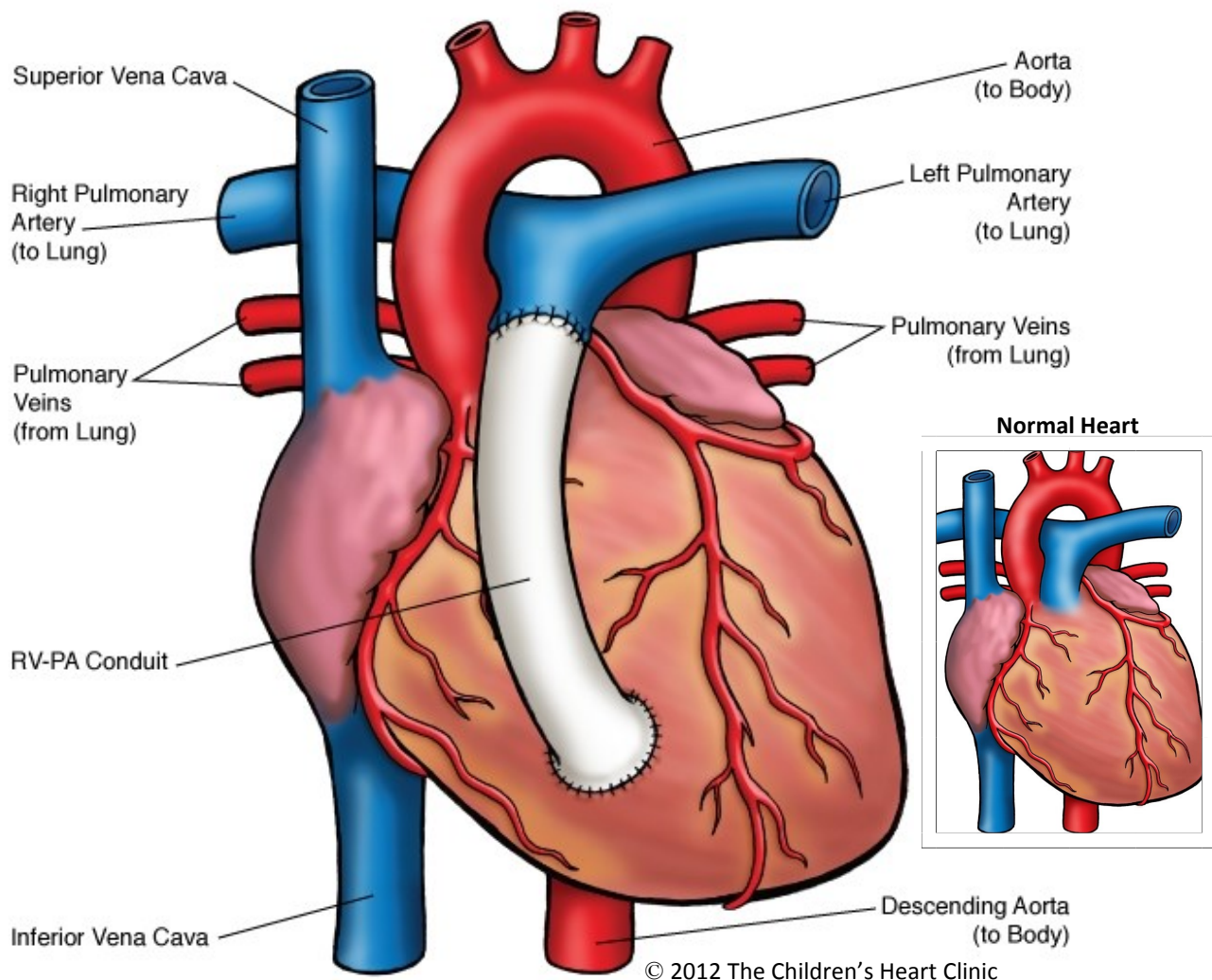


Right Ventricle to Pulmonary Artery Conduit (RV-PA)



NOTES:

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Right Ventricle to Pulmonary Artery (RV-PA) Conduit

A right ventricle to pulmonary artery (RV-PA) conduit is a means to supply blood flow to the lungs. They can be placed for a variety of heart defects, including tetralogy of Fallot, pulmonary atresia, or pulmonary stenosis. RV-PA conduits are also part of a many complex surgeries for congenital heart disease, including the Ross procedure, Rastelli procedure, or in the Sano modification of the Norwood procedure. They can be placed to fix a regurgitant (leaky) or stenotic (narrowed) pulmonary valve. RV-PA conduits can also be used to replace an absent right ventricular outflow tract.

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). Incisions are made on the pulmonary artery and right ventricle. Prior prosthetic material, if present, is removed. 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: 4 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 occasionally, temporary pacing wires.
- Typical Post-Operative Recovery: For patients with straightforward RV-PA conduit placement, without other complex surgery, the breathing tube is usually removed shortly 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 4 days following a RV-PA conduit placement.

Typical Home Medications: Children will require one or more medications at home following placement of a RV-PA conduit such as:

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