

Pneumothorax and Other Air Leaks

What is a Pneumothorax?

A pneumothorax (new-mow-thor-ax) refers to 'popped' air sacs (alveoli) in the lung that cause air to escape into the area between the lung and the chest wall. A pneumothorax can cause collapse of the lung, and the baby may have difficulty breathing. A pneumothorax is considered an 'air leak'.

There are other types of 'air leaks' as well:

- Pneumomediastinum---air leaks into the space in the chest cavity behind the sternum. *Usually* does not cause a big problem for the baby.
- Pneumopericardium---air leaks into the sac that surrounds the heart (rare, but can be very life threatening).

Air leaks may occur suddenly or develop gradually. How much danger a baby is in depends on where the leak is, how much air has escaped into the spaces where it shouldn't be, how much of the lung is collapsed, and if the air is pushing on the heart or not.

What caused the air leak?

There are several things that may cause an air leak. Sometimes just the process of being born can cause a pneumothorax. There probably have been many babies in the well baby nurseries that have had this problem and no one has known about it, because they were not in distress.

Babies that are on respirators (ventilators, breathing machines) are at risk to develop an air leak. The pressure of the air being placed in the lungs can cause the tiny air sacs to burst.

Babies that inhale meconium (stool) at delivery have the chance to have the meconium lodge in an air sac and trap air, causing the air sac to burst.

Babies that have any lung abnormality (RDS, pneumonia) are at increased risk.

How do you know if my baby has an air leak?

Again, sometimes babies will have an air leak and be in no distress at all.

Other times, babies will

- Breathe faster
- Become dusky (blue)
- Become pale and mottled (blotchy)
- Need more and more oxygen
- Have blood pressure changes
- Have heart rate changes
- Have differences in breath sounds when doctors and nurses listen to the lungs

A chest x-ray will confirm the diagnosis. In an emergency, a transilluminator is used (a high intensity light that is placed on the baby's chest...the chest will 'glow' if there is an air leak).

How is an air leak treated?

It all depends on the severity of the air leak. Some are treated more easily than others.

- If the air leak is small and not causing problems, it may not need to be treated. Perhaps a small amount of oxygen is all that this baby needs.
- Some babies respond to treating a small air leak by placing the baby in 100% oxygen.
- Sometimes a needle is inserted into the chest to get rid of the air. This sometimes works, and can work in an emergency.

- With babies that are distressed and the air leak is causing a problem, a chest tube will be inserted. If your baby needs a chest tube, more information will be given to you at that time. This is the most common treatment.