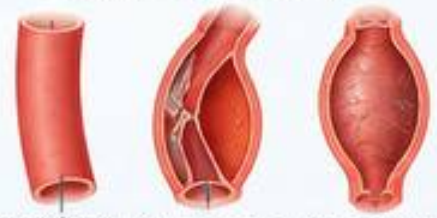
CT angiogram showing aortic dissection
(courtesy of Radiopaedia.org)

Treatment

- **Treatment** depends on the type and severity.
- **Blood pressure control** – to reduce stress on the aorta (usually with IV medicines initially).
- **Surgery** – often needed for type A dissection (ascending aorta) or if there is rupture, ongoing bleeding or reduced blood flow to organs.
- **Stent procedure** (endovascular repair) – often used for type B dissection (descending aorta) in selected cases.
- Close monitoring in hospital – in a specialist centre.

Possible complications

- Rupture of the aorta
- Reduced blood flow to the brain (stroke)
- Reduced blood flow to the heart (heart attack)
- Reduced blood flow to the kidneys (kidney failure)
- Reduced blood flow to the bowel (bowel damage)
- Aortic aneurysm (later in life)
- Death (especially if untreated)



Normal aorta | Aortic dissection (tear in wall) | Aortic aneurysm (weakened wall)

Looking after yourself

- Take your medicines as prescribed (e.g. for blood pressure).
- Keep your blood pressure under control.
- Stop smoking.
- Stay active as advised by your healthcare team.
- Eat a healthy, balanced diet.
- Seek support from family, friends or patient groups.
- Attend all follow-up appointments.

Preventing future problems

- Keep your blood pressure well controlled.
- Do not smoke.
- Discuss screening with family members if there is a genetic risk.
- Attend regular imaging follow-up (e.g. CT or MRI) as advised.
- Seek medical advice before any major surgery or invasive procedures.
- Discuss risks with your doctor if you plan to travel long distances.

Follow-up plan

Your follow-up appointments will usually include:

- Review with a cardiologist or vascular specialist
- Repeat imaging (CT or MRI) to monitor the aorta
- Monitoring and adjustment of medications
- Discussion about lifestyle, activity and long-term care

Your next appointment:

Date: _____ Time: _____

Location: _____

Contact number: _____

Useful contacts

Cardiology / Vascular Team: _____
GP: _____
NHS 111 (non-urgent medical advice): 111
Emergency (A&E): 999

Further information

NHS – Aortic Dissection
www.nhs.uk/conditions/aortic-dissection/
Aortic Dissection Awareness UK
www.aorticdissectionawareness.org
British Heart Foundation
www.bhf.org.uk