

Preventing group B streptococcus (GBS) infection in newborn babies:

information for you



Royal College of
Obstetricians and
Gynaecologists

Setting standards to improve women's health

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Key points

- Group B streptococcus (GBS) is one of many bacteria that normally lives in our bodies, including in the vagina and rectum, and usually causes no harm.
- About a quarter of pregnant women in the UK carry GBS in their vagina (this is called GBS carriage or colonisation with GBS).
- GBS carriage is not routinely screened for during pregnancy in the UK.
- GBS can be passed on from a mother to her baby. If this happens, it can occasionally cause severe illness in newborn babies. This is known as neonatal GBS.
- Out of every 2000 newborn babies in the UK and Ireland, only one is diagnosed with neonatal GBS, but it can be very serious.

- The risk of GBS being passed from a mother to a baby is highest during labour or at the time of the birth.
- If GBS is found in your vagina when you are pregnant, or if you have had a baby with neonatal GBS, you may be offered antibiotics during your labour.
- If your baby develops early onset neonatal GBS, he or she should be treated with antibiotics.
- It is recommended that you breastfeed your new baby in the usual way. Breastfeeding has not been demonstrated to increase the risk of GBS and will protect your baby against other infections.

About this information

This information is intended for you if you are expecting a baby or planning to become pregnant. It tells you about:

- Group B streptococcus (GBS) infection in babies in the first week after birth, otherwise known as early onset neonatal GBS infection, and referred to as 'GBS' throughout this information
- why GBS can be dangerous for newborn babies
- the most effective ways recommended in the UK for preventing GBS in newborn babies.

It aims to help you and your healthcare team make the best decisions about your care. It is not meant to replace advice from a doctor, midwife or nurse about your own situation.

This information does not tell you about:

- why GBS causes symptoms in the newborn baby
- late-onset GBS, which occurs after the first week of birth
- the reason some women carry GBS in their vagina during pregnancy and others do not.

If you would like further information on these topics, please ask your healthcare professional.

- Some of the recommendations here may not apply to you. This could be because of another illness you have, your general health, your wishes, or some or all of these things. If you think the treatment or care you get does not match what we describe here, talk about this with your doctor, midwife, nurse or another member of your healthcare team.

What is GBS?

GBS is part of the streptococcus family. It is a common bacterium (not a virus) which, like several others, normally lives in your body, including in the vagina and rectum (known as GBS carriage or colonisation). GBS usually causes no harm. However, if GBS is passed on from the mother to her baby around the time of the birth this can occasionally cause serious illness for the newborn baby.

What could it mean for my baby?

About a quarter of pregnant women in the UK carry GBS in their vagina. Many babies therefore come into contact with GBS during labour or during birth, and GBS will colonise some of them. The vast majority of babies are not harmed by contact with GBS at birth.

A small number of babies, however, develop GBS infection and may become seriously ill.

Most babies who are infected show symptoms within 12 hours of birth. They may be floppy and unresponsive and may not feed well. Other symptoms may include grunting, high or low temperature, fast or slow heart rates, fast or slow breathing rates, irritability, low blood pressure and low blood sugar.

Out of every 2000 newborn babies in the UK and Ireland, only one is diagnosed with GBS infection; this means that about 340 babies each year are diagnosed with early-onset neonatal GBS. Around one baby dies out of every ten who are diagnosed. Although it is rare, GBS is the most common cause of life-threatening infection in babies during the first week after birth.

For a few babies who become ill but who have already had antibiotics, the doctors may suspect the illness is due to GBS infection although it is not possible to confirm this diagnosis (as the antibiotics will have already killed the bacterium).

If there seems to be a higher risk of your baby being infected with GBS or if you have had a previous baby with GBS infection, you should be offered antibiotics during labour to reduce the chances of your baby developing the infection. Babies who show signs of GBS infection need to be treated with antibiotics to get well.

It is safe to breastfeed your new baby. Breastfeeding has not been demonstrated to increase the risk of GBS infection, and it protects against many other infections.

Are there tests for GBS?

GBS carriage may sometimes be detected during pregnancy in the course of tests for other infections by taking a sample by swab (similar to a cotton bud) from your vagina and/or rectum.

As GBS can cause urine infection in pregnant women, GBS infection may also be detected by taking a mid-stream urine sample (MSU), which is then sent to a laboratory for analysis. Urine infection caused by GBS should be treated with antibiotics.

Currently the evidence suggests that screening all pregnant women routinely would not be beneficial overall. You can be tested privately for GBS but the RCOG does not recommend this because a positive test may possibly result in unnecessary and potentially harmful interventions. If a test is done, the most sensitive method of detection requires swabs from the vagina and rectum that are cultured in the laboratory in a special solution. It is important to be aware that a negative swab test does not guarantee that you are not a carrier of GBS.

If there is a concern that a baby has GBS infection after birth, you will be offered treatment for your baby and testing to confirm that GBS is the cause of the infection. This testing will involve taking a sample of blood, or a sample of fluid from the spinal cord. Routine testing for GBS is not necessary.

Why is there no national screening programme for GBS?

You will not be offered a test routinely for GBS carriage during pregnancy as there is no national screening programme for this in the UK. There is conflicting evidence, and differing views, about whether a national screening programme would be effective. Research is being carried out to provide a clearer picture.

