**Streptococcus agalactiae Invasive Disease (GBS)**

Organism: *Streptococcus agalactiae* Group B beta-hemolytic, gram positive cocci. **Only INVASIVE cases are reportable (bacteremia, meningitis, fetal demise).** This is a leading cause of a neonatal disease; however, ~75% of Alaska invasive cases are reported in adults (per AIP/CDC).

Incubation period: For infants, early onset disease occurs in approximately 1 to 6 days. Late-onset disease usually occurs within 3 to 4 weeks. Very late-onset disease has an onset beyond 3 months of age in preterm infants requiring prolonged hospitalization. Group B streptococcus may also cause infections in adults with underlying medical conditions, such as, diabetes mellitus, chronic liver or renal disease, malignancy, or other immunocompromising conditions.

Infectious period: Source for neonate is maternal carriage in vagina/rectum that may wax and wane during pregnancy. Cultures are thought to be most predictive if taken within 35 to 37 weeks’ gestation.

Transmission route: Transmitted to infants during the intrapartum period, especially to infants delivered at < 37 weeks, and/or when rupture of membranes occurs > 18 hours prior to delivery. Mode of transmission of disease in non-pregnant adults is unknown.

Treatment: **Invasive neonatal disease:** manage septic neonate per standard practice and consult esteemed neonatologists as needed. Also see CDC 2010 MMWR for sample algorithm for managing a neonate whose mother received antibiotics for threatened preterm delivery or suspected chorioamnionitis: [http://www.cdc.gov/groupbstrep/guidelines/guidelines.html](http://www.cdc.gov/groupbstrep/guidelines/guidelines.html)

**Adult invasive disease:** no specific treatment guidelines. Most adults affected have significant co-morbidities (e.g., diabetes is very common).

Information Needed for the Investigation

Verify the Diagnosis

**Confirmed case:** isolation of GBS from a normally sterile site, such as, blood, cerebrospinal fluid (CSF), pleural fluid, peritoneal fluid, bone, joint fluid or internal body site, or GBS isolated from the placenta and/or amniotic fluid with fetal demise. [http://www.cdc.gov/abcs/methodology/case-def-ascertain.html](http://www.cdc.gov/abcs/methodology/case-def-ascertain.html).

**Probable case:** not defined. If receiving repeated reports of organism isolated from non-sterile site, consider contacting the lab/provider to explain the criteria for reportables and/or if appropriate, reiterating with the provider the importance of antibiotic management protocols at birth.

4/23/2013
Determine the Extent of Illness
- AIP-CDC will be collecting medical records on cases and reviewing data at their quarterly surveillance meeting. SOE staff members attend these meetings.

Laboratory Specimens
- Request that any INVASIVE isolate be sent to CDC-AIP (phone 729-3400).

Contact and Control Measures
- Screening or chemoprophylaxis of household contact is NOT recommended.
- Treat mothers who carry infection.

Settings requiring urgent public health action.
None; time-sensitive action is needed by labor and delivery staff at the time of birth.

Hospital Considerations
- In the hospital setting, use Standard Precautions.

Reporting Requirements
- Report case upon receipt to CDC-AIP; fax to 729-3429.
- FTR: write up special investigations.
- AK-STARS Database: enter all confirmed cases.
- CDC (ABCs) Case Definition is used to define confirmed cases.
Streptococcus agalactiae Invasive Disease (GBS) Fact Sheet

Newborns and Group B Strep

How common is group B strep disease in newborns?
Group B strep is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining around the brain) in newborns. Group B strep is a frequent cause of newborn pneumonia and is more common than other, more well-known, newborn problems such as rubella, congenital syphilis, and spina bifida.

How does group B strep disease affect newborns?
About half of the cases of group B strep disease among newborns happen in the first week of life ("early-onset disease"), and most of these cases start a few hours after birth. Sepsis, pneumonia (infection in the lungs), and meningitis (infection of the fluid and lining around the brain) are the most common problems. Premature babies are more at risk of getting a group B strep infection, but most babies who become sick from group B strep are full-term. Group B strep disease may also develop in infants one week to several months after birth ("late-onset disease"). Meningitis is more common with late-onset group B strep disease. Only about half of late-onset group B strep disease among newborns comes from a mother who is a group B strep carrier; the source of infection for others with late-onset group B strep disease can be hard to figure out. Late-onset disease is slightly less common than early-onset disease.

Can group B strep disease among newborns be prevented?
Yes! Most early-onset group B strep disease in newborns can be prevented by giving pregnant women antibiotics (medicine) through the vein (IV) during labor. Antibiotics help to kill some of the strep bacteria that are dangerous to the baby during birth. The antibiotics help during labor only — they can’t be taken before labor, because the bacteria can grow back quickly. Any pregnant woman who had a baby with group B strep disease in the past, or who now has a bladder (urinary tract) infection caused by group B strep should receive antibiotics during labor. Pregnant women who carry group B strep (test positive during this pregnancy) should be given antibiotics at the time of labor or when their water breaks.

