



Informed Consent for GBS Testing and Treatment

What is GBS?

Group B *Streptococcus* (GBS) is a type of bacteria that is found in the intestinal tract. GBS can also be found in the rectum, urinary tract, and vagina. The bacteria is transient and a person can test positive for GBS while testing negative a few weeks later and vice versa.

Risks of GBS infection

GBS does not usually cause symptoms or infections in pregnant women, though sometimes GBS can cause a urinary tract infection. However, GBS can cause severe infections in newborns that can lead to death. GBS is the leading cause of early-onset neonatal sepsis in the United States.

Infants with early-onset GBS disease may experience respiratory distress, apnea, pneumonia, and sepsis (a complication of infection in the body). Some infants may develop meningitis (inflammation of the brain and spinal cord) as a result of GBS infection. Surviving infants may experience long-term complications from meningitis.

Rates of GBS infection and GBS disease

According to the CDC, anywhere from 10-30% of pregnant women are colonized with GBS. Not all women colonized with GBS will give birth to an infant colonized with GBS and not all colonized infants will develop a GBS infection. Without antibiotic treatment during labor, approximately half (50%) of the babies born to colonized mothers will also become colonized with GBS. The rate of early-onset GBS disease in the US is 0.34--0.37 cases per 1,000 live births in recent years. Without treatment, it is estimated that 1%-2% of infants born to colonized mothers develop early-onset GBS infections. Of those full-term infants who develop early early-onset GBS infections, the CDC estimates that 2%-3% will die.

Risk factors for GBS disease

- Labor beginning before 37 completed weeks of pregnancy
- Membranes ruptured for longer than 18 hours
- Fever during labor (>99.5 degrees Fahrenheit)
- Presence of GBS in the urine at any point during pregnancy
- Previously delivering an infant with GBS disease

Testing and treatment options

There are two main approaches to GBS testing and treatment. In the US, the CDC began recommending "universal screening" in 2002, treating all women who test positive for GBS. In the UK, a "risk-based" approach is used, only treating women with risk factors for GBS disease.

In the US, testing is done in the form of a combined vaginal and rectal swab between 35 and 37 weeks of pregnancy. The swab is inserted into the vagina and then the rectum. The swab is then placed into a collection tube and dropped off at the lab. The swab is cultured for the presence of GBS bacteria and the results are usually available after 48 hours.

There is a rapid GBS test that can be done during labor but it has not been found to be as accurate as the standard screening test and it is not widely available.

The US standard for treatment is the administration of IV antibiotics during labor. Penicillin is the antibiotic of choice but cefazolin, clindamycin, erythromycin, and vancomycin may also be used if the woman has an allergy to penicillin. The alternatives to penicillin have not been studied in controlled trials so it is unclear if they are as effective as penicillin. IV antibiotics are given every 4 hours during labor until delivery.

In our area, homebirth midwives are not able to administer IV antibiotics to clients giving birth at home. If a homebirth client chooses to receive antibiotics in labor at home, they must be administered by a home health nurse or similar provider hired by the client. Clients may also choose to transfer care to the hospital for administration of antibiotics during a hospital birth.

Risks, benefits, and alternatives to treatment

Risks of antibiotic treatment include:

- Allergic reactions. The CDC estimates that these reactions occur in 0.7% to 4.0% of all women treated with penicillin. Anaphylactic reactions occur at an estimated rate of four in 10,000 to four in 100,000 women.
- Antibiotic resistance. The CDC reports that the prevalence of resistance among GBS isolates in the US ranged from 25% to 35% for erythromycin and 13% to 20% for clindamycin. GBS is not yet resistant to penicillin, ampicillin, and first-generation cephalosporins.
- Disruption of the baby's microbiome. Limited studies have found that infants who received antibiotics had less "good" bacteria in their gut at 4 weeks and 8 weeks after treatment.
- Yeast infection. Use of antibiotics is associated with an increased risk of yeast infections, to include thrush (oral yeast) in mothers and babies.
- Difficulty testing for other infections. The use of antibiotics in labor can make it difficult to test for other infections in the newborn.

Benefits of antibiotic treatment:

- The main benefit of antibiotic treatment is the reduction in the risk of your baby developing early-onset GBS disease. Studies have indicated prophylactic antibiotic treatment to be 86% to 89% effective at preventing early-onset GBS disease.

