

Group B Strep and Pregnancy

- By identifying Mums whose babies are at higher risk and managing their pregnancy and delivery appropriately, most GBS infection in newborn babies can be prevented
- GBS is the most common cause of life-threatening infection in newborn babies in the UK – infections that are usually preventable



Dr Chris Steele says:
“Every pregnant woman should read this leaflet – it could save her baby’s life.”

What is GBS? Group B Streptococcus (GBS) is a very common bacterium, occurring naturally in men and women and typically causes no harm or symptoms.

What is GBS carriage? Carrying GBS (GBS colonisation or carriage) is normal – up to one in every three adults carries GBS in the gut and up to one in four women in the vagina. Carriage can come and go. No treatment is required for GBS carriage until labour starts.

What is GBS infection? GBS infection occurs most often in babies shortly before, during or after birth though thankfully this is not common. Untreated, around one in every 1,000 babies develops GBS infection. With prompt medical care, most sick babies recover fully but up to 10% of infected babies die and some survivors suffer long-term problems.

GBS infects approximately 700 babies each year in the UK – it’s usually preventable

Occasionally, GBS is found in Mum’s urine during pregnancy – this is a urinary tract infection (not carriage) which needs antibiotic treatment at diagnosis, plus Mum should be offered intravenous antibiotics in labour.

Very rarely, GBS infects the womb or the waters around the baby before birth, which can lead to late miscarriage and stillbirth.

GBS infection in babies can usually be prevented

“I had the private test for GBS in my last pregnancy, after being found to carry GBS after my third (no problems, thank goodness). Test was negative so I had a low tech birth without antibiotics in a birthing pool.”
Christine M

What do I need to know about GBS?

- Identifying Mums likely to be carrying GBS in labour and giving them intravenous (through a vein) antibiotics at the start of labour or waters breaking and at intervals until birth prevents most GBS infection in newborn babies.
- Testing for GBS carriage is currently not routine in the UK.
- Antibiotics are highly effective at preventing GBS infection in newborn babies when given to Mums carrying GBS once labour starts, not before.
- Antibiotics should not be given before labour simply for GBS carriage.
- GBS can be carried on the skin, so everyone, whether they know they carry GBS or not, should wash and dry their hands properly before handling a baby under age three months.

How do I know if I am carrying GBS?

Most people don't know if they carry GBS as there are no symptoms – those who do, often find out accidentally when they've had tests done for other reasons. Testing isn't essential, but it is the only way to find out if you're carrying GBS.

Knowing you carry GBS when you're pregnant is good news

Most babies exposed to GBS will not develop infection although, for the small number who do, it can be life-threatening. Carrying GBS late in pregnancy doesn't mean your baby will develop GBS infection, although s/he is at an increased risk of doing so. However, you can reduce the risk hugely if you know you carry GBS by having intravenous antibiotics once labour has started or your waters have broken until your baby is born.

"Had I been fully informed about GBS, I could have been more proactive in agreeing with my health professionals what action should be taken to protect Arthur from this preventable infection." Natasha O

What are the tests for GBS carriage?

Routine testing of Mums for GBS carriage in pregnancy is not currently available on the NHS. The routine tests offered, say if you have an abnormal discharge, only pick GBS up about 50% of the time when Mum is carrying it. Although, if an NHS swab comes back as positive for GBS, you can be sure you do carry GBS.

There is a reliable test specifically developed to detect GBS carriage, called the Enriched Culture Method (ECM) test. It's available privately and from a small but growing number of NHS trusts. Recognised as the 'gold standard' for identifying GBS carriage, the ECM test involves taking swabs from the vagina and rectum, which are analysed in a laboratory.

Although GBS carriage can come and go, your GBS status,

determined by an ECM test, is not likely to change for about 5 weeks: research showed a positive ECM result gave an 87% chance you'd still be carrying GBS and a negative ECM result gave a 96% chance you'd not be carrying it 5 weeks later. So testing at 35-37 weeks of pregnancy is very good at predicting your chance of carrying GBS at delivery – earlier testing means your GBS status is more likely to change; later testing increases the chance your baby arrives before the test result.

For how to obtain the ECM test (around £32 privately for a UK-wide postal service), ask your health professional or visit www.gbss.org.uk/test.

Remember! Mums who've had a baby with GBS infection should **ALWAYS** be offered intravenous antibiotics from the start of labour in all subsequent pregnancies, so **they don't need testing**.

Is my baby at risk of GBS infection?

There are six situations where a newborn baby has a higher risk of developing GBS infection.