The RCOG guideline **Prevention of early onset neonatal Group B streptococcal disease** has carefully considered the benefits and harms of screening for GBS carriage during pregnancy. It agreed that there is still no clear evidence to show that screening all pregnant women in the UK would be beneficial overall. One of the potential harms of screening for GBS carriage during pregnancy is that large numbers of women would be given antibiotics during labour. The possible risks of this are:

- death or serious injury to a very few women from an allergic reaction (anaphylaxis) to the antibiotics
- strains of bacteria becoming resistant to antibiotics.

What can help reduce the risk of GBS?

In some circumstances antibiotics can help to reduce the risk of a baby developing GBS and so you may be offered antibiotics during labour if:

- GBS has been found in your urine in your current pregnancy
- GBS has been found on swabs from your vagina and/or rectum which have been taken for another reason
- you have previously had a baby with GBS infection
- you are at higher risk of passing on GBS to your baby. This may be because:
 - you have a high temperature during labour
 - you go into labour prematurely (prior to 37 completed weeks of pregnancy)
 - you give birth more than 18 hours after your waters have broken.

Depending upon your particular circumstance, your healthcare professional will discuss the option of antibiotic treatment during labour.

Penicillin is normally given; if you are allergic to penicillin, you should be offered an appropriate alternative. If your doctor thinks you may have an infection but is not sure of the cause, you should be offered antibiotics that will treat a wide range of infections including GBS.

When antibiotics are not necessary

If you carry GBS in your vagina, you should not need antibiotic treatment:

- if GBS was detected in your vagina in a previous pregnancy and the baby was not affected
- during pregnancy, **unless** you have a symptomatic infection (for example, a urine infection) though you may require antibiotics in labour.
- if you have a planned caesarean section before you go into labour and before your waters break.

The reason why antibiotics are not usually needed in these situations is that the risk of your baby becoming infected with GBS is so low and because antibiotics do not reduce your chances of carrying GBS at the time of the birth.

What will my treatment involve?

If you need antibiotics during your labour, it is best if you can start them as soon as possible after your labour starts. This will be given through a vein (intravenously). You should be offered further doses as necessary until the birth.

If you need intravenous antibiotics, it may not be possible to give birth at home or in some midwifery units. This may be a factor in your decision on where you will give birth.

If you need antibiotics during labour there may be concern about the risk of infection for your baby if for some reason you were not able to receive them, or if you delivered very soon after receiving them. The best approach in these circumstances is not clear. The options of monitoring the health of your baby, or of treating him or her with penicillin, should be discussed between you and the medical staff taking account of the potential risks and benefits of each approach.

What treatment is available for my baby?

Babies with any signs of GBS infection, for example, if the newborn baby is floppy and unresponsive and does not feed well, should be treated with antibiotics as soon as possible.

If you have had a previous baby with GBS, your healthcare team should either monitor the health of your newborn baby closely for at least 12 hours after birth, or treat him or her with penicillin until blood tests confirm whether or not GBS is present.

Babies who show no signs of GBS and who are well do not routinely receive antibiotics or tests for GBS.

More research is needed before we can be sure about the best way to identify and treat babies who were at 'higher risk' of GBS during labour and who appear healthy after birth. Your healthcare professional will keep you informed about the need to test and treat your baby for GBS after birth.

Are there any risks with antibiotics?

Some women have a specific allergy to antibiotics (see section **Why is there no national screening programme for GBS?**). Some women may experience temporary side effects such as diarrhoea or nausea. However, for most women antibiotics are safe. Your doctor or midwife should discuss the benefits and risks of taking antibiotics during labour for you as an individual.

It is thought that babies exposed to antibiotics very early in their lives may have a higher than normal risk of asthma and/or other allergies later in life.

What might happen without treatment?

If your doctor recommends that you take antibiotics because of risk factors such as a high temperature in labour, and you choose not to, your baby may be at higher risk of GBS infection.

If your baby has GBS infection and is not treated with antibiotics, he or she is likely to become seriously ill and may die.

Is there anything else I should know?

- No screening test is entirely accurate. A screening test for GBS carriage could give a falsely negative result. In other words, a woman would be given a negative result when in fact she carried GBS in her vagina.
- No treatment can be guaranteed to work all the time for everyone. Even with antibiotic treatment in labour, some babies still develop GBS infection.
- You have the right to be fully informed about your health care and to make decisions about it. Your healthcare team should respect these decisions.

Sources and acknowledgements

This information is based on the Royal College of Obstetricians and Gynaecologists (RCOG) guideline **Prevention of early onset neonatal Group B streptococcal disease** (which was published in November 2003 and is due to be reviewed in November 2006). This information will also be reviewed, and updated if necessary, once the guideline has been reviewed. The guideline contains a full list of the sources of evidence we have used. You can find it online at: www.rcog.org.uk/guidelines.asp?PageID=106&GuidelineID=56.

Clinical guidelines are written to improve care for patients. They are drawn up by teams of medical professionals and consumers' representatives, who look at the best research evidence available and make recommendations based on this evidence.

This information has been developed by the Patient Information Subgroup of the RCOG Guidelines and Audit Committee, with input from the Consumers' Forum and the authors of the clinical guideline. It was reviewed by women attending clinics in Bristol, Liverpool and London. The final version is the responsibility of the RCOG Guidelines and Audit Committee.

Other organisations

These organisations offer support:

Group B Strep Support

PO Box 203

Haywards Heath

West Sussex RH16 1GF

Tel: 01444 416176

Email: info@gbss.org.uk

Website: www.gbss.org.uk

The National Childbirth Trust

Alexandra House

Oldham Terrace

Acton

London W3 6NH

Tel: 0870 7703236

Email: enquiries@national-childbirth-trust.co.uk

Website: www.nctpregnancyandbabycare.com

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