



## Group B Streptococcus - GBS

### What is GBS?

Group B streptococcus (GBS) is a normal intestinal bacteria that is often present in the rectum, vagina, or urinary tract of adults. It usually causes no symptoms in young, healthy adults. It is of concern when a pregnant woman has it in her vagina because it can infect her baby, both during pregnancy and during birth. It can also infect a baby several weeks after birth. Once GBS has infected the baby, serious complications can arise within hours. GBS infection can cause pneumonia, meningitis, and death. Treatment does necessitate NICU admission, antibiotics, repeated blood draws, lumbar punctures, and separation from the mother.

Women are usually tested for colonization with GBS at 35-37 weeks of gestation. The current medical standard of care is to give IV antibiotics to GBS-positive women during labor in the hopes that enough antibiotics will reach the baby and kill the GBS bacteria before they infect the baby. IV antibiotics do not prevent all cases of GBS infection. The likelihood of neonatal infection is as follows:

- If a GBS-positive mother receives antibiotics: 1 in 4000
- If a GBS-positive mother does not receive antibiotics: 1 in 200
- About 1,700 out of 2.1 million babies per year get GBS disease at birth
- Another 1,500 get GBS disease in the weeks after birth

### Risk factors associated with GBS and its treatment

Some women are at higher risk of having a baby that becomes infected with GBS. They have the following conditions:

- Urinary tract infection from GBS during pregnancy
- Previous baby with GBS disease
- Fever during labor
- Rupture of membranes 18 hours or more before birth
- Labor or rupture of membranes before 37 weeks gestation.

The risk of GBS infection is increased when routine obstetrical interventions, including vaginal exams, stripping membranes and artificial rupturing of membranes, are used during labor and birth. In my midwifery practice, I reduce obstetrical interventions to a minimum in order to reduce the likelihood of GBS infection.

It is important to note that stillbirth can be caused by a prenatal infection, but the likelihood of GBS being the cause of infection and stillbirth is unknown. The pregnant woman should be aware of her baby's movements every day and immediately contact her care provider if she notices a decrease in fetal movements, especially if she feels any flu-like symptoms at the same time.

There are significant risks associated with the antibiotic treatment, particularly antibiotic resistance in GBS and other bacteria, such as E. coli and MRSA. While the incidence of babies being infected by resistant organisms is low, each dose of antibiotics increases the overall chances of resistance developing. Antibiotics given to newborns also disrupt their normal colonization with their mother's beneficial bacteria, thus increasing his risk of gastrointestinal distress and disease, allergies and asthma among other long-term health effects. It also allows other types of infectious bacteria to multiply, potentially creating the very risk for which you are being treated.

### GBS research

The incidence of GBS in newborns is based solely upon research done in hospitals, most of them large, tertiary care centers. Personalized and non-interventive care is not the norm in this setting. As of yet, there are no published rates derived from out-of-hospital births attended by midwives. This is significant because homebirths are associated with fewer vaginal interventions during labor, fewer maternal fevers, and less time between rupture of membranes and birth.

The standard of care emphasizing antibiotics for all GBS-positive women does not address topics that are particularly pertinent to understanding why GBS infects certain babies and how therapies can be targeted more effectively. For example, it is not known if antibodies to GBS are produced in breastmilk, nor whether mothers produce antibodies to GBS that pass through the placenta, nor whether certain strains of GBS are more infectious than others. It is not known whether maternal colonization by GBS that occurs for the first time during pregnancy has an impact on newborn infection rates, as it does for certain other infections during pregnancy. Most significantly, no studies have ever been published that indicate whether the strain of GBS which infected most babies with sepsis was even the same strain that the mother carried, or was nosocomial (a strain picked up from the hospital environment).

### GBS recommendations and protocols

Evidence supports a non-invasive style of practice as a way to reduce the incidence of GBS disease. This is our first-line of defense against neonatal infections.

GBS colonization in the vagina comes and goes throughout pregnancy as the GI flora fluctuates. For this reason, I recommend probiotics and a healthy diet to my clients throughout pregnancy so that the beneficial bacteria naturally out-compete the GBS. Heavy or systemic (non-transient) colonization is a greater risk for baby.

I recommend that my clients all be tested for GBS at 35-37 weeks of pregnancy. If you test negative, there is nothing else I need to do. If you test positive for GBS, I recommend a two-week herbal regimen followed by a retest. This new protocol is in an attempt to use natural methods to achieve a negative culture status before your delivery. I always carry a selection of the appropriate antibiotics, and in Washington you have the choice at any time of receiving or refusing antibiotics during your labor and birth.

Along with many scientists and doctors, I am concerned about the rise of antibiotic resistant organisms and the possible long term health consequences of antibiotic use, particularly during the important first hour of bacterial colonization of your newborn. The current standard of care that recommends antibiotics to all GBS-positive women (approximately 1.2 million each year) does not address the impact of obstetrical interventions on GBS infections, but does increase antibiotic resistance and health problems in individuals who receive antibiotics. I therefore support the targeted use of antibiotics in the reduction of GBS infection.

If a transport to the hospital is needed, your GBS status is important to know, so I do recommend GBS testing. If you are GBS-positive or unknown, you will likely receive antibiotics upon arrival if you have not yet birthed. Additionally, your baby will likely be taken to the NICU for observation and/or a full sepsis workup. If you are GBS-negative, the hospital should recognize that you have followed CDC recommendations during your labor and delivery and do not need any antibiotics or sepsis workups. Your postpartum time in the hospital will thus be shortened and expense spared.

### Information and references

The CDC discusses GBS clearly and succinctly. Please look at the information on early-onset, late-onset and adult-onset GBS infection. [http://www.cdc.gov/GroupBStrep/general/gen\\_public\\_faq.htm](http://www.cdc.gov/GroupBStrep/general/gen_public_faq.htm)

Some prenatal GBS recommendations. [http://www.obgyn.net/pregnancy-birth/pregnancy-birth.asp?page=/pregnancy-birth/articles/prenatal\\_onset\\_group\\_B\\_strep](http://www.obgyn.net/pregnancy-birth/pregnancy-birth.asp?page=/pregnancy-birth/articles/prenatal_onset_group_B_strep)

Group B Strep International is devoted to researching and educating about GBS infections. <http://www.groupbstreptinternational.org/>

### **By selecting and initialing your options on the Informed Choice Checklist for this document you agree that:**

*I have read this informed choice document in its entirety and have had my questions adequately addressed by my midwife(s). I have also researched this subject on my own. I understand that antibiotic treatment carries risks that may be greater than the risks of birthing without antibiotics in this out-of-hospital setting. I understand that if I am GBS-positive and I refuse antibiotics during labor, I am not following the current standard of care as determined by the CDC and that my baby may be at higher risk. I understand that GBS infection in my baby is not 100% preventable with or without antibiotics. I understand that GBS infection in my baby is not 100% detectable with or without screening. I understand the choices for treatment and testing as offered by my midwife(s). I understand that I accept responsibility for my testing and treatment decisions. I know that I can change my mind at any time and request a different course of treatment. I choose the following (please note your selections here for your own records to match those in your midwives' chart);*

\_\_\_\_\_ I do NOT want to be tested for GBS at 35-37 weeks of pregnancy

\_\_\_\_\_ I DO want to be tested for GBS at 35-37 weeks of pregnancy (please also indicate choice below)

\_\_\_\_\_ I DO want to receive prophylactic antibiotics during labor if I am GBS-positive

\_\_\_\_\_ I do NOT want to receive prophylactic antibiotics during labor I am if GBS-positive