GBS INFORMED CONSENT

Group B streptococcus (GBS) is a type of bacterium that can cause illness in newborn babies, pregnant women, the elderly, and adults with other chronic illnesses. GBS is the most common cause of life-threatening infections in newborns.

How common is GBS disease? GBS is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining surrounding the brain) in newborns and a frequent cause of newborn pneumonia.
In 1990, before CDC recommendations for GBS began, about 1.7 of every 1000 babies contracted early onset GBS disease. Now, with CDC guidelines in place, 0.4/1000 babies contract early onset GBS disease. Four to six percent of babies who get sick with GBS may die of it.

Does everyone who has GBS get sick? Many people are "colonized" with GBS, which means they carry it in their bodies but do not become ill. 10% to 30% of pregnant women are colonized with GBS in the rectum or vagina. It is not an "infection" and does not need to be treated.

How does GBS disease affect newborns? Neonatal infection occurs primarily when GBS ascends from the vagina to the amniotic fluid after onset of labor or rupture of membranes, although GBS also can invade through intact membranes. Infants also can become infected with GBS during passage through the birth canal; infants who are exposed to the organism through this route can become colonized at mucus membrane sites in the gastrointestinal or respiratory tracts, but these colonized infants most commonly remain healthy.

How is GBS disease diagnosed and treated in the newborn? Approximately 90% of cases of early-onset disease will manifest within the first 24 hours of life. If suspected, GBS infections are diagnosed when the bacterium is cultured from blood or spinal fluid. Cultures take a few days to complete. GBS infections in both newborns and adults are usually treated with IV antibiotics.

Can pregnant women be checked for GBS? CDC's guidelines recommend a vaginal/rectal swab culture be done at 35-37 weeks gestation. A positive culture result means that the mother is colonized with GBS - <u>not</u> that she or her baby will become ill. Colonized women should not be given oral antibiotics before labor because antibiotic treatment at this time does not prevent GBS disease in newborns. A negative culture does not mean that baby cannot contract GBS disease though it is much less likely.

Can GBS disease among newborns be prevented? Giving at risk pregnant women IV antibiotics during labor can prevent most GBS disease in newborns. Pregnant women who are colonized with GBS (have a positive GBS result) should be offered antibiotics at the time of labor or membrane rupture.
Colonized women at highest risk are those with any of the following conditions:

- Fever during labor (>100.4F)
- Rupture of membranes 18 hours or more before delivery
- Rupture of membranes or labor before 37 weeks

Because women who are colonized with GBS but do not develop any of the above complications have a relatively low risk of delivering an infant with GBS disease, the decision to take antibiotics during labor should balance risks and benefits. Penicillin and Ampicillin are very effective at preventing GBS disease in the newborn and is generally safe.

A colonized woman with none of the above conditions has the following risks:

- A 2 in 1000 chance of delivering a baby with GBS disease if no antibiotics are given
- A 4 in 100 chance, or lower, of experiencing a mild allergic reaction to penicillin (such as rash)
- A 4 in 10,000 chance of developing a severe allergic reaction - anaphylaxis - to penicillin. Anaphylaxis requires emergency treatment and can be life-threatening.

Who is at highest 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 colonization late in pregnancy
- Fever during labor
- Rupture of membranes 18 hours or more before delivery
- Rupture of membranes or labor before 37 weeks

What is the holistic treatment for GBS? Research by the CDC and others has indicated that women with GBS colonization also tend to have antibodies to GBS. The immune system does play a part in minimizing illness from GBS by passing these antibodies from mother to fetus. Holistic prenatal care includes supporting the immune system with excellent nutrition, regular exercise and overall healthy lifestyle. If desired, supplements can be used such as Echinacea, vitamin C, probiotics and zinc.
Furthermore, fewer vaginal exams in labor and less time with ruptured membranes (not rupturing membranes artificially early in labor to speed things up) contribute to less incidence of early onset GBS disease in newborns. These are generally standard of care in home birth, certainly in this practice.
Lastly, the practice of using chlorhexidine (hibiclens) in the vagina showed early promise in reducing early onset GBS disease in newborns but further research found no effect. Products like this would kill good bacteria in the vagina and disturb the natural healthy balance there. Therefore, I would not recommend them.

The information and statistics in this document were largely drawn from *Prevention of Perinatal Group B Streptococcal Disease* Revised Guidelines from CDC, 2010.