Risk factors for GBS infection in newborn babies

- Mum has had a previous baby infected with GBS – risk 10 times higher
- GBS has been found in Mum's urine during this pregnancy – risk 4 times higher
- Mum has a raised temperature during labour (37.8°C or higher) – risk 4 times higher
- GBS has been found on a vaginal or rectal swab during this pregnancy – risk 3 times higher
- Labour starts or waters break before 37 weeks of pregnancy – risk 3 times higher for each
- Waters break more than 18 hours before delivery – risk 3 times higher

If you carry GBS this pregnancy, the chance your baby will develop GBS infection (without preventative medicine) is around one in 300. If you have another 'risk factor,' such as going into labour prematurely, this increases 3 times to around three in 300 or one in 100.

Carrying GBS before this pregnancy doesn't mean you're carrying GBS now – carriage can come and go. If you haven't had a positive GBS test result this pregnancy, you should only be offered intravenous antibiotics in labour if one or more other risk factors is present.

How can GBS infection in newborn babies be prevented?

Most GBS infection in newborn babies can be prevented. Up to 90% of early-onset GBS infection would be preventable if intravenous antibiotics were offered in labour to all Mums carrying GBS, identified by universal sensitive testing late in pregnancy, plus to Mums with any of the other recognised risk factors (listed above).

GBSS Recommendations:

Mums whose babies are at risk of GBS infection
(“risk factors” for infection are explained in the box above)

High Risk – Mum should be strongly advised to have intravenous antibiotics in labour until delivery. At high risk means:

- Mums who have previously had a baby infected with GBS.
- Mums carrying GBS this pregnancy with another risk factor.
- Mums who don't know if they carry GBS who have two or more other risk factors.
- Mums where GBS has been found in their urine this pregnancy.
- Mums who have a fever during labour.

Increased Risk – Mum should be offered intravenous antibiotics in labour until delivery. At increased risk means:

- Mums carrying GBS with no other risk factor.
- Mums who don't know if they carry GBS this pregnancy but have one of premature labour, waters breaking prematurely or waters broken more than 18 hours before birth.

Treatment in labour

Intravenous antibiotics should be given to Mum immediately at start of labour and then at intervals until delivery to prevent GBS infection in the newborn baby. The Royal College of Obstetricians and Gynaecologists recommends the antibiotics should be given for a minimum of 2 hours before delivery. GBSS considers this the absolute minimum, with a period in excess of 4 hours being more ideal.

Intravenous antibiotics recommended for Mums in labour until delivery are:

- **Penicillin G:** 3g (or 5MU) at first and then 1.5g (or 2.5MU) at 4-hourly intervals.
- **Clindamycin** 900 mg every 8 hours for Mums allergic to penicillin.

Where infection of the membranes is diagnosed or suspected (called “chorioamnionitis”), or where there is premature prolonged rupture of membranes, broad-spectrum intravenous antibiotics should be given which include adequate GBS cover.

If you are allergic to Penicillin or any other antibiotic, you MUST tell your health professionals.

Using any antibiotic carries risks, so please discuss this with your health professionals.

Care after birth

Babies born at increased/high risk to Mums who HAVE received antibiotics for more than 2 hours before delivery should be:

- carefully assessed by an appropriately trained Paediatrician or Advanced Neonatal Nurse Practitioner.

- If completely healthy, no antibiotics for the baby are required.
- A period of monitoring (12-24 hours) may be appropriate for those at highest risk of infection.

Babies born at increased/high risk to Mums who HAVE NOT received antibiotics for more than 2 hours before delivery should be:

- Examined thoroughly and investigated by a Paediatrician as appropriate.
- Observed for a minimum of 12 hours, ideally 24 hours.
- If completely healthy, no antibiotics for the baby are required.

For well babies at highest risk of infection, monitoring (12-24 hours) may be appropriate and this should be undertaken as a minimum if the baby is not screened and treated for infection.

If there's any doubt about whether an infection is present, the baby should be started on intravenous antibiotics until it is known that he/she is not infected.

Caesarean Sections

Planned Caesareans are not recommended as a way to prevent GBS infection in babies. They reduce but don't eliminate the risk of GBS infection in babies and pose their own risks for both Mums and babies.

If your planned Caesarean is before your waters break and labour starts, then antibiotics against GBS infection are not recommended as the risk of the baby developing GBS infection is so low. If labour has started or your waters have broken, then you should be treated as for a normal labour up until the time when an emergency Caesarean section becomes necessary, when you should be delivered immediately.

