National University Heart Centre Singapore

Thoracic Aortic Aneurysm

Scan the QR code to visit the Aortic Centre website for more details.

STEP 01

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STEP 02

The QR code will decode instantly. You'll be brought to **https://www.nuhcs.com.sg/Aortic-Centre**

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What is proximal aortic aneurysm?

Proximal thoracic aortic aneurysm is a progressive dilatation of the aorta, one of the two large vessels arising from the heart, close to its origin in the chest. It is defined by a diameter of at least 50% greater than the normal size of the artery. The estimated incidence is 6 cases per 100,000 persons annually. A large or rapidly enlarging aortic aneurysm predisposes to the risk of rupture, usually a fatal complication.

Who is at risk?

Aneurysm usually occurs due to the degeneration of the aorta with age. Risk factors include hypertension, smoking, chronic obstructive lung disease and atherosclerotic disease.

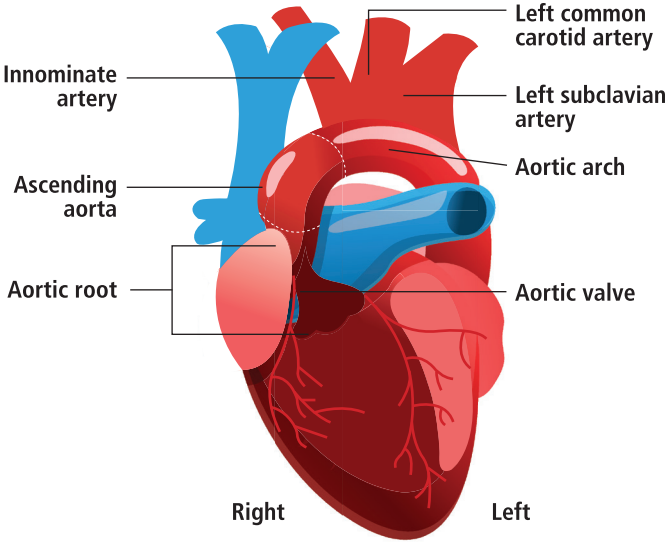
It may also be caused by a congenital disorder such as Marfan syndrome or bicuspid aortic valve.

What are the symptoms?

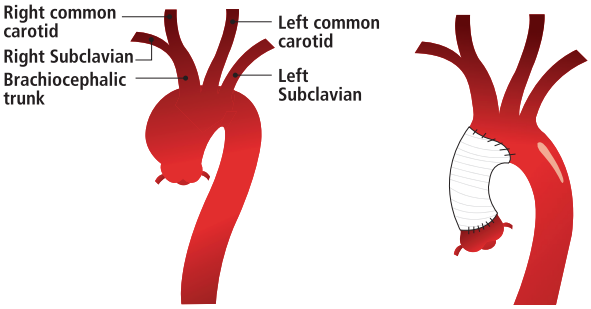
Most patients may remain asymptomatic unless the aneurysm grows large and compresses on surrounding structures. Symptoms may include chest pain, hoarseness, wheeze or cough and distended neck veins. Erosion into the trachea or gullet may result in coughing or vomiting blood respectively.

How is aortic aneurysm diagnosed?

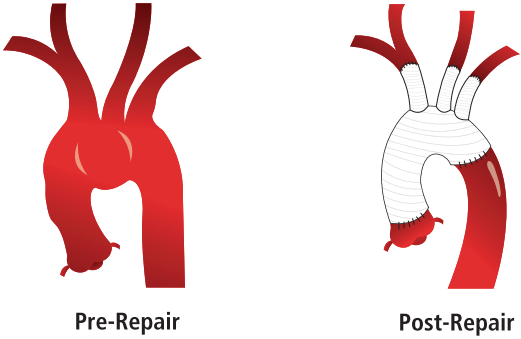
Aortic aneurysm is diagnosed on contrasted CT scan, or echocardiography if more proximal. A CT scan of the whole aorta is usually required to assess for aneurysms elsewhere along the aorta. Echocardiography is also done for aneurysm of the aortic root to evaluate the function of the aortic valve for leakage.



Ascending Aortic Aneurysm

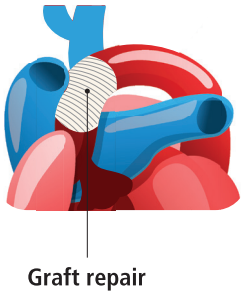


Arch Aneurysm

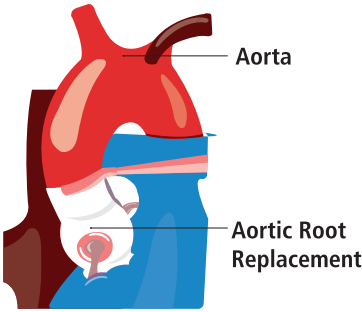


What is the treatment?

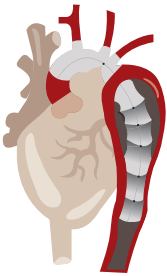
Ascending Aorta Replacement



Bentall Procedure



Hybrid Arch Surgery



Arch Replacement

Initial treatment for early stage aneurysm includes medications to control blood pressure, risk factor control and surveillance.

However, larger aneurysms pose an exponential risk of rupture with increasing size, and warrant surgery. This is usually ≥55mm, but the threshold decreases in patients with congenital disorders and if other open heart surgery is also required.

Open heart surgery is performed to replace the aneurysmal segment of the aorta, and is performed under general anaesthesia with the use of a heart-lung machine.

What happens after surgery?

Surgery will repair the area of aneurysm. However, there may be a possibility of aneurysm forming distally after repair of a root aneurysm, or other chronic complications.

Your surgeon will advise you on the necessary monitoring and follow-up. Most patients will need surveillance with serial CT imaging. If there is associated valve disease, coronary artery disease or existing cardiovascular risk factors, you should also follow up with a cardiologist who will also help to optimise your cardiac medications and manage your modifiable risk factors.

As this condition may also be related to a genetic disorder, especially in younger patients, your surgeon may advise you to consult a genetics specialist, who will take you through what you need to know about genetic testing, discuss your options and decide whether or not to proceed with it.

Location

Contact Information

National University Heart Centre, Singapore

NUH Main Building Zone F, Heart Clinic
Opening Hours: 8.00 am - 5.30 pm (Monday - Friday)
Closed on Weekend & Public Holidays
Tel: **8938 4677**
Email: **aortic_centre@nuhs.edu.sg**
Website: **www.nuhcs.com.sg**

Getting to NUH

Circle Line Kent Ridge MRT Station

Commuters can transit at the Buona Vista MRT Interchange and alight two stops after at the Kent Ridge Station. The station is served by three exit-entry points.

Exit A: Right at the doorstep of National University Heart Centre, Singapore.

Exit B: Along South Buona Vista Road, which links to Singapore Science Park 1.

Exit C: Leads to NUH Medical Centre.

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