

Fact Sheet

Group B Streptococcus in pregnancy -GBS

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What is GBS?

Human beings have many more bacteria cells in their bodies than human cells (billions of each) and bacteria cover every surface of our bodies, inside and out. A few bacteria can cause disease but most are completely harmless. In fact, many bacteria carry out useful functions for us and keep us healthy.

GBS is a common bacteria found in the vagina, bowel and bladder of about 20 - 25% of healthy women at any one time, both pregnant and not pregnant. GBS is usually harmless in healthy women and is not considered an infection; in a non-pregnant woman, the lab doesn't even report it because it is considered a 'normal bacteria'.

It is likely that all women have GBS at some time in their lives. It is not a sign of poor hygiene and it cannot be passed to a sexual partner. It almost never causes any symptoms for the woman – no itch, discharge or burning urine.

Interestingly, GBS often doesn't stay around for very long. It tends to come and go. This makes testing to see if GBS is present tricky.

For example:

- if a woman carried GBS in her vagina in her last pregnancy, there is a 60% (6 out of 10) chance she won't have it this time
- if a woman has a swab at 36 weeks that shows no GBS, there is a 4% chance GBS will be present in the vagina when she is in labour a month later
- if a woman has a swab 36 weeks that shows she is carrying GBS, there is a 13% chance the GBS will be gone by the time she is in labour a month later

Why does GBS matter?

Even though GBS is not a problem for the woman herself, rarely a newborn baby can pick up a serious GBS infection from the mother's vagina during birth.

This is called Early Onset GBS (EOGBS) because it occurs within the first 6 days of life, usually within the first 24 hours. The infection may involve the baby's blood (septicaemia), lungs (pneumonia) or brain / spinal cord (meningitis).

A serious GBS infection in the first 6 days of life:

- occurs in about 1 in 2000 babies overall if antibiotics are given to women thought to be at increased risk of passing on GBS and 2 – 4 in 2000 if there is little or no attempt to prevent GBS with antibiotics
- 70% of babies get over the EOGBS infection very well after treatment with antibiotics
- however 20% will have some long term problems and 10% will die from the infection. Overall about 1 in 20,000 babies will die. Premature babies (born before 37 weeks) are much more likely to have problems or die than those born closer to full term

How is GBS detected in a pregnant woman?

- GBS is best detected on a swab collected from the low vagina and anus which is then grown in a special broth in the laboratory
- GBS may sometimes also be detected in a urine sample. It is not as common to find GBS in urine but if it is found, it might suggest a larger number of GBS bacteria are present

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How can the chance of a GBS infection in a baby be reduced?

The first thing to know is that it is not possible to prevent all cases of EOGBS and every hospital will occasionally have a baby who gets sick with EOGBS despite taking steps to prevent it.

There are two general approaches used around the world to try and reduce EOGBS. Both involve selecting a group of women whose babies are considered at higher risk of infection and giving these women antibiotics in labour while at the same time trying not to give antibiotics to large numbers of women who may not need them.

Approach 1: Swab Every Woman at 36 Weeks

Swabs are collected at 36 weeks (35 – 37 weeks) on all women. Those who are GBS positive are treated with antibiotics in labour. Antibiotics are not given in labour to women who have a negative GBS swab in the previous 5 weeks, even if the waters are broken longer than 18 hours. However they are given if there is a fever or other signs of infection. Antibiotics are not given to women in labour before 37 weeks (premature labour) who have a negative GBS swab in the previous 5 weeks.

This approach is supported by the American College of Obstetricians and Gynaecologists.

Approach 2: Don't Swab, Use Risk Factors

Routine swabs are not collected at 36 weeks. Instead, antibiotics are given in labour to those women who have Risk Factors that put the baby at higher risk of EOGBS. This includes women in labour before 37 weeks or who have broken waters for more than 18 hours or who show signs of infection, for example a high temperature.

A variation of this approach is supported by British Royal College of Obstetricians and Gynaecologists (the British actually give antibiotics to fewer women than in this list).

In addition, both approaches always give antibiotics in labour if the woman has had a previous baby who got sick with EOGBS or had a urine test or vaginal swab (done for whatever reason) in this pregnancy which showed GBS

Both of these EOGBS reduction approaches are supported by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and by the NSW Ministry of Health.

Westmead's Modified Risk Factor Approach

Westmead follows a Modified Risk Factor Approach to reducing the risk of EOGBS. This is based on a strategy of:

- trying to target as best as possible the women and babies at increased risk while
- giving antibiotics to the smallest possible number of women in labour

At Westmead, GBS antibiotics in labour are given to women with any of these risk factors:

- a previous baby who got sick with EOGBS
- a urine test in this pregnancy showing GBS
- a vaginal swab in this pregnancy (usually taken for another reason) showing GBS
- a fever of 38 degrees or higher in labour
- less than 37 weeks and in labour
- 37 weeks or more with ruptured membranes for 18 hours or longer where there is no negative GBS swab in the last 5 weeks (see next panel)

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For women planning a vaginal birth who are 37 weeks or more with ruptured membranes (broken waters) but who are not in labour, Westmead takes 2 GBS swabs to decide if antibiotics are needed or not.

