

Suspected infection in the first week of life

Information for parents



Who is this leaflet for?

This information is for parents who have been advised that their baby should be treated with antibiotics for suspected infection in the days following birth. We hope that you will find the following information helpful.

What is this about?

Bacterial infections that happen soon after birth ('early-onset infection') can be dangerous for newborn babies, especially if the infection is not recognised and treated quickly. Research has shown that it is safest to start treatment in babies who are at risk of having an infection, and in babies who show symptoms that may be due to infection.

Which babies are more likely to get an early-onset infection?

Most early-onset infections are caused by bacterial germs that live normally in the mother's bowel or birth canal, usually without causing symptoms in the mother. The most common of these is called Group B Streptococcus (GBS). Most newborn babies do not develop an infection, but some will do. There are some things that increase the risk, including:

- if the mother has previously had a baby who had a GBS infection*
- if the mother is known to have carried the GBS germ during this pregnancy, or had a GBS infection during this pregnancy*
- if the mother's membranes broke before the start of labour
- if the baby is born before 37 weeks (premature birth) following natural onset of labour
- if the baby is born before 37 weeks and mother's membranes broke more than 18 hours before the birth
- if the mother has a high fever, or infection of the membranes or amniotic fluid (chorioamnionitis)
- if the mother has needed antibiotics for a bacterial infection such as blood poisoning (septicaemia) in the 24 hours before the birth, at any time during labour, or within 24 hours after the birth
- if the baby is one of twins or triplets and an infection is suspected or confirmed in one of the babies.

*In these situations it is recommended that mothers are offered intravenous antibiotics during labour, which reduces the risk of infection in the baby.

What are the symptoms of early-onset infection in a baby?

Infection can cause a range of symptoms in babies, including:

- breathing difficulty
- feeding problems
- high or low body temperature
- low blood sugar
- jaundice
- weakness
- lack of alertness
- seizures.

When babies have breathing difficulty they may show it by breathing faster (panting), 'sucking in' their rib cage, or making a grunting or bleating sound with each breath.

Each of these symptoms on their own can be caused by things apart from infection. When doctors and nurses assess whether or not to start antibiotics they look at how many risk factors there were, how many symptoms the baby is showing, and if the baby appears unwell.

Why has antibiotic treatment been recommended for my baby?

The Doctor or Advanced Neonatal Nurse Practitioner (ANNP) looking after your baby has recommended that your baby is given antibiotic treatment for suspected infection. It is usually not certain straight away that a baby has an infection, but it is safest to start treatment at the same time as doing tests to prevent babies becoming seriously unwell.

What antibiotics are used, and how are they given?

Antibiotics are given using a small intravenous cannula, usually placed in the baby's hand or foot. This cannula can usually also be used to take the first blood samples. This is done on the Neonatal Unit by a doctor or ANNP.

We usually give babies a few drops of a sugary liquid called Sweetease at the time of the blood test for pain relief.

We most commonly use a nationally recommended combination of antibiotics called Penicillin and Gentamicin. Penicillin is given every 12 hours, and Gentamicin is given once every 36 hours (ie less than once per day).

Although gentamicin works very well, very high levels can be harmful to a baby's hearing or kidneys. Therefore any baby who has more than one dose of gentamicin needs at least one blood test to check the gentamicin level.

What tests are done, and how will I know for certain whether my baby has an infection?

After starting antibiotics, all babies in hospital are reviewed every day by a doctor or advanced nurse practitioner from the Neonatal Unit. This includes an assessment of the baby's progress, and the results of blood tests looking for signs of infection.

The tests include checking for something called 'CRP'. This is a substance in the blood which usually increases in someone who has an infection. The CRP can take 12-24 hours to increase when a baby gets an infection, even after the right antibiotic treatment has been started. For this reason we routinely do a second blood test 18-24 hours after starting antibiotics.

The other important test is called a 'blood culture'. This is a very small blood sample that is sent to the laboratory just before the first dose of antibiotics to look for bacterial germs in the blood sample. This process normally takes 36-48 hours.

In some babies with an infection, the germs are not detectable in the laboratory. So although a normal blood culture result is reassuring in a baby who is well, we don't rely on this test on its own.

Ruling out meningitis

Some babies have symptoms of illness or test results that can be signs of meningitis. Meningitis is an infection of the membranes and fluid that surrounds the brain. This is not at all common in newborn babies but it can occur, and can be difficult to detect. If we strongly suspect infection, or if the blood culture finds a significant bacterial germ, we recommend a check for meningitis.

The test for meningitis is called a lumbar puncture, which collects a very small sample of a fluid called CSF. It is a very safe procedure which is very frequently done by neonatal doctors and advanced neonatal practitioners. If your baby needs a lumbar puncture we will give you more information and ask your consent for this test. Some results are available within a few hours and that information usually tells us whether a baby needs to receive meningitis treatment.

Will my baby need to be admitted to the Neonatal Unit?

The first antibiotic dose is given on the Neonatal Unit. Babies who are well but having antibiotics as a precaution are usually able to go back to their mother and have continuing treatment on the postnatal ward. However, some babies need to be looked after on the Neonatal Unit because they need extra support, help with breathing or closer observation.

How long will my baby need to have antibiotic treatment?

At around 36-48 hours after starting antibiotics we review all the information from the baby's medical examinations, blood tests and progress. At that point we may be clear that the baby did not have an infection, and can stop the antibiotics. If we confirm that there was a blood stream infection and have found the germ causing the infection, we recommend treatment for a total of at least 7 days. If it is unclear, we usually continue until the baby has received a total of 5 days antibiotics. Meningitis needs to be treated for longer and we would discuss this individually.

After stopping antibiotics it is not usually necessary for a baby to remain in hospital for observation alone, unless there are other reasons for the baby to need hospital care.

Are any precautions needed after my baby has gone home?

It is very uncommon for symptoms of early-onset infection to come back after babies have stopped antibiotics and gone home. However, it is important for you to know what to look out for and what to do if you think your baby is unwell.

You should seek medical help (for example, from NHS Direct, your GP surgery, or a hospital Emergency department) if you are worried that your baby is unwell or showing signs of any of the following:

- fast or difficult breathing, or in-drawing of the chest when breathing
- a grunting or 'bleating' sound with each breath
- changes from your baby's normal behaviour
- being listless or unusually floppy
- problems feeding or tolerating feeds
- being unusually cold or hot
- a change in skin colour.

Will any future pregnancies be affected?

If your baby has been treated for a GBS infection, any babies you have in the future will also be at increased risk of early-onset infection. You should tell the maternity care team that a previous baby has had a GBS infection, and you will be advised to have antibiotics during labour.

If you have had GBS in this pregnancy but the baby did not have an infection, this will not affect any future birth if you become pregnant again.

What if I have any questions?

We understand that it is very worrying for parents to be advised that their baby may have an infection, and that you may have questions that are not answered by this leaflet. If so, or if you have any concerns or uncertainties about this information, please don't hesitate to ask a member of the maternity or neonatal staff.

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

