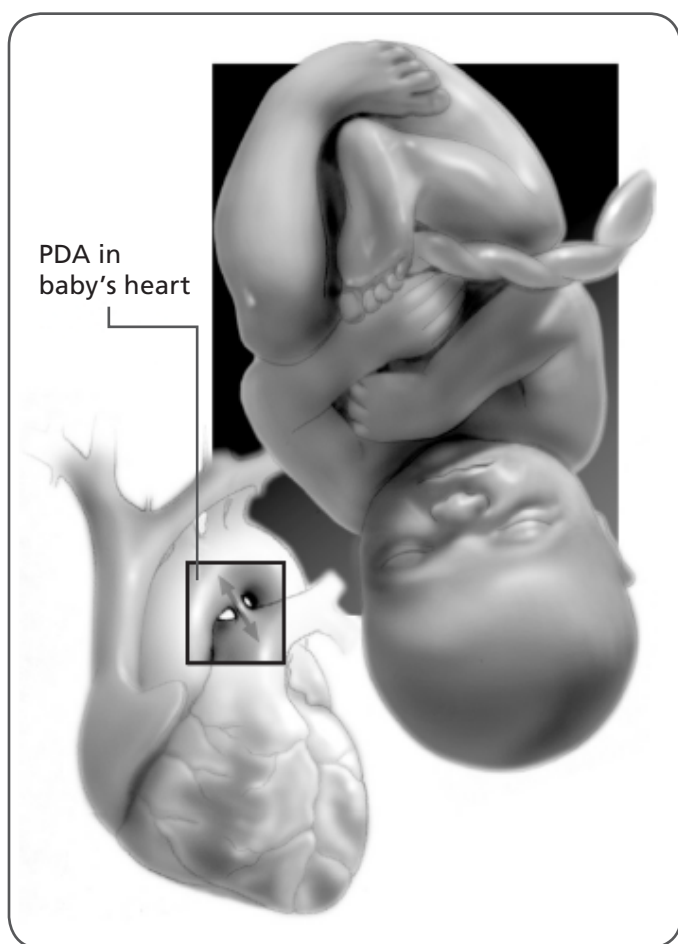


Let's Talk About...

Patent Ductus Arteriosus (PDA) Repair

A patent ductus arteriosus (PDA) is a connection between two arteries. Patent means “open.” The ductus arteriosus connects the aorta (the main artery that carries blood and oxygen to the body) and the pulmonary artery (the artery that takes blood from the heart to the lungs to get oxygen).



A baby in the womb gets all oxygen and nutrients from the mother's placenta. The baby does not need lungs to breathe in oxygen or supply oxygen to the blood. Before a baby is born, the PDA lets blood flow directly from the pulmonary artery to the aorta without going to the baby's lungs.

When a baby is born, the pressure in the baby's lungs drops. This allows the PDA to begin to close on its own. If the PDA stays open, the lungs will begin to overload with too much blood. A PDA can hurt a baby's heart because the heart has to work very hard to carry the blood to the body.

If your child is premature or has another lung or heart problem, the PDA may not close on its own or may not close when it should. This problem affects about 1 out of 5 babies who weigh less than 3 pounds, and about 2 out of 5 babies who weigh less than 2 pounds.

How is a PDA diagnosed?

Babies with PDAs may have the following signs or symptoms:

- They may work harder to breathe.
- They may need extra oxygen.
- They may need a ventilator (mechanical breathing tube) to help breathe.
- They may have a heart murmur (heard through a stethoscope).
- Their hearts may look bigger than normal on a chest x-ray.
- Their echocardiogram (heart ultrasounds) show a PDA.

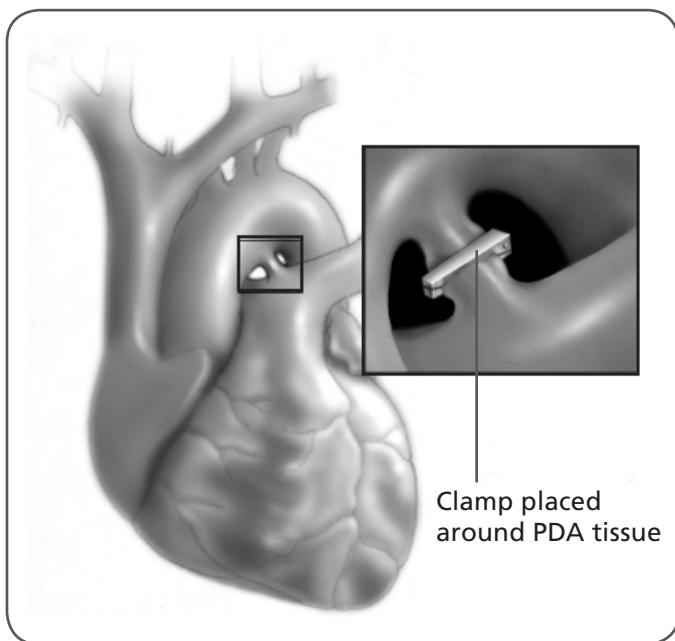
How is a PDA treated?

If your child's condition is stable and the PDA is small, it may close on its own. Your healthcare provider may prescribe indomethacin if the PDA is causing problems. Your child may need to have surgery to close the PDA if the medicine isn't safe for their condition or if the PDA does not close with the medicine.

How is PDA surgery performed?

A pediatric heart surgeon performs the surgery to close your child's PDA. The surgery takes about an hour. This is what you can expect:

- 1 Your child will receive general anesthesia and will not feel the procedure.
- 2 The anesthesiologist places an endotracheal tube (breathing tube) and connects it to a ventilator (breathing machine) that will breathe for your child during surgery.
- 3 The surgeon makes an opening on the left side of your child's chest.
- 4 The surgeon gently spreads the ribs apart and moves the lung aside.
- 5 The surgeon places a suture or clip around the PDA to close off this connection (see illustration).



- 6 The surgeon may place a tube in your child's chest to drain air and fluid that builds up in the chest.
- 7 The surgeon closes the opening in your child's chest with sutures and covers it with a bandage.
- 8 Your child will be given antibiotics to prevent infection and pain medicine to help them rest comfortably. Blood will be available in case your child needs it during the surgery.

What happens after the surgery?

Nursing staff monitors your child before, during, and after PDA surgery. They watch carefully for problems and will respond quickly if anything happens.

Within a day or two after surgery, your child's lungs should improve. If the surgeon placed a chest tube, it is removed after it stops draining—usually in a day or two. The bandage is removed at the same time. The incision usually heals very quickly, and the steri-strips can be removed within 10–14 days.

If you have more questions...

The heart surgeon will talk with you before the surgery. You may also ask your child's nurse, nurse practitioner, or neonatologist for more information.

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