

Hypoglycaemia in a newborn baby

This information sheet aims to answer some commonly asked questions about hypoglycaemia in a newborn baby. Informed consent and woman centred care are integral to health care in Queensland. Decisions about your baby's care are always up to you.

IMPORTANT: This is general information only. Ask your doctor, midwife or nurse about your own situation.

What is 'newborn hypoglycaemia'?

Newborn hypoglycaemia is when the amount (level) of glucose (sugar) in your baby's blood is lower than normal. Newborn hypoglycaemia can come and go in the first few days of life.

What is a 'normal' blood glucose level?

Most well babies have a gradual increase in their blood glucose levels after birth. The level is usually stable by about 4 days of age. The expected blood glucose level at each age helps decide if treatment is needed.

Age in hours since birth	Blood glucose level expected
Birth to 48 hours	At least 2.6 mmol/L
48–96 hours	At least 3.0 mmol/L
More than 96 hours (4 days)	At least 3.5 mmol/L

Why is hypoglycaemia important?

Glucose gives energy to body organs such as muscles and the brain. Low glucose in the blood can cause injury to the brain and affect the way it grows and develops. This is why it is important to prevent and treat low blood glucose in babies as early as possible.



Image: baby brain showing learning activities

How do you know if your baby has hypoglycaemia?

Some babies show signs of a low blood glucose. Other babies don't show any visible signs at all. Signs can include:

- Not feeding well
- Weak or high-pitched cry
- Jitters or tremors
- Cool skin to touch
- Floppy arms and legs
- Fast breathing

How is it diagnosed?

A blood test can measure your baby's glucose level. The test is done by taking a small sample of blood from your baby's heel. The test result may be the first sign of low blood glucose.

Breastfeeding, skin-to-skin contact or being wrapped and cuddled can be comforting for your baby while the blood test is done.

A small amount of expressed breastmilk or sucrose (type of sugar) put on baby's tongue can also help reduce pain from the blood test.



Image: baby feet

Can you keep breastfeeding?

Yes, breastfeeding your baby early and often, will help keep the blood glucose level normal. If your baby is not feeding well or is sick, you can express your breast milk. This milk can be given to your baby until they are able to breastfeed.



What are the causes?

Some babies are more likely than others to have low blood sugar. About a quarter (25%) of all babies have at least one risk factor for newborn hypoglycaemia.

If your baby has one (or more) risk factors it is important to check if they have low blood sugar.

Your baby is more likely to have low blood sugar if their:

- birth weight is below 2.5 kg or more than 4.5 kg
- mother had diabetes during pregnancy (any sort)
- body is under stress; for example they needed help to start breathing at birth (resuscitation) or are not warm enough

Or they are:

- not feeding well
- born early (before the 37th week of pregnancy)
- smaller or larger than expected for the number of weeks of pregnancy
- sick or unwell, for example, have an infection
- born with a condition known to cause hypoglycaemia, for example, liver disease

Can it be prevented?

You can reduce the chance of your baby becoming hypoglycaemic by:

- holding baby skin-to-skin
- keeping baby warm
- feeding baby in the first hour after birth
- keeping baby with you (where possible) so you can feed them frequently
- offering a feed at least every 3 hours if they have risk factors for hypoglycaemia
- watching for signs of hypoglycaemia and telling your healthcare provider if you see any



Image: mother and baby skin to skin

What is the treatment?

Treatment depends on the level of glucose in the blood, how well baby is feeding and if they have any other health concerns (such as breathing problems).

Your baby's blood glucose level can be improved with:

- Frequent feeding (can sometimes be enough)
- A small amount of glucose gel rubbed into their mouth
- Extra milk (expressed breast milk, donor milk (if available) or formula)

Glucose gel

Glucose gel is not a treatment by itself to increase the blood sugar level. Instead it gives your baby energy to help them feed well at the next feed. This is why feeding your baby straight after having glucose gel is important.

Next level care

If the blood glucose level is very low, your baby is unwell or there is no improvement after feeding, an IV line (a drip) is used to give glucose. A very low blood glucose level needs urgent treatment to prevent injury to the brain. Your baby may go to a neonatal unit (special or intensive care). A few babies may also need medication.

Your baby's blood glucose level will be checked until your baby is feeding well and the blood glucose level becomes and stays normal.

If your hospital can't provide this specialist care, they may need to be moved to another hospital. If this is needed, you will be given information about the transfer, and the support that is available. You might like to read the Queensland Clinical Guidelines parent information *Baby needing transfer*. Talk with your healthcare provider about the care recommended for your baby.

What causes ongoing hypoglycaemia?

When hypoglycaemia is treated, it usually only lasts a few hours to a couple of days. If the hypoglycaemia lasts longer, it may be caused by conditions that:

- Lower the amount of glucose in the bloodstream
- Stop the glucose being stored in the body
- Use up the glucose stored in the body
- Stop or delay the use of glucose by the body

These conditions are rare. However, if the hypoglycaemia continues your baby may need other tests and treatments. Your healthcare team will talk with you about this.

Support & information

Queensland Clinical Guidelines Parent information www.health.qld.gov.au/qcg

Pregnancy, Birth & Baby Helpline (1800 882 436) offers free, confidential, professional information and counselling about conception, pregnancy, birthing and postnatal care. www.health.gov.au/pregnancyhelpline

Lifeline (13 11 14) telephone crisis support service. www.lifeline.org.au

Preterm Infant's Parent Association (PIPA) (1300 773 672) www.pipa.org.au

Australian Breastfeeding Association (1800 686 268) Community based self-help group offers information, counselling, and support services, on breastfeeding issues www.breastfeeding.asn.au