Alternative treatments include:

- Use of the "risk-based approach." This means treating for risk factors, should any develop. This is not recommended by the CDC and is not the standard of care in the US.
- Hibiclens treatment. Hibiclens (chlorhexidine) is a topical disinfectant used to kill bacteria. Hibiclens has been used vaginally to reduce the rate of GBS colonization but it has not been shown to reduce the rate of GBS infections in the newborn. Some midwives use this approach but it is not recommended by the CDC and is not the standard of care in the US.
- Other home remedies. Probiotics, garlic, vitamin C, and other alternatives have been suggested in the treatment of GBS. However, none of these options have been studied adequately so we do not know if they are effective at preventing GBS disease. These options are not recommended by the CDC and are not standard of care in the US.

What happens if transport becomes necessary?

In the event that it becomes necessary to transport to the hospital during labor or immediately after birth, the hospital will request the client's GBS testing status. If the client has been screened for GBS and the test was negative, the plan of care will not change. If the client has been screened for GBS and the test was positive, the hospital will recommend antibiotic treatment. If the client refuses treatment or if it is not possible to administer both doses of antibiotics, most local hospitals will recommend observation of the baby for 48 hours after birth and will probably request to obtain blood cultures on the baby before discharge. If the client has an unknown status (either because the client declined testing or because the test results have not been received yet), the CDC recommends treating for risk factors and some local hospitals may also recommend 48 hours of observation for the newborn.

Further information and resources

CDC: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5910a1.htm?s_cid=rr5910a1_w

Group B Strep International: <http://www.groupbstrepinternational.org/>

Evidence Based Birth: <http://evidencebasedbirth.com/groupbstrep/>

I have read about the options for GBS testing and treatment and have had the opportunity to ask questions and do my own research. I understand the risks and benefits of GBS testing and treatment as stated above. I have chosen the following options for GBS testing and treatment.

_____ I elect to perform the screening test for GBS between 35-37 weeks.

If positive:

_____ I elect to transfer care and have IV antibiotics administered in the hospital during labor. I understand the risks of antibiotic treatment as outlined above.

OR

_____ I elect to have IV antibiotics administered during labor at home. I understand that I will need to hire a home health nurse or similar provider to administer the antibiotics at home. I understand the risks of antibiotic treatment as outlined above.

OR

_____ I decline treatment and/or elect to treat only in the presence of risk factors. I understand that this is not the community standard of care and is not recommended by the CDC. I understand that this may be less effective than receiving antibiotic treatment prophylactically.

_____ I decline the screening test for GBS and elect to treat only in the presence of risk factors. I understand that this is not the community standard of care and is not recommended by the CDC. I understand that this may be less effective than performing the screening test for GBS.

_____ I decline the screening test for GBS and decline treatment. I understand that this is not the community standard of care and is not recommended by the CDC. I understand that this may be less effective than performing the screening test for GBS.

Client's signature: _____ Date: _____

Midwife's signature: _____ Date: _____

References:

- American College of Nurse-Midwives (ACNM). (2012). *Prevention of group B streptococcal disease*. Retrieved from <http://www.midwife.org/ACNM/files/ACNMLibraryData/UPLOADFILENAME/000000000275/Group%20B%20Streptococcal%20Position%20Statement%20June%202012.pdf>
- Centers for Disease Control and Prevention (CDC). Prevention of perinatal group B streptococcal disease. *MMWR*. 2010;59(RR10):1-32.
- Fairlie, T., Zell, E., & Schrag, S. (2013). Effectiveness of intrapartum antibiotic prophylaxis for prevention of early-onset group B streptococcal disease. *Obstet Gynecol*, 121, 570-7.
- Ohlsson, A. & Shah, V. (2013). Intrapartum antibiotics for known maternal Group B streptococcal colonization. *Cochrane Database Syst Rev*. Jan 13: CD007467. doi: 10.1002/14651858.CD007467.pub3.
- Ohlsson, A., Shah, V., & Stade, B. (2014). Vaginal chlorhexidine during labour to prevent early-onset neonatal group B streptococcal infection. *Cochrane Database Syst Rev*. Dec 14, CD003520. doi: 10.1002/14651858.CD003520.pub3.
- Verani, J., Spina, N., Lynfield, R., Schaffner, W., Harrison, L., Holst, A., ... Schrag, S. (2014). Early-onset group B streptococcal disease in the United States: potential for further reduction. *Obstet Gynecol*, 123, 828-37.