**RAPID GBS TEST
(result in 2-3 hours)
Plus the usual GBS test**

- **If the rapid test shows GBS, we give antibiotics and bring the labour on**
- **If the rapid test does not show GBS, we do not give antibiotics but allow the woman to go home to wait for labour to start (with regular check ups)**

NOTE: Women known to carry GBS in the current pregnancy or who had a baby in a previous pregnancy who got very sick from EOGBS are not swabbed. Instead they are treated as GBS positive and the labour is brought on

Note that GBS swabs are not collected for women who are expected to deliver before they pass 18 hours with broken waters. This includes women who are in spontaneous labour or who are having an induction of labour

For more information, see Fact Sheet on Term Prelabour Rupture of the Membranes (TermPROM)

Are there risks in giving pregnant women antibiotics?

- There are many very good and important reasons for some pregnant women to be given antibiotics in pregnancy and labour. Antibiotics often save lives by preventing infections from becoming serious
- It is reassuring that antibiotics have been taken by millions of pregnant women (and therefore their babies) over many years without seeming to cause significant problems
- At the same time, antibiotics are not completely harmless. Some medical research has found that asthma, allergies and even cerebral palsy may be slightly increased in children whose mothers took antibiotics in pregnancy, while other research has not shown these results. Either way, it makes sense to be careful with any medication taken in pregnancy
- Antibiotics wipe out many of our body's helpful bacteria at the same time as they wipe out dangerous bacteria. This can sometimes cause us harm
- Rarely, a pregnant woman may have a severe allergic reaction to an antibiotic. More often, she may have annoying side effects
- Finally, a really important and worrying fact is that many of the world's antibiotics no longer work against the dangerous bacteria they used to work against and this problem gets worse every year. Part of this loss of antibiotic power is due to using them in situations where they aren't needed

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What if I have a booked elective caesarean section (CS)?

- If your waters don't break before the CS you are not given GBS antibiotics even if you are known to carry GBS in this pregnancy. The bacteria can't usually get up to the baby in this situation. Instead you are given the usual 'CS antibiotics'
- If your waters do break before the CS and you are known to carry GBS this pregnancy, you will be given GBS antibiotics. However, if it is unknown whether you carry GBS this pregnancy or not, we will collect GBS swabs as for other women with broken waters. We do this even though you will probably give birth before the results are through. The results help us decide how best to look after your baby in the next few days.

Why aren't women with GBS treated earlier in pregnancy? Why wait until labour?

Antibiotics to treat GBS are not given in pregnancy. Instead, it is recommended to wait until labour because:

- it is mostly impossible to get rid of GBS for more than a few weeks. Because it is a 'normal bacteria' in women's bowel, vagina and bladder, GBS often comes back once the antibiotics are finished.
- almost all the risk to the baby occurs during labour and vaginal birth so that is the best time to give antibiotics.

There is one situation when we do treat GBS in pregnancy -

This is when the number of GBS bacteria in the urine test (bladder sample) is high enough to be considered an 'infection' rather than simply 'colonisation' by a small number of bacteria

What if I carried GBS in my last pregnancy?

- If you carried GBS last time but your baby was well, current international guidelines – whether they support the Swab Approach or Risk Factor Approach - do not recommend giving you antibiotics in this labour this time
- This is because there is a 60% chance GBS is not present this time
- Instead, each pregnancy is considered separately and treatment is based on the findings in the current pregnancy

How will I know if my baby has an infection?

- The risk of an infection is low. Even if a woman is GBS positive and not given antibiotics, only 1 – 2% of babies will get an infection. With antibiotics, the risk is much lower – less than 0.5% (1 in 200). And since most women are GBS negative, the overall risk is even lower.
- Most babies who develop an infection will get sick within 24 hours, often within 12 hours
- Our staff keep a close watch over all newborns to make sure they seem well, are feeding well and have normal breathing, heart rate and temperature.

Things that might suggest a baby has an infection is if she/he is

- **very sleepy or floppy**
- **feeding poorly**
- **grunting instead of breathing easily.**

If you have any concerns, please let us know immediately

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How long do my baby and I have to stay in hospital if I carry GBS in this pregnancy?

- If you were known to be GBS positive in this pregnancy and your baby is well, she / he needs to stay in hospital for:
 - 24 hours if you received adequate doses of antibiotics in labour; or
 - 48 hours if you received an inadequate dose of antibiotics in labour, either because your labour was quite fast or because you have an allergy to the best antibiotics and were given other antibiotics
- If we think your baby has an infection, the neonatologists (baby doctors) will do some tests and start your baby on antibiotics

Can I still breastfeed if I have GBS?

- Breastfeeding does not increase the risk of GBS infection and it is completely safe to breast feed your baby.
- Breastfeeding also protects your baby against other infections.

We welcome further feedback on this brochure as a way of continually improving our service.

Send your feedback to:

WSLHD-Get_Involved@health.nsw.gov.au

CONCLUSION

- GBS is one of many bacteria that live in our bodies and usually do us no harm
- It is present in about 20 - 25% of women at any one time. It tends to come and go
- While harmless to the mother, GBS can rarely cause a serious infection in newborn babies
- The risk of a newborn getting an infection can be reduced by giving antibiotics in labour to selected women thought to be at high risk of passing on the GBS
- Both a 'swab everyone' and a 'risk factor' approach provide good care
- Westmead has adopted a Modified Risk Factor approach. This allows us to prevent most cases of EOGBS while giving antibiotics to the fewest number of women
- However there is no current strategy anywhere in the world that can prevent all EOGBS infections and it is inevitable that a small number of cases – about 1 in 2000 births – will continue to occur
- Premature babies (born < 37 weeks) are at the greatest risk