

## **What is Group B Strep (GBS)?**

Group B Streptococcus (GBS) is a type of bacteria that is found in the lower intestine of 10-35% of all healthy adults and in the vagina and/or lower intestine of 10-35% of all healthy, adult women. Group B Strep should not be confused with Group A Strep, which causes strep throat. A person whose body carries Group B Strep bacteria but who does not show signs of infection is said to be "colonized" with Group B Strep. GBS colonization is not contagious. GBS bacteria are a normal part of the commonly found bacteria in the human body. Normally, the presence of GBS does not cause problems. In certain circumstances, however, Group B Strep bacteria can invade the body and cause serious infection; this is referred to as Group B Strep disease.

### **Who May Be Affected by Group B Strep?**

15,000 to 18,000 newborns and adults in the United States will contract serious GBS disease each year, resulting in bloodstream, respiratory, and other devastating infections.

About half of all GBS disease occurs in newborns and is acquired during childbirth when a baby comes into direct contact with the bacteria carried by the mother.

GBS causes infections in pregnant women - in the womb, in amniotic fluid, in incisions following cesarean sections, and in the urinary tract. Each year there are over 50,000 cases of such infections in pregnant women.

35-40% of GBS disease occurs in the elderly or in adults with chronic medical conditions.

### **How Common is GBS Disease in Newborns?**

Approximately 8,000 babies in the United States contract serious GBS disease each year. Up to 800 of these babies may die from it, and up to 20% of the babies who survive GBS-related meningitis are left permanently handicapped.

In newborns, GBS is the most common cause of sepsis (infection of the blood) and meningitis (infection of the fluid and lining surrounding the brain) and is a frequent cause of newborn pneumonia. GBS disease is more common than other, better known, newborn problems such as rubella, congenital syphilis, and spina bifida. Some babies that survive, especially those who develop meningitis, may develop long-term medical problems, including hearing or vision loss, varying degrees of physical and learning disabilities, and cerebral palsy.

### **How Do Babies Get Sick from GBS Disease?**

Typically, babies are exposed to Group B Strep during labor and delivery; they may also be exposed after the mother's membranes rupture ("water breaks"). Babies can come in contact with Group B Strep if the bacteria travel upward from the mother's vagina into the uterus. Babies may also be exposed while passing through the birth canal. The babies become infected when they swallow or inhale the bacteria. There is also evidence that GBS may cross intact membranes to expose the baby while it is still in the womb. There it may cause preterm births, stillbirths or miscarriages. However, these problems may be caused by a variety of factors - other infections, stress, genetic defects for example. Be sure that any of these complications are investigated fully even if you are colonized with GBS.

### **Are Certain Babies More Vulnerable to GBS Disease?**

Premature babies, with their less-developed bodies and immune systems, are more vulnerable to GBS

infection than older infants. Premature babies infected with GBS are at higher risk for long-term complications and/or death. Since most babies are born full term, however, full term babies account for 70% of the cases of GBS disease in newborns.

The majority (80%) of the cases of GBS disease among newborns occur in the first week of life. This is called *early onset disease*. Most of these babies are ill within a few hours after birth. Babies who develop early onset disease may have one or more of the following symptoms:

⊗**Problems with temperature regulation**, ⊗**Grunting sounds**, ⊗**Fever**, ⊗**Seizures**, ⊗**Breathing problems**, ⊗**Unusual change in behavior**, ⊗**Stiffness**, ⊗**Extreme limpness**

GBS disease may also develop in infants one week to several months after birth. This is called *late onset disease*. Meningitis is more common with late onset GBS disease. About half of late onset GBS disease can be linked to a mother who is colonized with GBS; the source of infection for other babies with late onset GBS disease is unknown. *A baby who develops late onset GBS disease may exhibit the following signs:*

Stiffness (this could be the entire body or just arms or legs), ⊗**Limppness or floppy**, ⊗**Inconsolable screaming**  
Fever, ⊗**Refusal to feed**, ⊗**Grunting sounds as if difficult breathing**, ⊗**Breathing irregularities**,  
⊗**Temperature regulation**

### **How is a Baby Tested for GBS disease?**

Babies who develop the signs of early onset disease while still in the hospital, should be evaluated immediately by a doctor. Blood tests, cultures, and x-rays can help determine if a baby has GBS disease, and treatment should begin immediately. Babies that develop the signs of late onset disease should be taken to the local emergency room for evaluation.

### **How is GBS transmitted? Is GBS a sexually transmitted Disease?**

GBS is a naturally occurring bacterium in the human body of both women and men. Since it is commonly found in the vagina, some people wonder whether GBS is a sexually transmitted disease. The answer is "No". GBS bacteria usually do not cause genital symptoms or discomfort and are not linked with increased sexual activity. Women found to carry GBS do not need to change their sexual practices.

