



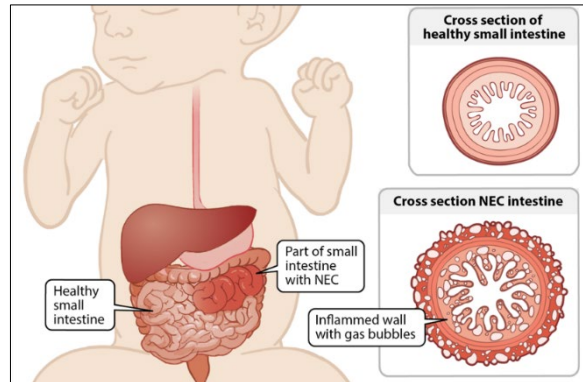
Necrotising Enterocolitis

Whānau/Family Information – Neonatal Services

Necrotising enterocolitis (NEC) is a serious intestinal (bowel) condition that occurs more commonly among premature and low birth weight babies than in term pēpi/babies.

It occurs when the tissue in the intestine (bowel) become injured or inflamed. It can affect just a small part or sometimes the whole intestine.

This can lead to a perforation (hole) developing, which allows the contents of the intestine to leak into the abdomen (tummy). This can cause a very serious infection.



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What causes NEC?

In some cases, a specific cause is not found. NEC is most common in extremely premature pēpi and/or pēpi who are already ill.

Other possible risk factors may include:

- Poor growth in the womb
- An immature intestine
- Too little oxygen or blood flow to the intestine (lack of oxygen/blood flow will damage the lining of the intestinal wall, which can lead to infection/inflammation of the intestine).
- Congenital heart disease (existing at birth)
- Formula milk feeds (do not have the same protective components of breastmilk).

How is NEC diagnosed?

NEC can be difficult to diagnose, but there is often:

- General signs of illness, quietness, low or unstable temperature
- Problems feeding, or green vomits (bile) and a swollen, red and tender abdomen
- Blood in stool (poo)
- Diarrhoea
- Apnoea (pauses in breathing)
- Bradycardia (low heart rate)
- Hypotension (low blood pressure)
- Abdominal x-rays will be taken to see if there is an abnormal gas pattern. If there is an abnormal gas pattern it will look like a bubbly or streaky pattern in the walls of the intestine.

Blood tests will be taken to confirm or rule out the presence of bacterial infections.



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How is it treated?

Your pēpi will be closely monitored by the neonatal intensive care unit team (NICU). In many cases, NEC can be treated without surgery by resting the intestine and treating any infection with antibiotics for around 7-10 days.

- Mouth/tube feeds are stopped
- A tube is inserted into the pēpi stomach to relieve gas pressure
- Fluids are given through an intravenous (IV) drip
- IV antibiotics are given
- IV morphine may be given
- Oxygen or help with breathing may be required

An operation will be required if a perforation in the wall of the intestine occurs or there is no response to the treatment above. The operation is carried out under a general anaesthetic (your pēpi will be asleep) and can last several hours.

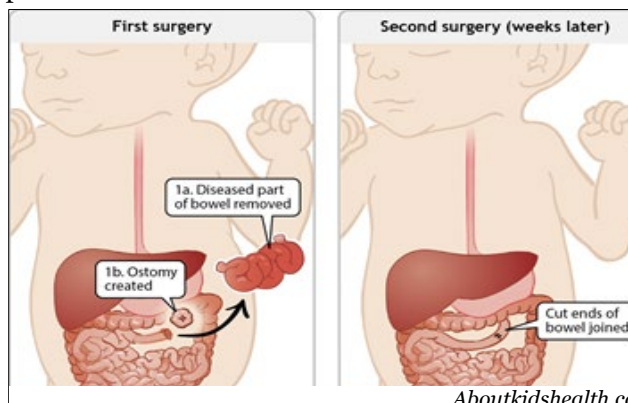
What happens before the operation?

The surgeon and anaesthetist will explain about the operation and anaesthetic and discuss any worries you have. They will ask you to sign consent forms giving permission for the operation and general anaesthetic.

What does the operation involve?

Any parts of the bowel where tissue is not healthy will be removed. After removing this tissue, the healthy intestine may be sewn back together. If a large part of the intestine is removed and the two ends of healthy intestine cannot be sewn back together a stoma may be created. A stoma is where the bowel is brought out onto the skin of the abdomen (*see picture*). This allows the gut to rest, stools can pass into a small bag which is placed on the outside of your pēpi abdomen.

If a stoma is made, it will be closed after the intestine is fully healed and healthy again. (usually around 6–8 weeks later)



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What happens afterwards?

The surgeon will update you. You will be able to see your pēpi as soon as he/she is back on the intensive care unit. For a while your pēpi will need help with breathing so will return to the intensive care unit ventilated. Pain relief drugs will be given through an intravenous infusion. A small catheter (tube) may be inserted into your pēpi bladder to drain urine for a while.

Until the gut starts to recover and bowel motions are passed your pēpi will be fed by an intravenous infusion which makes sure your pēpi is receiving all the correct nutrition he/she needs to grow (total parental nutrition (TPN) and healthy fats).

When feeding starts again (usually in one to two weeks' time) breastmilk is recommended as it is easily digested, supports the growth of healthy bacteria in the intestine and helps pēpi immunity. If there is not enough breastmilk your doctor will recommend giving pasteurised human breastmilk. (Christchurch Women's Hospital has a breastmilk bank.)

If a large amount of the gut was removed your pēpi might be on TPN for a much longer period, until the gut can absorb enough nutrients for normal growth and development. Most pēpi who develop NEC recover fully and do not have further feeding problems. In some cases, the intestine is scarred, narrowed, or blocked. If so, more surgery might be needed.

If your pēpi has NEC it is perfectly normal to worry. All the monitoring, intravenous infusions, tubes and the number of people involved in your pēpi care can be very daunting. You will receive lots of guidance and support but please do not hesitate to ask your nurses and doctors if you have any questions or concerns and what you can do to care for and bond with your pēpi.