Group B Streptococcus

What is Group B Streptococcus (GBS)?
GBS is part of the normal bacteria that is found in the digestive systems of healthy people. Approximately 10-30% of women will have GBS in their vaginas at the time of birth. GBS colonization in the vagina is asymptomatic and rarely causes any maternal complications but can cause a very serious infection acquired by newborns before or during birth.

GBS and the Newborn
Due to the immature immune systems of many newborn babies, GBS disease occurs in 0.5 per 1000 babies, and causes illnesses such as meningitis, pneumonia and/or sepsis. Two percent of infected babies will die.

Risk Factors for Neonatal GBS Disease
- Preterm labour (less than 37 weeks)
- Rupture of membranes for greater than 18 hours
- Maternal fever in labour
- GBS bacteria found in urine anytime in this pregnancy
- History of a previous baby that developed GBS disease

GBS Screening and Treatment
The current recommendation for the prevention of GBS disease is that all pregnant women are offered a vaginal-rectal swab between 35-37 weeks. Since GBS colonization can come and go, testing within five weeks of the due date is shown to be predictive of GBS status at the time of birth. Each woman does the swab herself, and results are available in 72 hours.

If the screening test is *positive*, IV antibiotics are recommended in active labour or when your water breaks. Penicillin is the antibiotic of choice, unless known penicillin allergies exist. Ideally, you will receive two doses four hours apart to have maximum protection, though if your labour is too fast, there is still benefit to having only a single dose. If your water breaks before you are in labour, IV antibiotics along with induction of labour is the current standard.

If the screening test is *negative*, you do not carry GBS and IV antibiotics will not be necessary.

Benefits of Treatment
- 1 in 500 newborns will develop GBS disease if the mother has an unknown GBS culture result and no antibiotics in labour are given.
- 1 in 200 newborns will develop GBS disease if the mother has a known positive GBS culture result and no antibiotics in labour are given.
- 1 in 20 newborns will develop GBS disease if the mother has a known positive GBS culture result and no antibiotics are given and she has any risk factors during labour.
- 1 in 4000 newborns will develop GBS disease if the mother has a known positive GBS culture result and receives one dose of antibiotics four hours before birth.
- 1 in 20 000 newborns will develop GBS disease if the mother has a known positive GBS culture result and receives two doses of antibiotics before birth.

Risks of Treatment
- The risk of allergic reaction to penicillin is between 4 in 10 000 and 4 in 100 000.

- Exposure to antibiotics in labour has been associated with an increased incidence of yeast and thrush infections in moms and babies.
- Wide spread use of antibiotics could lead to the presence of superbugs that are antibiotic resistant.
- New evidence suggests that early exposure to antibiotics may be linked to asthma in small children.

GBS and Homebirth

You can still have a homebirth if you are GBS positive. Because of the possibility of an allergic reaction to intravenous antibiotics, the hospital is the safest place for you to have the first dose.

In most cases, you will go to the hospital at the beginning of active labour and then return home for the birth. The risk of an allergy is greatest with the first dose, so your midwives will give you the subsequent doses at home, once you are in active labour.

If you are not in active labour but your water has broken and you have declined induction of labour, you will return to the hospital for the subsequent doses (usually every 4 hours) until you are in active labour and it is time for the midwives to attend you at home.

If your labour is progressing very quickly and there isn't time to get to the hospital and then return home, the midwives can give you the first dose at home and are prepared to treat an anaphylactic reaction.