



# Bronchopulmonary Dysplasia (BPD) in Newborn Babies

## What is Bronchopulmonary Dysplasia (BPD)?

BPD is a chronic lung disease that happens in babies who:

- have had severe Respiratory Distress Syndrome (RDS).
- have had pneumonia.
- were extremely premature at birth.

It can be mild, moderate or severe.

## What causes BPD?

BPD is a reaction of the premature lung to the oxygen and ventilator that were needed to treat the baby's lung disease. Changes in the lungs can happen in this way:

- The pressure of the air from the ventilator over a long time can cause the air sacs to become scarred.
- High levels of oxygen over a long time can also cause damage to the air sacs.
- Rarely, very premature babies get BPD even if they did not need a ventilator or much extra oxygen after birth.

## What happens when the lungs are damaged?

When the air sacs become damaged a few things can happen:

- They may become filled with too much air. When this happens, air has trouble leaving the sac when your baby breathes out.
- The air sacs may collapse and not let air in.
- The injured lung may leak fluid, which makes the lung stiff. Your baby has to work harder to breathe.

- The tiny muscles in the air tubes can get irritated and go into spasm. This makes the tubes narrower and it is hard for air to go in and out. This causes a wheezing sound when your baby breathes.
- The damaged lungs become inflamed, which causes more swelling of the airways.

## How will I know if my baby has BPD?

A baby has BPD if, after many weeks, they:

- still have an abnormal chest X-ray.
- need extra oxygen.
- have rapid (fast), difficult, wheezy or noisy breathing.
- have wet or crackling sounds in the lungs heard with a stethoscope.
- are slow to gain weight.

## How is BPD treated?

A baby with BPD needs extra oxygen for a long time. This may be for several weeks or months, or rarely, for more than a year. Babies with severe BPD may go home on oxygen.

Some babies are treated with medicines to:

- decrease the inflammation in the lungs.
- help the body to get rid of extra water.
- decrease wheezing.

## What can I do?

The most important thing you can do is get to know your baby. Learn what your baby's normal breathing looks like:

- Watch to see if the spaces between the ribs move during breathing and how much.



- Watch how fast your baby breathes when asleep. You can count the breathing for 15 seconds and multiply by 4 times. This will tell you how many breaths there are in one minute.
- Note the colour of your baby's skin around the mouth and lips.
- Listen to the sounds your baby makes when breathing.

Babies with BPD tend to have more trouble eating and gaining weight. Your baby may need to have extra calories added to their milk, whether you are breastfeeding or bottle-feeding. Your Doctor, Nurse or Dietitian can help you learn ways to feed your baby what they need.

### When should I get help?

You should get help when there are signs that your baby is in distress, such as when they:

- have fast or shallow, grunty breaths.
- are working harder at breathing. You may see spaces between the ribs or at the base of the neck being sucked in (or sucked in more than usual) during breaths.
- cough more.
- are getting more tired.
- have trouble eating.
- are bluer in colour around the mouth or all over.

### If you have questions call:

- Your health care provider.
- The Public Health Nurse or Nursing Station.
- Health Links – Info Santé  
24 hours a day at 204-788-8200  
or toll free 1-888-315-9257.

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