

Premature babies

Around 17,500 Australian babies are born prematurely (before 37 weeks gestation) every year. This accounts for approximately 7 per cent of births. Some babies die as a result of being born too early, but risks are related to the gestation (time spent in the womb) at delivery and birth weight. Those babies that survive often face complications because their organs are too immature to function properly outside the womb.

We know of a few risk factors, but the mechanics behind premature labour remain a mystery. It is, therefore, difficult to prevent premature labour without fully understanding the reasons for it.

Predicting premature labour

Research suggests that there may be ways to identify those pregnant women who are at risk of premature labour, including:

- **Fibronectin test** - a pregnancy is 'stuck' to the lining of the womb with the help of a substance called fetal fibronectin. If premature labour is imminent, small amounts of fibronectin leak through the cervix and can be picked up in a vaginal swab. This means that pregnant women who test positive can be monitored more closely in hospital.
- **Cytokine signal failure** - cytokines are special factors produced by the cells of both the mother and baby. The cross-communication of cytokines appears to aid the proper development of the pregnancy. It seems that in the case of premature labour, there is a disruption in cytokine signalling. More research is needed, but there are hopes of predicting and preventing cytokine signal failure in the future.

Sometimes a premature labour can be delayed

Some premature labours can be stopped for a time with certain treatments. As long as the baby is growing normally and the placenta is working properly every extra day a baby can spend inside the mother's womb increases its chances of survival. The lungs are the last organ to mature and respiratory disease is the most frequent complication for a premature baby. Lung maturity can be improved by giving steroid injections to the mother prior to delivery.

Suspected risk factors

The reasons for premature labour remain unknown. However, there seem to be a few maternal risk factors, including:

- Very high blood pressure
- Diabetes
- Severe illness.

The odds of survival

The odds of survival depend on the baby's degree of prematurity and birth weight. A full term pregnancy is said to last between 37 and 42 weeks. Recent figures (1998) found that at 24 weeks the odds of survival are 58 per cent, rising to 98 per cent or more by the time the baby reaches 28 to 30 weeks gestation. **These statistics will continue to improve as neonatal care and research evidence evolves.**

Common complications

Some of the complications a premature baby might battle include:

- **Lung disease** - premature babies often require oxygen via a ventilator or in an incubator until their lungs are fully matured.
- **Feeding difficulties** - premature babies are often unable to suck and require feeding via a tube into the stomach until the sucking and swallowing reflex is developed.
- **Temperature control difficulties** - premature babies' temperature control centre in the brain is immature. The babies are therefore cared for under special overhead heaters or in enclosed incubators until they are mature enough to be cared for in a normal cot.
- **Apnoea** - this is when breathing stops for a short period of time. Breathing is controlled by a part of the brain called the respiratory centre, which is immature in premature babies.
- **Bradycardia** - a slowing down of the heart rate, usually caused by apnoea.
- **Jaundice** - the skin takes on a yellow colour, due to a compound in the blood called bilirubin, which breaks down red blood cells. A premature baby's liver is too immature to process the bilirubin properly so phototherapy lights are used.

Mild to severe disabilities

In general, the risks of a baby having a severe disability depend on their degree of prematurity and severity of illness following birth. Around half of babies born at 24 weeks are at risk of a severe disability such as intellectual disability, cerebral palsy, blindness or deafness. Minor disabilities, such as reading or learning problems, usually do not show up until school age. Babies born close to full term usually have no long term problems.

Where to get help

- Your doctor
- Your obstetrician
- Midwives and staff at maternity hospitals

Things to remember

- The causes of premature labour aren't fully understood, so prediction and prevention are difficult.
- The odds of survival depend on the degree of prematurity and birth weight.
- Premature babies who survive are at risk of a range of mild to severe disabilities, including visual impairment, developmental delay and learning difficulties.

This page has been produced in consultation with, and approved by:

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