Neonatal chronic lung disease

Parent information

Chronic Lung Disease (CLD) occurs mostly in babies who were born extremely preterm or who have had severe lung disease and needed breathing support with a mechanical ventilator for a long time. The ventilator causes the babies fragile lungs to become inflamed and can also affect the lungs growth. The earlier a baby is born and the longer they are on the ventilator, the greater the chance of CLD. Babies who are born at 23 weeks gestation have more than an 80% chance of having CLD. Baby born at 31 weeks gestation have less than 10% chance of having CLD.

What causes Chronic Lung Disease?

- Prematurity – as baby's lungs are not fully developed and fragile.
- Oxygen use – which many babies need, but it can also damage developing lungs.
- Use of ventilation – the pressure applied to assist baby to breathe can cause damage.
- Infection – in the lungs or in the blood stream can lead to CLD.
- Chest wall and muscle weakness – these babies often need ventilation and oxygen.

Who is affected by Chronic Lung Disease?

- Babies born preterm
- Babies born less than 1500 grams
- Maternal womb infection (known as chorioamnionitis)
- Babies with a Persistent Ductus Arteriosus (PDA)
- Babies with underdeveloped lungs (Pulmonary Hypoplasia)
- Babies with severe lung disease

How does Chronic Lung Disease affect babies?

- Babies work harder to breathe.
- Babies may need many weeks or months with breathing support: Ventilation, Continuous Positive Airway Pressure (CPAP), High Flow Nasal Cannula (HFNC), and low flow oxygen via nasal prongs. All breathing support is tailored to the baby's individual needs.
- They will have a longer stay in the nursery.
- After discharge from the nursery, they require ongoing care by a Paediatrician.
- Once home they may have more coughs and colds in their first 2 years and may need admission to a children's hospital for care.

Consumers contributed to this information.

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What treatments can be provided for babies?

- The medical consultant determines treatment plans, in discussion with parents / carers
- Medications:
    - Steroids (Dexamethasone) can be used to reduce lung inflammation.
    - Diuretics (Lasix) help the passing of any extra water in the body which may cause further breathing problems.
- Increasing their nutrition, or calories, to help the lungs grow.
- Immunisations against potential lung infections like Respiratory Syncytial Virus (RSV).

Ongoing support and planning for home

Prior to discharge or back transfer, referrals will be made to either a General Paediatrician in your local area and/or to a Respiratory Paediatrician at the Queensland Children's Hospital (QCH) for ongoing care.

Some babies with CLD may require home oxygen. For these babies, the Respiratory Specialist Team from the Queensland Children's Hospital is linked in.

The Respiratory Team's assessment is done here in the nursery and includes: a chest x-ray, a blood test (to look at oxygen levels) and an overnight saturation run, which we simply record from the monitors used routinely in the nursery.

For further information on home oxygen please see "Parent Information – Home Oxygen."

Any further questions?

This fact sheet provides general information.

If you have any questions about your baby's care, we encourage you to speak to the nursing and medical staff.