

Group B Streptococcal Infections

What is GBS Disease and how common is it?

The GBS bacterium is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining surrounding the brain) in newborns. GBS infection causes newborn pneumonia and is more common than other, better known, newborn problems such as rubella, congenital syphilis, and spina bifida. Approximately 8,000 babies in the U.S. get GBS Disease each year and about 300 of these babies die (3.75% of those who become SICK). The statistical chances of a baby having a fatal infection are approximately ONE out of 13,333 births. This is slightly less than the rate for maternal mortality (the statistical chances of a woman dying) associated with vaginal birth, which is one out of 16,666. Babies that survive a serious GBS infection, particularly those who have meningitis, may have long-term problems, such as hearing or vision loss or learning disabilities. In pregnant women, GBS can cause urinary tract infections, uterine infections (amnionitis, endometritis) and stillbirth.

Does everyone who has Group B Strep get sick with GBS Disease?

No. Many people carry GBS in/on their bodies but do not become ill. These people are “colonized.” Adults can be colonized in the bowel, genital tract, urinary tract, throat, or respiratory tract. 15% to 40% of pregnant women are colonized with GBS in the rectum or vagina. Because GBS usually does not cause problems for the adult female, many women carry it and do not know it. GBS can cause serious illness to a baby born to a woman who carries the bacteria. A fetus *may become colonized* with GBS if the mother is colonized with GBS in the rectum or vagina at birth; colonization occurs during labor or birth.

How does GBS Disease affect newborns?

Approximately 1% to 2% of babies who are colonized with GBS develop signs and symptoms of GBS Disease. Three-fourths of the cases of GBS disease among newborns occur in the first week of life (“Early-Onset GBS Disease”), and most of these cases are apparent within a few hours after birth. Sepsis, pneumonia, and meningitis are the most common problems. Premature babies are more susceptible to GBS infection than full-term babies are, however most babies (75%) who get GBS Disease are full term. GBS Disease may also develop in infants one week to several months after birth. Meningitis is more common with Late-Onset GBS Disease.

How do babies get sick from GBS Disease?

Babies are exposed to GBS during labor and delivery. If a mother’s membranes are ruptured (“water breaks”), her baby may come in contact with GBS if the bacteria travel upward from the vagina into the uterus. A baby may also be exposed to GBS while passing through the vagina. There is some evidence that GBS may cross intact membranes, exposing the baby while it is still in the uterus. GBS exposure may cause preterm births, stillbirths or miscarriages, but is only one possible cause.

Can pregnant women be checked (screened) for GBS?

Yes. GBS colonization can be detected during pregnancy by a vaginal and rectal swab. The CDC (Center for Disease Control) recommends that you be screened for GBS at 35-37 weeks. Vaginal/rectal cultures done at this time are 90% accurate in predicting who will be GBS+ at delivery. A positive culture result means that you are colonized with GBS - NOT that you or your baby are or will become ill. GBS can come and go from your body (so if your test results were negative, you might in fact be positive at your time of delivery.) What you can do is make sure you know when it’s more likely for babies to develop GBS infection and what the signs of this infection in babies are.

If I have a POSITIVE GBS culture, what are my treatment options?

It is NOT recommended that colonized women (GBS+) take oral antibiotics before labor, as recent studies indicate that such course of treatment does not prevent GBS Disease in newborns. According to the CDC, the recommended treatment to reduce the risk of GBS infection in newborns of colonized women is for the mothers to receive intrapartal (during labor) intravenous antibiotics.

Antibiotic treatment

Mothers planning home births may be able to arrange with a physician or other prescriber to receive intravenous (IV) antibiotics during labor, if they test positive for GBS or if they have risk factors during labor. In addition, conventional medical wisdom recommends that ANY pregnant woman who previously had a baby with GBS Disease or who has a urinary tract infection caused by GBS should receive antibiotics during labor, as these women may be more likely to transmit the bacteria to their baby. Intravenous antibiotics should be given for at least 4 hours prior to delivery where possible. For women in labor, the recommended doses of penicillin G are 3 g (or 5 mU) intravenously initially and then 1.5 g (or 2.5 mU IV every 4 hours until delivery. For women allergic to penicillin, the recommended doses of Clindamycin are 900 mg intravenously every 8 hours until delivery OR Erythromycin, 500 mg IV every 6 hours until delivery.