### **Can pregnant women be checked for GBS colonization?**

The Group B Strep Association advocates that every pregnant woman be screened for GBS. The medical community recommends routine screening for GBS at 35-37 weeks of pregnancy.

One third, or 1,200,000 pregnant women carry GBS bacteria. Knowing your culture result before you go into labor can help *protect your baby's life*.

The test should be performed late in pregnancy, around 35 to 37 weeks of gestation. The test involves collecting a swab or swabs from the lower vagina and rectum and culturing the sample on a special medium (LIM or selective broth medium). The test result is usually ready in 2 or 3 days; it usually costs between \$15 and \$35. This culture (LIM or selective broth) is considered the "Gold Standard" - it is the best GBS screening available. Unfortunately, it is not perfect and may miss a small number of women (approximately 5%) who carry GBS. Fortunately, it is accurate in detecting colonization and will not give a false positive result. Rapid screen tests are not as good at detecting the bacteria as the "Gold Standard" culture but may be beneficial in a setting where a pregnant woman had not received prenatal care.

A positive culture result means that the mother is colonized with GBS. It does not mean that she has Group B Strep disease or that her baby will become ill. Rather, a positive test means that a woman and her doctor need to plan for her labor and delivery with this test result in mind. The results of GBS cultures should be available at delivery. If they are not available, a woman should not hesitate to tell a doctor or nurse her results as soon as she arrives in Labor and Delivery.

If you are pregnant, ask your healthcare professional about testing for GBS. If the test is not offered, you should request it. Ask to be cultured for GBS during pregnancy, discuss treatment plans with your doctor, and tell your baby's doctor, pediatrician, or newborn nursery nurse about your culture result. By doing these things you can help prevent a GBS infection.

### **What are a mother's risk factors for developing GBS disease?**

- ⊗ Positive culture for GBS colonization at 35-37 weeks
- ⊗ Having already had a baby who had a GBS infection
- ⊗ Having a positive GBS culture prior to or during another pregnancy
- ⊗ GBS bacteria in urine (bacteriuria, either with or without symptoms)
- ⊗ Membrane rupture (having your "water break") more than 18 hours before delivery
- ⊗ Labor or membrane rupture before 37 weeks
- ⊗ Developing a fever in labor (higher than 100.4 F)
- ⊗ Black race
- ⊗ Age less than 20 years

The baby's doctor and nurse should be told if the mother has any of the above risk factors.

### **How can GBS disease in newborns and mothers be prevented?**

Giving antibiotics (such as penicillin) through a vein during labor and delivery to women who have a positive GBS test or who have certain risk factors effectively prevents most GBS infections in women and their newborns. For best protection, the mother should receive intravenous antibiotics at least 4 to 6 hours before delivery. However, the earlier the administration of antibiotics the better once a risk factor has been identified. For example, a woman who has had a previous GBS baby should have I/V antibiotics started at the time of hospital admission, whether labor takes 14 hours or 6 hours.

If a woman's labor begins or her membranes rupture before 37 weeks of pregnancy (before a culture is collected) she should be offered I/V antibiotics.

Since antibiotics can cause side-effects, which are usually mild but can be severe, their use should be limited to those women who have one or more of the listed risk factors - the decision to take antibiotics during labor should balance risks and benefits. If you are allergic to penicillin, consult your doctor to learn about other effective antibiotics.

Cesarean sections are not likely to prevent GBS disease.

Unfortunately, no prevention plan is 100% effective. Some women with GBS escape detection because they do not have risk factors. All women should be tested for GBS with each pregnancy to ensure that the very best available protection is provided for their babies.

### **Is There a Vaccine for GBS?**

Researchers are actively working to develop a GBS vaccine. Use of the vaccine in adult women will stimulate the immune system to make protective proteins, called antibodies, which could cross the placenta later in pregnancy and protect the baby. Although widespread use of a vaccine is still years away, vaccination will one day protect babies and others from this bacterial infection.

### **Should Women Who Have Had a Previous GBS Positive Baby Have More Children?**

Women who have had problems due to GBS in the past should inform their prenatal care provider and pediatrician. GBS infections can be prevented and managed in subsequent pregnancies so that babies are protected and born healthy and free of GBS.

### **GBS and Breastfeeding**

Breastfeeding does not pass GBS from a mother to her baby; women colonized with GBS may breastfeed without concern about harming their newborns. As always, keep hands and nipple area clean.

<http://www.groupbstrep.org/>