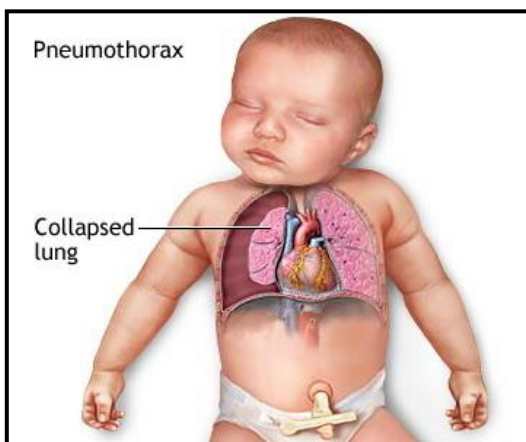


### What is a pneumothorax?

A pneumothorax is an abnormal collection of air in the area between the lung and chest wall (pleural space). This build-up of air puts pressure on the lung, affecting normal breathing as the lung cannot expand. The lung may be so compressed by the excess air it may collapse completely.



<http://www.nlm.nih.gov/medlineplus>

### What causes a pneumothorax?

A pneumothorax will usually occur in the first 24 to 36 hours of life. The tiny air sacs in a baby's lung become swollen and burst, leaking air into the pleural space causing a pneumothorax. Some common causes of swollen air sacs are;

- **Respiratory distress syndrome**, which occurs in premature babies. A premature baby's lungs do not have surfactant (compounds that reduces surface tension) and the lung air sacs are unable to easily expand.
- **Mechanical ventilation**, the extra pressure on the lungs from mechanical ventilation can cause the tiny air sacs to split.

- **Meconium aspiration**, sometimes baby will breathe in meconium (baby's first stool) during labour and birth. The meconium can trap air in the lung sacs causing over-distension leading to a pneumothorax.
- **Spontaneous pneumothorax**, some healthy term babies develop a spontaneous pneumothorax at birth. This is thought to occur due to the high pressures generated by baby when establishing his or her breathing. This type of pneumothorax usually resolves spontaneously with time.

### Signs and symptoms of a pneumothorax

Some babies who have a pneumothorax do not experience any symptoms. If symptoms do occur, they can include the following:

- Cyanosis - a blue or purple colouration of the skin
- Rapid breathing
- Flaring of the nostrils
- Grunting with breathing
- Irritability
- Indrawing - use of other chest and abdominal muscles to help with breathing
- Over-distended chest
- Stopping breathing briefly (Apnoea)
- Slowing of the heart rate

### Tests and Treatment

A special light may be used to trans-illuminate the affected side of the baby's chest while in a darkened room. This procedure is used to identify free air and provides a quick evaluation of a pneumothorax. This is generally followed by a

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chest x-ray which provides a definitive diagnosis of pneumothorax.

Babies with no symptoms may not require any treatment, other than positioning of your baby in a certain way to help the pneumothorax to resolve. The medical team will monitor your infants breathing, heart rate and colour. These pneumothoraces usually resolve within a few days.

If your baby is experiencing symptoms, a member of the medical team may need to place a needle or a chest tube (also known as a pigtail chest drain or intercostal drain) into baby's chest to remove the air that has leaked into the plural space. Medical staff will continue to monitor the drain with chest x-rays. This treatment can take a few days to weeks to resolve the pneumothorax completely.