“Knowing I carried GBS meant I could have antibiotics in labour and keep my baby safe.” Kylie G

How to recognise GBS infection in babies

GBS infection usually shows in a baby's first 6 days (early onset). Signs are apparent within 12 hours of birth in most babies and in the first 6 days for up to 90% of these sick babies. Early onset GBS infection in babies usually shows as bloodstream infection (sepsis), lung infection (pneumonia) and, less frequently, infection of the fluid and lining surrounding the brain (meningitis).

Typical signs of early-onset GBS infection include:

<i>Grunting</i>	<i>Poor feeding</i>
<i>Being abnormally drowsy (lethargic)</i>	
<i>Being irritable</i>	<i>High/Low temperature</i>
<i>High/Low heart rate</i>	<i>High/Low breathing rate</i>
<i>Low blood pressure</i>	<i>Low blood sugar</i>

Most early-onset GBS infection can be prevented by giving intravenous antibiotics in labour to Mums whose babies are at increased risk.

Late-onset GBS infection occurs after a baby's first 6 days, is uncommon after a baby is one month old and is very rare after age three months. Late-onset GBS infection in babies usually shows as meningitis with septicaemia.

Typical signs of late-onset GBS infection – including meningitis – may include one or more of:

*High temperature, fever, possibly with cold hands and feet
Vomiting, refusing feeds or poor feeding
High pitched moaning, whimpering cry
Blank, staring or trance-like expression
Pale, blotchy skin
Floppy, may dislike being handled, be fretful
Difficult to wake or lethargic
Tense of bulging fontanelle (soft spot on babies' heads)
Turns away from bright light
Altered breathing pattern
Involuntary stiff body or jerking movements*

There are no known ways of preventing late-onset GBS infection in babies – awareness is essential as early treatment is vital.

Trust your instincts! If your baby shows any of the above signs, immediately call your GP or go to the nearest PAEDIATRIC Accident & Emergency Department. Early diagnosis and treatment are essential – delay can be fatal.

GBS infection can normally be effectively treated

With aggressive intravenous antibiotic therapy and intensive care, most babies with GBS infection recover fully, especially when meningitis is not present. Up to half of babies who recover from GBS meningitis suffer long-term mental or physical problems. Sadly, even with the best medical care, 10% of babies infected with GBS will die and another 5% will suffer long term problems: that's roughly 70 babies dying and another 40 survivors left with problems. Yet most of these infections could be prevented.

GBS infection in newborn babies is usually preventable

What next?

Talk to your midwife and obstetrician about GBS. The UK doesn't have a universal policy for preventing GBS infection in newborn babies so find out what your hospital's policy is. Then agree a pregnancy and birth plan that addresses the risk of GBS infection in

your baby. Once your baby is born, be alert for any symptoms of GBS infection and contact your health professionals urgently if your baby shows signs of any (and mention GBS when you do).

Remember!

- Most GBS infection in newborn babies can be prevented
- Pregnancy can normally be managed so your baby can be protected from GBS infection
- Good management of your pregnancy, using the recommendations above, reduces the risk of a baby developing GBS infection when born to a Mum carrying GBS at delivery from one in 300 babies to less than one in 6,000

For more information about GBS, speak with your health professionals or contact:



Group B Strep Support

Preventing life-threatening group B Strep infection in newborn babies

PO Box 203, Haywards Heath,
West Sussex RH16 1GF
E-mail: info@gbss.org.uk
Tel: 01444 416176
Fax: 0870 803 0024

www.gbss.org.uk

(Free downloadable information)

Regd charity No: 1112065 Regd company No: 5587535

Group B Strep Support is a national charity providing accurate and up-to-date information on GBS for families and health professionals. GBSS has no financial links with any laboratory.

GBSS believes:

- Every Mum in the UK should be informed about GBS as a routine part of her antenatal care.
- All low-risk Mums should be offered a sensitive test for GBS carriage at 35-37 weeks of pregnancy on the NHS (and, until GBS-specific tests are available, Mums should be told of its availability privately – see www.gbss.org.uk/test).
- All Mums whose babies are at higher risk of GBS infection, including those found to carry GBS during the current pregnancy, should be offered intravenous antibiotics in labour.

This approach could prevent **over 80%** of GBS infection in newborn babies, as compared with **less than 60%** of GBS infection in newborn babies being prevented using risk factors alone. Not only would many more horrible GBS infections be prevented, it would also save NHS resources.

Key Medical References – see www.gbss.org.uk/research