



# Intrauterine Growth Restriction – Small for Gestational Age

Parent/Caregiver/Whānau Information – Neonatal Services

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In a small number of pregnancies, the pēpi/baby (fetus) may not grow as well as expected in the womb. This is called intrauterine growth restriction (IUGR) and the unborn pēpi/baby will be described as ‘small for gestational age’ (SGA). This means that the pēpi/baby is smaller than expected for the length of the pregnancy. An unborn pēpi/baby with IUGR should be carefully monitored during pregnancy and delivery with frequent scans assessing general wellbeing and growth. At the time of delivery, a neonatal team Doctor or Advanced Neonatal Nurse Practitioner may be present if there are concerns. IUGR pēpi/babies need resuscitation at delivery more often than well-grown pēpi/babies.

The two types of IUGR are:

- Symmetrical: all parts of the pēpi/baby’s body are similarly small.
- Asymmetrical: pēpi/baby’s head and brain are the expected size, but the rest of the body is small.

## What causes IUGR?

There are many possible causes, sometimes the reason is not always clear and can be normal. IUGR can be caused by one or more factors, including:

### Maternal:

- Poor nutrition
- Chronic high blood pressure, pre-eclampsia (PET)
- Advanced diabetes
- Chronic or prolonged illness such as diseases of blood cells (eg. sickle cell anaemia)

### Fetus:

- Various genetic disorders or birth defects. Some syndromes cause SGA in the newborn

### Environmental (outside and inside the uterus):

- The placenta (supplier of food and oxygen to the pēpi/baby) not working as well as it should, so pēpi/baby does not get enough nutrients, nourishment and oxygen.
- Maternal smoking, alcohol or drug use.
- Infection that crosses the placenta to the fetus such as cytomegalovirus, toxoplasmosis, rubella.
- Pregnant with multiples (such as twins or triplets).

## What to expect after your pēpi/baby has been born

Pēpi/Babies who are very small at birth are more likely to stay in hospital for a longer time.

You will receive lots of support and shown how to care for your baby.

They may have problems with:

- Breathing and feeding
- Keeping a stable body temperature
- Infection
- Low blood sugar levels

Pēpi/Babies who are born very small have low glucose and fat storage capacity. They are prone to heat loss and low blood sugar levels soon after being born. Pēpi/Babies are often initially nursed in an incubator (like a greenhouse) to help stop them getting cold.

A small drop of blood will be taken from your pēpi/baby's heel. If this shows a low blood sugar level, frequent colostrum, expressed breastmilk, or donor expressed milk feeds will need to be given. Initially milk feeds may need to be given hourly through a nasogastric tube (a tube which is passed through your pēpi/baby's nose or mouth, down into their stomach).

If the blood sugar level remains low, intravenous glucose may need to be given through a tiny tube that goes into a vein.

Persistent low blood sugar levels can have a detrimental effect on the pēpi/baby's brain.

Your pēpi/baby will be monitored closely to make sure feeds are being tolerated. If there was a reduced blood flow to your pēpi/baby's gut while they were in the womb or at delivery, a bowel condition called necrotising enterocolitis (NEC) may occur. This can occur after oral feeds have started.

Your pēpi/baby may have blood and urine tests done to make sure they are getting the correct treatment as needed. A head ultrasound scan may also be done during their stay on the Neonatal Unit. When a pēpi/baby has a small body and head they are at a greater risk of developmental problems.

You will be kept informed of the tests done and their results.

## Follow up

The long-term effects of IUGR on your pēpi/baby may depend on the condition that caused the problem.

Your pēpi/baby will be seen in a clinic after discharge from hospital to monitor their growth and developmental stages.

