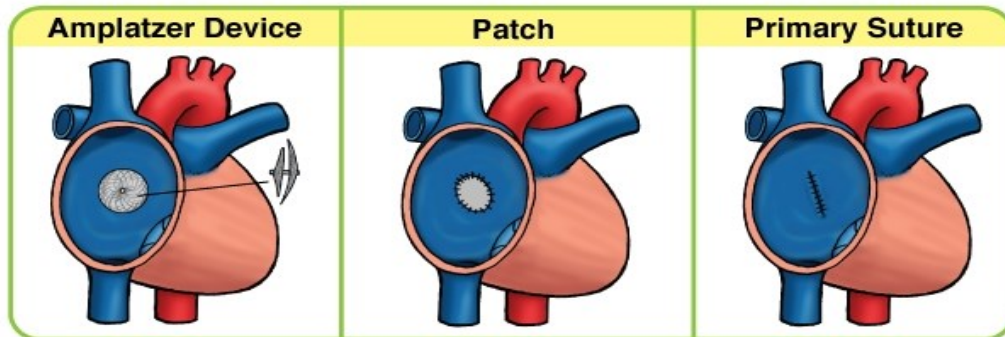
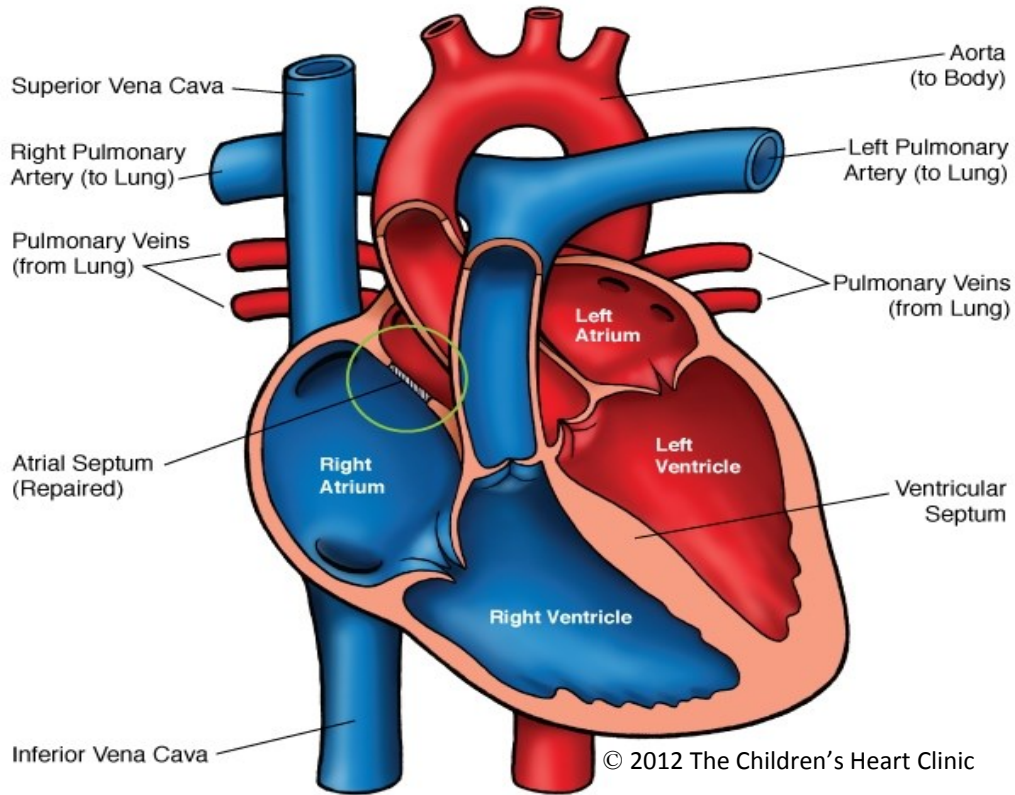


## Atrial Septal Defect (ASD) Repair



**NOTES:**

Children's Heart Clinic, P.A., 2530 Chicago Avenue S, Ste 500, Minneapolis, MN 55404  
 West Metro: 612-813-8800 \* East Metro: 651-220-8800 \* Toll Free: 1-800-938-0301 \* Fax: 612-813-8825  
 Children's Minnesota, 2525 Chicago Avenue S, Minneapolis, MN 55404  
 West Metro: 612-813-6000 \* East Metro: 651-220-6000

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## Surgical Closure of Atrial Septal Defect (see Atrial Septal Defect)

### Secundum ASD:

- Many will close spontaneously
- **Catheter Based Intervention:** An Amplatzer™ device (St. Jude) can be used to close the hole through a catheter inserted in the child's leg vein. This device is used in large, centrally located secundum ASDs.
- **Surgery:** A median sternotomy (incision through the middle of the chest) is done. The child is placed onto cardiopulmonary bypass (heart-lung machine). The ASD is either closed primarily with suture or with a patch of the patient's own pericardium (sac surrounding the heart).

**Patent foramen ovale (PFO):** Most close spontaneously or don't require a surgical intervention.

### Primum ASD:

- **Surgery:** A median sternotomy (incision through the middle of the chest) is done. The child is placed onto cardiopulmonary bypass (heart-lung machine). The ASD is closed with a patch of the patient's own pericardium (sac surrounding the heart). This defect is often associated with a "cleft," or gap, in the mitral valve. Usually this "cleft" is repaired with suture. The valve is tested to make sure it does not leak and is not too narrow.

### Sinus venosus ASD (with or without partial anomalous pulmonary venous return (PAPVR)):

- **Surgical Patch closure:** A patch of pericardium is usually used to close the ASD while the child is on cardiopulmonary bypass (see above)
- **Surgical Warden procedure:** The superior vena cava is removed at its junction with the right atrium and sutured to the right atrial appendage. The sinus venosus ASD is then closed with a patch of pericardium.

### Unroofed coronary sinus:

- **Surgery:** A patch, usually pericardium, is used to tunnel the coronary sinus blood flow to the right atrium. Another patch is then used to close the ASD (see above)

### Typical Post-Operative Course:

- Surgery Length: 3-4 hours
- Typical Lines: Most children 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 often, temporary pacemaker wires.
- Typical Post-operative Recovery: The breathing tube is usually removed shortly after surgery. The central line is left in place as long as labs and IV medicines are needed. Chest tubes usually are removed 24-48 hours after surgery, once fluid output decreases.
- Typical length of hospital stay: A child will typically stay in the hospital for 3-5 days following a surgical ASD closure.

**Typical Home Medications:** Children may require one or more medications at home following an ASD closure such as:

- Diuretics (Lasix) to control fluid
- Anticoagulant (Aspirin) to prevent clotting after catheter device closure