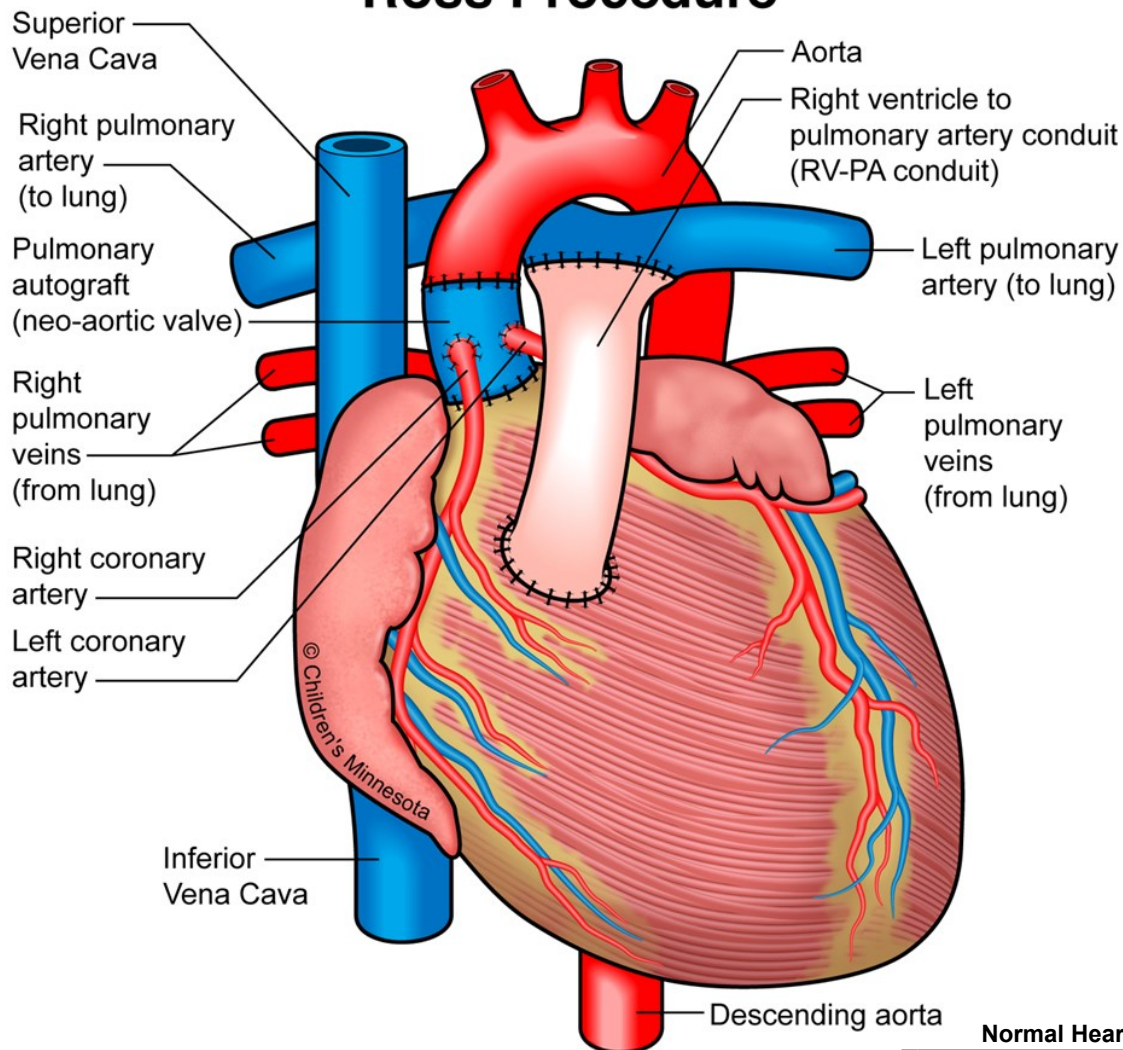
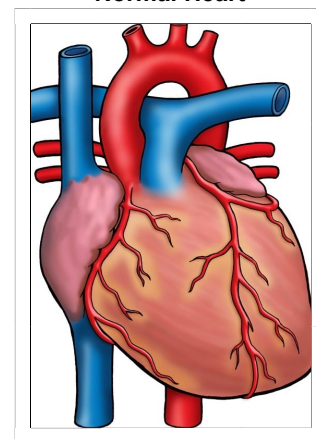


## Ross Procedure



**Normal Heart**



The Children's Heart Clinic, 2530 Chicago Avenue S, Ste 500, Minneapolis, MN 55404  
 612-813-8800 \* Toll Free: 1-800-938-0301 \* Fax: 612-813-8825  
 Children's Hospital of Minnesota, 2525 Chicago Avenue S, Minneapolis, MN 55404

---

## Ross Procedure

The Ross procedure is a surgery that can be done to replace a narrowed, or stenotic, aortic valve. This surgery is often done when a prosthetic aortic valve is too large to fit into the patient's native aortic annulus. During this procedure, the narrowed aortic valve is replaced with the patient's own pulmonary valve and a right ventricle to pulmonary artery (RV-PA) conduit is used to replace the patient's pulmonary valve. There are many types of materials used for RV-PA conduits. Depending on the surgical plan and patient's anatomy, conduits made of Gore-tex®(Gore), homograft (cadaver valved tissue), Contegra® conduits (Medtronic)(valved bovine (cow) jugular vein), or Hancock® conduits (Medtronic) (Dacron tube graft containing a porcine (pig) valve) can be used.

A median sternotomy (incision through the middle of the chest) is done through the patient's prior incision, if present. The patient is placed on cardiopulmonary bypass (heart-lung machine). The aorta is opened and the aortic leaflets are removed. If part of the surgical plan, incisions can be made to enlarge the area beneath the aortic valve. The coronary arteries are detached from the aorta with a surrounding "button" of tissue. The pulmonary valve with surrounding tissue, or "autograft," is harvested. The pulmonary autograft is then sutured into the aortic position. Holes are cut into the side of the autograft, and the coronary buttons are sewn into the proper location. The ascending aorta is then sewn onto the pulmonary autograft, to complete the newly constructed aorta. An appropriate sized RV-PA conduit is selected. One end of the conduit is sewn onto the incision on the pulmonary artery and the other end is sewn onto the incision on the right ventricle.

### Typical Post-Operative Course:

- Surgery Length: 5 hours
- Typical Lines: Most patients will return to the Cardiovascular Care Center after surgery with a breathing tube, an arterial line to monitor blood pressure, a central venous line (for giving IV medicines and drawing labs), a peripheral IV, chest tubes to drain fluid, a Foley catheter to drain urine, and temporary pacing wires.
- Typical Post-Operative Recovery: The breathing tube is generally removed within 24 hours after surgery. The arterial line is usually removed within a few days, once most IV medicines are stopped. The central venous line is removed once most IV medicines are stopped and labs no longer need to be drawn. Chest tubes are usually removed 24-48 hours following surgery, once the output of fluid is minimal. Depending on the type of conduit placed and surgical plan, the patient may be placed on aspirin for a period of time after surgery.
- Typical Length of Stay: A patient usually stays in the hospital for 6 days following a Ross procedure.

**Typical Home Medications:** Children will require one or more medications at home following a Ross procedure such as:

- Diuretics (Lasix) to control fluid
- Anticoagulant (Aspirin) to prevent clotting
- Bacterial endocarditis prophylaxis may be required.