**Group B Streptococcus (35-37 weeks)**

**WHAT IS GROUP B STREPTOCOCCUS?**
Group B streptococcus (GBS) is a type of bacteria that can cause serious illness and death in newborns. The bacteria are found in the gastrointestinal tract (gut) and are sometimes found in the vagina and/or rectum. Many pregnant women carry GBS in their bodies, have no symptoms of illness and are not sick. These women are considered colonized with GBS. Approximately 10% to 30% of pregnant women are colonized with GBS.

**HOW DOES SOMEONE GET GBS?**
Anyone can be colonized with GBS. It is not a sexually transmitted disease. Most women never have symptoms or know that they are colonized with GBS.

**WHY WORRY ABOUT GBS IN PREGNANCY?**
In general most of the concern for GBS in pregnancy is geared towards preventing infection in the baby. Pregnant women rarely get sick from the bacteria although sometimes GBS can cause a urinary tract infection. Approximately 2% of babies born to women colonized with GBS will get sick from the bacteria. Babies can come into contact with GBS in the uterus and the birth canal during labor. GBS can cause sepsis (blood infection), meningitis (infection of the fluid and lining around the brain) and pneumonia in the newborn. One out of every 20 babies with GBS infection will die. Babies who do survive, particularly those with meningitis, may have long-term problems such as hearing loss, learning disabilities and other neurological injuries. Most cases of GBS disease in newborns occur in the first week of life and symptoms are usually seen in the first hours after birth.

**SYMPTOMS OF GBS INFECTION IN A BABY INCLUDE:**

- Difficulty in breathing
- Fever or abnormally low body temperature
- Jaundice
- Poor feeding
- Vomiting
- Seizures
- Swelling of the abdomen
- Bloody stools

**GBS PREVENTION EFFORTS IN THE UNITED STATES**
The first guidelines for preventing newborn GBS infection were issued in the United States in 1996. If you had a baby before 1996 you probably never discussed GBS with your care-provider. In 1993 before prevention efforts were underway there were approximately 7,600 cases of newborn GBS infections and 310 deaths out of about 4,000,000 live births. This means that in the United States we had a rate of 1.7 cases of GBS infection per 1,000 live births. The first GBS guidelines recommended two approaches for the prevention of newborn GBS infection.
Universal Screening
The first approach involves swabbing the vagina and rectum of all pregnant women between 35 and 37 weeks of pregnancy and sending it to a laboratory to see if there is GBS. Women identified as colonized with GBS are then treated with prophylactic intravenous (IV) antibiotics during labor. In order to be effective a laboring woman should receive 3 doses of antibiotics over 6 hours. So, if 25% of pregnant women are colonized with GBS, then under this prevention method 75% of all laboring women will receive IV antibiotics.

Risk Based Screening
The second approach for GBS prevention recommended in the 1996 guidelines is based on labor risk factors to identify which women should be treated with IV antibiotics. The three labor risk factors are labor prior to 37 weeks of pregnancy, fever of 100.3 or higher, or prolonged rupture of membranes (>18 hours). This prevention method requires women to be treated with IV antibiotics if they have one of these risk factors in labor.

The rate of GBS infection went down after the 1996 GBS prevention guidelines were issued. In 2000-2001 the rate of GBS infection had dropped to 0.49 cases per 1,000 live births. In 2010 the Centers for Disease Control issued revised guidelines for the prevention of newborn GBS infection. The current guidelines recommend universal screening as the preferred approach to the prevention of newborn GBS infection. The risk-based screening approach is recommended only if universal screening has not been done.

Both universal screening and risk based screening have been shown to be effective in reducing newborn GBS infection but until 2002 it was not clear which approach was better at preventing newborn GBS infection. A study published in the New England Journal of Medicine (NEJM) in 2002 showed that universal screening prevented more newborn GBS infections compared to risk-based screening. The current GBS prevention guidelines were heavily influenced by the publication of this study.

The results from the NEJM study show that universal screening reduced the rate of newborn GBS infection by 50% compared to risk-based screening. However, the rate of newborn GBS infection was very low in both groups, 0.33 cases per 1,000 live births if universal screening was used and 0.66 cases per 1,000 live births if risk based screening was done. Another interesting factor is that in the risk-based screening group only 61% of the women with risk factors actually received IV antibiotics labor. This means that some of the cases of infection may have been prevented if the proper protocol for risk based screening had been followed.

GBS & THE MIDWIVES MODEL OF CARE
It is very important to us that you ask questions about GBS and have a good understanding of the options available to you prior to making a decision about screening. We have tried to include links to outside resources that we think are helpful and we encourage you to seek out other sources of information. There is no right or wrong decision here. You must weigh for yourself the risk and benefits of each approach. In the Medical Model you would just be screened for GBS and there would not be any discussion about other options. We assume that part of the reason you chose home birth and midwifery care is because you wanted information presented to you so you could make individualized informed decisions about your care.

This in fact, is the hallmark of the Midwives Model of Care (MMOC). As part of our home birth practice, we routinely limit the number of internal vaginal exams we do during labor (especially if the water bag is broken). We also do not routinely rupture the bag of waters, waiting for it to break naturally. This usually means that the water bag breaks late in labor (sometimes the baby is born in the bag). Both of these practices are thought to minimize the exposure of the baby to GBS in the vagina.

To get you started on the further research you might want to do on GBS here is an article in Mothering Magazine that discusses it.
TESTING OPTIONS
As midwives we offer the choice of universal screening for GBS between 35 and 37 weeks of pregnancy and/or risk based screening in labor.

CAN IV ANTIBIOTICS BE GIVEN AT HOME?
We do offer prophylactic IV antibiotic therapy at home. If GBS screening is positive we can make arrangements to try to be present for labor early enough so you can receive IV antibiotics during labor, if desired.

WHAT IF I DON'T WANT TO BE SCREENED FOR GBS?
You have the right to decline universal screening for GBS. When universal screening is declined we use the risk based screening approach in labor. In the event that labor risk factors are present (labor prior to 37 weeks, fever >100.3, or prolonged rupture of membranes >18 hours) we will discuss your options for care which will include a recommendation for transfer-of-care to your choice of hospital for IV antibiotic therapy.

WHAT HAPPENS IF I SCREEN NEGATIVE FOR GBS?
If you have a negative GBS screen it does not completely eliminate the risk of GBS infection in your baby. Recent studies have shown cases of GBS infection in newborns whose mothers screened negative between 35 and 37 weeks of pregnancy. We still recommend using risk based screening in labor even with a negative screen prior to labor.

PROMOTING GOOD BACTERIAL HEALTH
A fundamental element of minimizing colonization of any harmful bacteria in the body is maintenance of a healthy intestinal tract. This usually includes supplementing your diet with probiotics, which are extremely helpful in maintaining the beneficial balance of good bacteria in the gut.

Resources for nutrition based approach to GBS colonization:

- Vaginal Ecology- An Owner's Guide to Care and Maintenance by Sheri Winston
- Handout on Vaginal Health by Gail Hart
- Garlic to Treat GBS Protocol by Judy Slome Cohen

HIBICLENS VAGINAL WASH AS AN ALTERNATIVE TREATMENT TO ANTIBIOTICS IN LABOR
Some research has demonstrated the effectiveness of using a Chlorhexidine (Hibiclens) vaginal flush to prevent newborn GBS infection. Hibiclens is an over-the-counter, medical grade antiseptic and antimicrobial soap.

Hibiclens Flush Protocol

Studies on Hibiclens for GBS:


