

## GROUP BETA STREPTOCOCCUS AND PREGNANCY

Group beta strep is a type of bacteria found in 10-30% of all pregnant women. A woman with GBS can pass it on to her baby during delivery or after birth. Most babies who get GBS from their mothers do not have any problems. A few, though, will become sick. This illness can cause major long term health problems or even threaten their lives.

### **What Is Group Beta Strep (GBS)?**

GBS is one of many strains of bacteria that are found in the digestive, urinary and reproductive tract. In women, it is most often found in the vagina and rectum. It is different from Group A Streptococcus, which is the bacteria that causes “strep throat”. A person who has GBS typically does not present with symptoms. Therefore, it is not always possible to tell who is a GB carrier until you culture the bacteria from a clinical sample.

Group Beta Streptococcus is a dynamic condition. This means, in any given woman, GBS colonization may come and go over a period of months or even weeks. A woman can test negative and then have a positive culture at a later time. Studies show that cultures done within 6 weeks of delivery will be more predictive of the mother’s status at the time of delivery. Intervals longer than 6 weeks between the date of the culture and the birth of the baby are less likely to accurately predict the mother’s GBS status.

### **What Is The Effect Of GBS On The Baby?**

About 50% of infants born to mothers with GBS, are themselves colonized on the skin and mucosal surfaces as a result of passage through the birth canal or as a result of GBS ascending into the uterus once the membranes have ruptured. **The majority of these babies will be healthy and asymptomatic (they do not present with symptoms). However, about 2% of babies will develop Group Beta Strep disease.**

### **What Is Group Beta Strep Disease?**

Infection with GBS can be very serious. It can cause inflammation of the baby’s blood, lungs, brain or spinal cord (sepsis, pneumonia and meningitis). GBS infection causes death in roughly 5-6% of affected newborns and can lead to severe permanent retardation, hearing loss and blindness in up to 30% of survivors. Group Beta Strep Infection occurs in two time frames:

**Early Onset GBS Infection** occur within the first 7 days after birth. Most occur within the first six hours. In most newborns with early infection, GBS is passed to them by their mother during labor and delivery.

**Late Onset GBS infections** occurs after the first week of life. About half of late onset infections are passed from the mother to the baby during birth. The other half results from other sources of infection, such as contact with other people who are GBS carriers.

As mentioned, the majority of infants born to GBS positive mothers will remain perfectly healthy. There are, however, certain risk factors which increase the chance that the infant will be afflicted with the disease.

- **Prolonged rupture of membranes > 18 hours**
- **Preterm labor (labor prior to 37 weeks)**
- **A previous baby with GBS disease**
- **Maternal temperature of greater than 100.4 F during labor**
- **Women with GBS bacteria in their urine during pregnancy**

Twenty per cent of all cases of early-onset neonatal GBS infection occur in term infants without the presence of maternal risk factors.

### **Preventing Early Onset GBS Infection**

The best way to prevent GBS infection in the baby is to give the mother antibiotics through an IV during labor. Antibiotics given before labor are not helpful.

Antibiotics given every four hours before the birth are the most effective, although getting antibiotics even a few minutes before birth may be helpful. This practice will reduce, but not eliminate early onset infection in babies.

The antibiotic of choice is penicillin. Women who are allergic to penicillin will be offered another antibiotic. Other antibiotics may not be as effective as penicillin.

### **Recommended Prevention Strategies**

The American College of Gynecologists and Obstetricians (ACOG) and the Center for Disease Control (CDC) recommend the following two strategies to assist in preventing GBS infection of the newborn:

#### **1. Screening-based strategy**

Pregnant women are cultured for GBS at 35-37 weeks using rectal and vaginal swabs. Women who are identified as GBS carriers and women who deliver preterm are given antibiotics in labor. Any pregnant woman who previously had a baby with GBS disease or who had a urinary tract infection (UTI) caused by GBS should receive antibiotics during labor.

#### **2. Risk-based strategy**

Pregnant women may or may not be cultured for GBS at 35-37 weeks using rectal and vaginal swabs. Pregnant women who present with any of the risk factors, mentioned above, during labor receive antibiotics.

A GBS carrier with no risk factors at the time of labor has the following risks:

- 1 in 200 chance of delivering a baby with GBS disease if antibiotics are not given
- 1 in 4000 chance of delivering a baby with GBS disease if antibiotics are given
- 1 in 10 chance, or lower, of experiencing a mild allergic reaction to penicillin (rash).
- 1 in 10,000 chance of developing a severe allergic reaction –anaphylaxis-to penicillin . Anaphylaxis requires emergency treatment and can be life threatening.
- 1 woman out of 100,000 will die from an allergic reaction
- Women may also get vaginal yeast infections or diarrhea after receiving antibiotics.
- Risks or potential risks to the unborn child are not known.

## **Newborn Management**

The Center for Disease Control and Prevention makes the following recommendation for children born to mother who carry Group Beta Strep:

Well-appearing infants of any gestational age whose mother received adequate intrapartum GBS prophylaxis ( $\geq 4$  hours of penicillin, ampicillin, or cefazolin before delivery) should be observed for  $\geq 48$  hours, and no routine diagnostic testing is recommended (BIII). Such infants can be discharged home as early as 24 hours after delivery, assuming that other discharge criteria have been met, ready access to medical care exists, and that a person able to comply fully with instructions for home observation will be present (CIII).

## **Midwifery Care Regarding Newborn Management**

It is the practice of the Greenbnak Women's Clinic and Birth Center midwives **not** to stay with the newborn for 24 hours following delivery. If the midwife deems the child healthy, with no risk factors presenting for sepsis, she will leave the home after 2 to 4 hours and/or discharge mother and baby from the birth center anytime after two hours postpartum.