Alternative Options

Although not accepted by the CDC or mainstream medicine, herbal and other non-conventional methods of minimizing the presence of the GBS bacteria in the birth canal may be offered by some providers. These might include use of herbal vaginal suppositories, probiotics, immune-supporting herbs and supplements, and an external rinse with antibacterial soap during labor. While none of these methods have been conclusively researched, they may provide a less-invasive avenue to minimize the chance of transferring the bacteria to baby during labor.

Who is at higher risk for GBS disease?

Pregnant women with the following conditions are at higher risk of having a baby with GBS disease:

- previous baby with GBS disease
- urinary tract infection due to GBS
- GBS carriage late in pregnancy
- fever during labor
- rupture of membranes 18 hours or more before delivery
- labor or rupture of membranes before 37 weeks

GBS-COLONIZED women at highest risk are those with any of the following conditions:

- fever (>100.4 degrees F) during labor
- rupture of membranes 18 hours or more before delivery
- labor or rupture of membranes before 37 weeks (“preterm”)

Colonized women who DO NOT develop ANY of the above complications have a relatively low risk of delivering an infant with GBS Disease. Therefore, the decision to take antibiotics during labor should balance risks and benefits. Penicillin and Rocephin are very effective at preventing GBS Disease in the newborn and are considered generally safe.

A colonized woman with NONE of the conditions previously mentioned has the following risks:

- a 1-in-200 chance of delivering a baby with GBS Disease if no antibiotics are given
- a 1-in-10 chance of experiencing a mild allergic reaction to antibiotics (such as a rash)
- a 1-in-10,000 chance of developing a severe allergic reaction (anaphylaxis) to antibiotics

Understanding the Statistics...

- GBS+ women are 29 times more likely to deliver infected babies than GBS- women
- GBS+ women with risk factors (fever in labor, prolonged ROM, etc) have a 1-in-25 chance of having infected babies if NOT given antibiotics in labor
- GBS- women with risk factors have approximately 1-in-1,000 risk. So, knowing that you carry GBS or not allows you to know whether your risk is 1 in 25 or 1 in 1,000

- GBS- women without risk factors have a 3-in-10,000 risk of having sick babies
- 46% of the women who deliver GBS infected babies had no risk factor(s) in labor
- Screening for GBS at 35-37 weeks and offering antibiotics in labor to GBS+ moms can prevent more than 88% of the cases of GBS in the first week of life.
- If women are NOT screened but are only treated if risk factors develop, the number of cases prevented is 69%.

Warning Signs

The typical signs of GBS infection in a newborn baby include grunting, poor feeding and/or vomiting, lethargy, low blood pressure, irritability, and/or abnormally high or low temperature, heart rates or breathing rates, or impaired consciousness. The warning signs of meningitis in babies may also include: shrill or moaning cry or whimpering, dislike of being handled, fretful, tense or bulging fontanel (soft spot on the head), involuntary body stiffening or jerking movements, floppy body, blank - staring or trance-like expression, turns away from bright lights, and pale and/or blotchy skin. If your baby shows signs consistent with late-onset GBS infection or meningitis, call your GP immediately. If not available, go straight to your nearest Accident and Emergency Department. If your baby has late-onset GBS infection or meningitis, early diagnosis and treatment are vital: delay could be fatal. The risk decreases with age - GBS infection in babies is rare after one month of age and virtually unknown after three months.

More information:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5111a1.htm>

<http://www.groupbstrep.com/GBStrep.htm>

Group B Streptococcus Informed Consent/Refusal

I have read the information presented about Group B Strep. I have had an opportunity to discuss with the midwife and have my questions answered.

1. I understand that there is no “perfect” answer for strep - no perfect screening program, no perfect protocols which will identify and prevent all strep-infected babies; that no method of screening and/or prophylactic treatment is 100% effective in preventing GBS. All that we can do is reduce the incidence
2. I CONSENT DO NOT CONSENT to a non-invasive vaginal culture for GBS.
3. If I culture GBS positive, I understand the risks to my baby of contracting GBS disease is lower if I have IV antibiotic therapy in the hospital. I CONSENT DO NOT CONSENT to this course of action if I have no risk factors at the time of labor.
4. Regardless of my GBS status, I CONSENT DO NOT CONSENT to transfer to the hospital for IV antibiotic therapy if I present with risk factors (prolonged rupture of membranes >18 hours, fever in labor of >100.4 degrees, or signs/symptoms of infection identified by my midwife.)

Client Signature _____ Date _____