



Aortic Valve Replacement

A guide to help you understand your options

There are many things to think about when planning to have your aortic valve replaced. Your heart surgeon will review the options and recommend the best choice for you.

Major issues related to valve choice include:

- Artificial valve durability.
- Need for life long blood thinning (anticoagulation).
- Ease of insertion.

Minor issues about valve choice include:

- Homograft (human tissue valve) availability.
- Noise of the valve.
- Resistance to infection.

Five Valve Options

1. **A mechanical valve** is made of carbon fiber. The valve is easily placed into the aorta, and lasts for many years. You will need to take blood thinning (*anticoagulation*) medicine for the rest of your life to prevent blood clots from forming around this type of valve.
2. **A stented tissue valve** is from a pig or cow. The tissue is supported by a metal stent (Carpentier-Edwards pericardial valve). This valve is less durable. A young person would have to have it replaced at some time. There usually is no need to take blood-thinning (*anticoagulation*) medicine. It is easier to place. This valve is a good option for a patient who cannot take blood-thinning medicine (women of childbearing age would be in this category). It is also a good option if you are older and are not likely to need a replacement.

Questions?

Your questions are important. Call if you have questions or concerns.

Cardiac Nurse Case
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Monday to Friday
8 a.m. to 5 p.m.

3. **A stentless tissue valve** is from a pig. This is a new valve that is likely to be more durable. You would not need to take blood thinning (*anticoagulation*) medicine. It is a little more difficult to insert, and has only recently been released by the FDA for general use. University of Washington Medical Center was involved with the research on this valve and therefore has much experience with it.
4. **An aortic human tissue valve (homograft)** is taken from a person who has died and arranged to donate his/her valve. Because of this it is not always available. It may be a little bit more durable. It is slightly harder to insert. It is often used in patients with infection of their valve.
5. **The Ross procedure** is harder to do. The aortic valve is removed. The pulmonary valve is taken and moved to where the aortic valve was. The place where the pulmonary valve was is replaced with human tissue valve donated from a person who died (homograft). The size and shape of your aortic and pulmonary valves may affect whether you can have this surgery. This aortic valve surgery offers the most durable tissue valve in the aortic position. Rarely, the pulmonary homograft has to be replaced. This valve surgery does not require you to take blood-thinning (*anticoagulation*) medicine.

Size of Incision

- The first four valve options can be placed through a mini-sternotomy in some patients. This is an incision in the center of the chest from the top of the breastbone to halfway down the breastbone.
- The fifth valve option, the Ross, requires a full median sternotomy. This incision is in the center of the chest. It starts at the top of the breastbone and continues all the way down to below the breastbone.

Call the Cardiac Nurse Case Manager If:

- You have questions.
- You need more information about your surgical options for aortic valve surgery.
- You have made your choice and would like to schedule your operation.

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