



LUNG DISEASE IN PREMATURE BABIES

the women's
the royal women's hospital
victoria australia

The information in this fact sheet aims to explain why premature babies need support with their breathing and may develop a condition known as Chronic Lung Disease of Prematurity.

What is Chronic Lung Disease of Prematurity?

Premature babies need oxygen and breathing support for weeks after birth. Their lungs gradually improve as they grow, but if a premature baby still needs additional support by the time they are the equivalent of 36 weeks of gestation we call this *Chronic Lung Disease of Prematurity*. The medical term for this is *Bronchopulmonary Dysplasia* or BPD. We will use the acronym BPD throughout this fact sheet.

The lungs of premature babies grow and develop differently from term-born babies. In addition, the treatments that we use to support their breathing whilst they grow can sometimes injure the fragile lung tissue.

Injury to the lung tissue causes inflammation, which leads to excess fluid and eventually to scar tissue forming inside the lungs. The scar tissue makes it harder for the baby's lungs to work normally. Over time - often weeks or months - the scar tissue will heal and the baby's breathing will usually improve.

Why has my baby developed BPD?

There are a number of situations that can lead to a baby developing BPD. Your baby's BPD may have been caused by one or more of the following:

- your baby was born prematurely. Though it is also possible for babies to develop problems even when born close to their due date, usually this is because the baby's lungs are not fully developed at birth
- your baby spent a prolonged period of time in the womb after the waters had been broken
- infection, either before or after birth
- your baby has been receiving breathing support via a breathing machine (ventilator) and oxygen over a long period of time.

Occasionally, babies who are born prematurely but who do not have any of these things happen may also develop BPD.

At the Royal Women's Hospital, the chances of babies developing BPD is closely related to the degree of prematurity.

- One in every two babies born at 24 and 25 weeks and surviving to 36 weeks will have BPD.
- One in every three babies born at 26 and 27 weeks and surviving to 36 weeks will have BPD.
- One in every ten babies born at 28 and 29 weeks will develop BPD.
- Babies born at 30 weeks and above are even less likely to develop BPD.

What are the symptoms of BPD?

The most common symptom is that the baby will have an ongoing need for oxygen or breathing support. Breathing can be fast and effortful, and babies with BPD may suck in their chest more than usual. Babies with more severe BPD can have trouble feeding and gaining weight, as a lot of energy is used just for breathing.

When babies with BPD go home, they may continue to have noisy or wheezy breathing and breathing can take a greater effort than it would for a baby without BPD.

Can BPD be treated?

BPD gets better with time. There are no specific treatments to make BPD better. The main focus is to help your baby to grow; as your baby grows so will their lungs.

If your baby has BPD and needs help with breathing, we will continue to provide oxygen and breathing support.

If your baby is on a breathing machine (ventilator), we may recommend steroid medication to help reduce the inflammation, fluid and scarring in the lungs. This medication will help get your baby off the ventilator. Many babies will also be given medicines to help remove excess fluid, by producing more urine (known as diuretics) as this also helps the lungs. If your doctor recommends these medications for your baby, they will tell you about the medicines and their side effects, and why your baby needs to take them.

Most babies with BPD continue to improve and have less need for medications and breathing support over time. Sadly, despite the treatments we can use, a very small number of babies with severe BPD will not survive.

What will happen to my baby in the long term?

Although a small number of babies will develop very serious BPD, the good news is that most babies will improve over time – weeks or months – and will grow out of their lung disease.

If your baby is ready to go home; feeding and growing well, but still needs additional oxygen, we may send your baby home with oxygen. If this happens, we will teach you how to use the equipment and make sure you are comfortable with using it.

Babies with BPD are more likely to be admitted to hospital in the first year of life, largely related to chest infections.

For more information

Your baby's doctor, nurse or care manager are available to answer your questions.

Newborn Intensive Care Unit

Royal Women's Hospital
Cnr Flemington Rd and Grattan St
Parkville VIC 3052
T: (03) 8345 3400

Special Care Nursery

The Women's at Sandringham
193 Bluff Rd
Sandringham VIC 3191
T: (03) 9076 1572

Recommended websites

- Safer Care Victoria
bettersafecare.vic.gov.au
- Children's Hospital of Eastern Ontario
www.cheo.on.ca/en/bpdtellme
- BLISS
Visit this UK website to read one family's experience
www.bliss.org.uk/story/laura-and-hollys-story