

What is Necrotising Enterocolitis (NEC)?

“Necrotising” means the death of tissue, “entero” refers to the small intestine (small bowel), “colo” to the large intestine (large bowel), and “itis” means inflammation. NEC is the most common and serious gastrointestinal disorder among hospitalised preterm babies.

NEC typically occurs within the first 2 weeks of life. It is usually after milk feeding has begun (usually feeds are given via a tube going from the baby's mouth to stomach).

NEC is most common in premature babies who weigh less than 1500g.

These premature babies have immature bowels which are sensitive to changes in blood flow and they are prone to infection. They may also have difficulty with their blood and oxygen circulation and digestion. This increases their chances of developing NEC.

What causes NEC?

The exact cause of NEC is not known. The risk of getting NEC can be halved by giving only breast milk once feeds start.

It is thought that the bowel tissues of premature babies are weakened by too little oxygen or blood flow. When feeds are started the added stress of food moving through the bowel allows bacteria that are normally found in the intestine to invade and damage the wall of the intestinal tissues.

When this happens the baby very quickly starts to look ill as the bacteria travels through the wall of the bowel and into the blood stream. In severe cases of NEC a hole or perforation can develop in the bowel.

Other theories behind the cause of NEC

- Rate of delivery of a milk feed
- Premature babies being given formula feeds as expressed breast milk not available

- Babies who have had difficult deliveries and had lower oxygen levels at birth. Their bodies prioritise blood circulation to their essential organs (e.g. brain) and the bowel misses out
- Babies who have too many red blood cells (polycythaemia) in their circulation are at higher risk for and hinders the transport of oxygen around their body

Signs and symptoms of NEC

Every baby may show all or some of these symptoms differently:

- Poor feed tolerance
- Feeds stay in their stomach for longer
- Their stomach becomes distended and tender
- Bile stained vomit
- Red mottled stomach
- Stools: more or less frequent
- Bloody stools
- Apnoea (stopping breathing)
- Bradycardia (slow heart rate)
- Lethargy (not as active when awake)
- Fluctuating body temperature

How is NEC diagnosed?

NEC is confirmed on an x-ray of baby's abdomen. The x-ray will show an abnormal gas pattern of a “bubbly” appearance of gas in the walls of the bowel.

How is NEC treated?

- Baby's feeds are stopped. They will continue to receive nutrition intravenously
- A naso-gastric tube is placed into baby's stomach and gentle suction is attached to the end to remove air

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- Antibiotics are always given
- Frequent examinations and x-rays of baby's stomach
- If baby's stomach size is so swollen it affects their breathing, baby may need extra oxygen or help with breathing
- Blood samples are taken to check on the infection of the bowel

If baby's bowel perforates they may need surgery to insert a drain into the tummy or even remove the section of the affected bowel. Sometimes after removal of diseased bowel the healthy areas can be sewn back together.

If baby is very ill, or some stool has spilled into their abdomen, the surgeon will need to bring an area of bowel up to the surface of the skin (called a stoma). This gives the bowel a rest and the bowel can be joined up again once the baby is well.

Will my baby recover fully from NEC?

Most babies recover fully from NEC and are able to restart feeds after a course of bowel rest and antibiotics or after they have recovered from surgery.

In some babies the bowel develops a small area of narrowing as it heals which may cause a bowel obstruction and there may be a need for an operation a few weeks after the NEC.

If a lot of bowel has had to be removed baby may have malabsorption (the failure of the bowel to absorb nutrients normally). If this is the case a care plan would be made by the medical and nursing staff to provide baby with the nutrients he/she needs.

Contact us

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