

## Infection in newborns

### Information for patients and carers

#### Other formats

If you need this information in another format such as audio tape or computer disk, Braille, large print, high contrast, British Sign Language or translated into another language, please telephone the PALS desk on 01271 314090.

#### What does newborn (neonatal) infection mean?

Normally neonatal infection (which can be called sepsis) refers to the presence in a newborn baby of a bacterial bloodstream infection. Sometimes it is caused by an infection before he or she is born.

#### What causes neonatal infection?

Your baby could get an infection that has crossed through the placenta, from the birth canal during delivery or from another source after they are born.

All newborns are born with bacteria, most of which are usually harmless and some of which are beneficial. But some babies, particularly those born prematurely, can go on to get an infection. This is because they have a reduced ability to fight infection because their immune system is not yet fully developed.

Bacterial infection is a common cause of illness in newborn babies and is treated with antibiotics.

Group B streptococcus (GBS) is a common type of bacteria which is the most frequent cause of serious infection in newborn babies. Around one in 1,000 babies in the UK develops a GBS infection. One in five pregnant women carries GBS in the bowel or vagina without it causing any problems. It is not known why some babies develop infection and others do not.

Newborn babies are more likely to develop an infection if they have these risk factors:

- They are born prematurely
- The mother has an infection in her blood, urine or birth canal before the baby's birth
- The mother has had a high temperature during labour
- The mother had a previous baby with an infection
- The membranes (the protective sac of fluid surrounding the baby during pregnancy) are broken for more than 18 hours before baby is born.

## What are the symptoms of infection?

The signs of infection in a newborn baby (0-6 days old) include:

- Difficulty breathing or making a grunting noise
- Poor feeding or dry nappies
- Abnormal drowsiness
- Irritability
- High/low temperature, heart rate or breathing rate
- Pale or mottled colour
- Swollen tummy
- Cold hands and feet

## How is it diagnosed?

Whenever possible, mothers with risk factors for infection are given antibiotics during labour, before their baby is born.

If the mother did not receive antibiotics, or the baby has added risk factors or is showing symptoms of infection, the baby will need blood tests to look for infection and be started on intravenous antibiotics.

The baby will need observations which include heart rate, breathing rate and temperature being checked every four hours for at least 24 hours on the postnatal ward.

In some babies, cerebral spinal fluid (CSF), which is fluid from the spine, is taken to check for an infection, while a chest X-ray may be done. It takes about 48 hours to receive the blood results and CSF cultures. Not all babies need all these tests, and the doctors will decide which tests your baby needs and speak to you about them. If your baby develops symptoms of infection, they will need to be admitted to the special care unit (SCU).

## How is infection treated?

Bacterial infection is treated with antibiotics for between two and seven days. Some babies may need a longer course. This is dependent on the blood test results and if your baby is showing signs of infection.

The most common antibiotics used on the ward are penicillin and gentamicin, which are given into the vein through a cannula. This cannula stays in place until the antibiotics are finished. Having a cannula means your baby will not need lots of injections.

Can my baby have antibiotics as an oral medicine?

This is not normally possible as some antibiotics cannot be given orally. Antibiotics that are given into the vein work more quickly and are more effective.

Possible effects of treatment

The antibiotics used are safe and serious side-effects (including nausea, vomiting and rashes) are rare. All babies who receive gentamicin have a blood test to check their gentamicin level, as high levels can affect hearing and kidney function. Babies may require an additional hearing test at eight months of age if the level is high.

## **Can I stay with my baby?**

If your baby is feeding and is not unwell, they may be able to stay with you on the postnatal ward. Your baby will have to come to the SCU to have their antibiotics and the midwives will monitor them.

Sometimes, if your baby is poorly or unable to feed on their own, they may be cared for on SCU. If a room is free you may be able to stay on SCU with your baby. If not, you can visit and stay with them at any time – day or night – for as long as you want.

## **Can I feed my baby?**

You can feed your baby if they are well enough. You can help your baby build up their resistance to infection by breastfeeding, as you pass antibodies to infection through to your baby via your breast milk.

If your baby is too ill to feed, we will feed them milk by nasogastric tube or intravenous fluids through the vein.

## **Will my baby recover from the infection?**

Most babies recover fully from infection when treated with antibiotics. However, some babies can become very unwell. This is why we treat possible infection so seriously.

## **Will my baby develop more infections than other babies when they get older?**

The immune system of your baby will mature as they get older and they will then be able to fight infections like other children.

## **When to seek medical advice after discharge from hospital**

Contact NHS 111, your GP or health visitor, or visit emergency department if you are concerned your baby:

- Is showing abnormal behaviour (i.e. crying lots or sleepy)
- Has developed difficulties with feeding or with tolerating feeds
- Is being sick
- Has dry nappies
- Has an abnormal temperature unexplained by environmental factors (lower than 36°C or higher than 38°C)
- Is breathing fast

- Has a rash
- Is floppy
- Has a change in skin colour
- Has a bulging or sunken soft spot on their head

## Further information and references

Group B Strep Support

[gbss.org.uk](http://gbss.org.uk)

Neonatal infection (early onset): antibiotics for prevention and treatment; National Institute for Health and Care Excellence

[www.nice.org.uk/guidance/cg149](http://www.nice.org.uk/guidance/cg149)

Group B Streptococcus and neonatal infection; NHS Ayrshire & Arran

[www.nhsaaa.net](http://www.nhsaaa.net)

### PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or e-mail [ndht.pals@nhs.net](mailto:ndht.pals@nhs.net). You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

## Have your say

Northern Devon Healthcare NHS Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of the staff or the PALS team in the first instance.

'Care Opinion' comments forms are on all wards or online at [www.careopinion.org.uk](http://www.careopinion.org.uk).

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