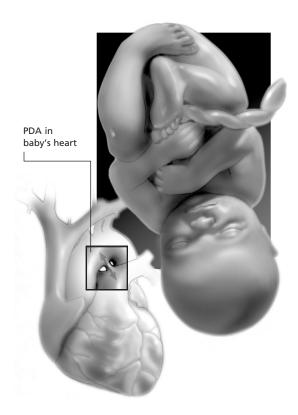
Let's Talk ABOUT...

A patent ductus arteriosus (PDA) is a connection between two arteries. "Patent" means "open." The ductus arteriosus is a connection between 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 the oxygen and nutrients his body needs from the mother's placenta. He does not need his lungs to breath in oxygen or supply oxygen to the blood. In an unborn child, 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



Patent ductus arteriosus (PDA) repair

can strain a baby's heart because the heart has to work very hard to carry the blood to the body.

If your baby is premature or ill with another lung or heart problem, the PDA may not close on its own, or the closure may be delayed. This problem affects about 20 out of 100 babies who weigh less than 1,500 grams, and about 40 out of 100 babies who weigh less than 1,000 grams.

How is a PDA diagnosed?

A baby with a PDA may have the following signs or symptoms:

- He may work harder to breathe.
- He may need extra oxygen.
- He may need a breathing tube (ventilator) to help breathe.
- He may have a heart murmur (heard through a stethoscope).
- The heart may look bigger than normal on a chest x-ray.
- The cardiologist can tell if he has a PDA by doing an echocardiogram (an ultrasound of the heart).

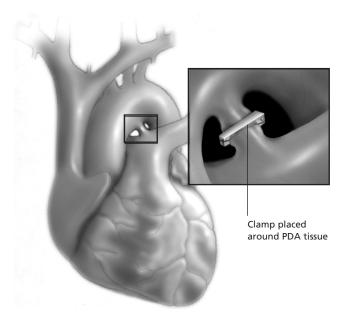
How is a PDA treated?

If your baby's condition is stable and his PDA is small, it may close on its own. If it is causing problems, he may be treated with a medication called indomethacin (Indocin®). If your baby's condition makes it unsafe to use this medication, he may need to have surgery to close the PDA.

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 baby will receive general anesthesia and does not feel the procedure.



- **2.** The anesthesiologist places a breathing tube (ventilator) and connects it to a breathing machine (ventilator) that will breathe for your baby during surgery.
- **3.** The surgeon makes an opening (incision) on the left side of your baby's chest.
- **4.** The surgeon gently spreads the ribs apart and gently 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 baby's chest to drain air and fluid that builds up in the chest.
- **7.** The surgeon closes The incision on your baby's chest with sutures and covers it with a bandage.
- **8.** Your baby will be given antibiotics to prevent infection, and pain medications to help him rest comfortably. There will be blood available in case your baby needs it during the surgery.

What happens after the surgery?

Your baby is monitored before, during, and after PDA surgery. The nursing staff carefully watch for problems, and respond quickly if anything occurs.

Within a day or two after surgery, your baby's lungs should begin to 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 within a week, the bandage can be removed.

If you have more questions...

The heart surgeon will be talking to you about the surgery before the operation. You may also ask your baby's nurse, nurse practitioner, or neonatologist for more information.