What are the symptoms of group B strep in a newborn?
The symptoms for group B strep can seem like other problems in newborns. Some symptoms are fever, difficulty feeding, irritability, or lethargy (hard to wake up the baby). If you think your baby is sick, get medical help right away.

How is group B strep disease diagnosed and treated in babies?
If a mother received antibiotics for group B strep during labor, the baby will be observed to see if he or she should get extra testing or treatment. See the newborn management section of the CDC’s revised prevention guidelines to learn more. If the doctors suspect that a baby has group B strep infection, they will take a sample of the baby’s sterile body fluids, such as blood or spinal fluid. Group B strep disease is diagnosed when the bacteria are grown from cultures of those fluids. Cultures take a few days to grow. Group B strep infections in both newborns and adults are usually treated with antibiotics (e.g., penicillin or ampicillin) given through a vein (IV).
Pregnancy and Group B Strep Prevention

How will I know if I need antibiotics to prevent passing group B strep to my baby?
You should get a screening test late in pregnancy to see if you carry group B strep. If your test comes back positive, you should get antibiotics through the vein (IV) during labor. If you had a previous baby who got sick with group B strep disease, or if you had a urinary tract infection (bladder infection) during this pregnancy caused by group B strep, you also need to get antibiotics through the vein (IV) when your labor starts.

How do you find out if you carry group B strep during pregnancy?
CDC’s revised guidelines recommend that a pregnant woman be tested for group B strep in her vagina and rectum when she is 35 to 37 weeks pregnant. The test is simple and does not hurt. A sterile swab (“Q-tip”) is used to collect a sample from the vagina and the rectum. This is sent to a laboratory for testing.

What happens if my pregnancy screening test is positive for group B strep?
To prevent group B strep bacteria from being passed to the newborn, pregnant women who carry group B strep should be given antibiotics through the vein (IV) at the time of labor or when their water breaks.

Are there any symptoms if you are a group B strep carrier?
Most pregnant women have no symptoms when they are carriers for group B strep bacteria. Sometimes, group B strep can cause bladder infections during pregnancy or infections in the womb during labor or after delivery. Being a carrier (testing positive for group B strep, but having no symptoms) is quite common. Around 25% of women may carry the bacteria at any time. This doesn’t mean that they have group B strep disease, but it does mean that they are at higher risk for giving their baby a group B strep infection during birth.

What if I don’t know whether or not I am group B strep positive when my labor starts?
Talk to your doctor about your group B strep status. Pregnant women who do not know whether or not they are group B strep positive when labor starts should be given antibiotics if they have:
- labor starting at less than 37 weeks (preterm labor);
- prolonged membrane rupture (water breaking more than 18 hours before labor starts);
- fever during labor.

What are the risks of taking antibiotics to prevent group B strep disease in my newborn?
Penicillin is the most common antibiotic that is given. If you are allergic to penicillin, there are other antibiotics that can be given. Penicillin is very safe and effective at preventing group B strep disease in newborns. There can be side effects from penicillin for the woman, including a mild reaction to penicillin (about a 10% chance). There is a rare chance (about 1 in 10,000) of the mother having a severe allergic reaction that requires emergency treatment. However, a pregnant woman who is a group B strep carrier (tested positive) at full-term delivery who gets antibiotics can feel confident knowing that she has only a 1 in 4000 chance of delivering a baby with group B strep disease. If a pregnant woman who is a group B strep carrier does not get antibiotics at the time of delivery, her baby has a 1 in 200 chance of developing group B strep disease. This means that those infants whose mothers are group B strep carriers and do not get antibiotics have over 20 times the risk of developing disease than those who do receive treatment.

Can group B strep cause stillbirth, pre-term delivery, or miscarriage?
There are many different factors that lead to stillbirth, pre-term delivery, or miscarriage. Most of the time, the cause is not known. Group B strep can cause some stillbirths, and pre-term babies are at greater risk of group B strep infections. However, the relationship between group B strep and premature babies is not always clear.

Will a C-section prevent group B strep in a newborn?
A C-section should not be used to prevent early-onset group B strep infection in infants. If you need to have a C-section for other reasons, and you are group B strep positive, you will not need antibiotics for group B strep only, unless you begin labor or your water breaks before the surgery begins.
What should I do if my water breaks early?
If your water breaks before term, get to the hospital right away. If your group B strep test has not been done, or if you don’t know if you have been tested, you should talk with your doctor about group B strep disease prevention. If you have already tested positive for group B strep, remind the doctors and nurses during labor.

Can I breastfeed my baby if I am group B strep positive?
Yes. Women who are group B strep positive can breastfeed safely.

More About Group B Strep

Do people who are group B strep carriers feel sick?
Many people carry group B strep in their bodies, but they do not become sick or have any symptoms. Adults can have group B strep in the bowel, vagina, bladder, or throat. About 25% of pregnant women carry group B strep in the rectum or vagina. A person who is a ‘carrier’ has the bacteria in her body but may not feel sick. However, her baby may come into contact with group B strep during birth. Group B strep bacteria may come and go in people’s bodies without symptoms.

How does someone get group B strep?
The bacteria that cause group B strep disease normally live in the intestine, vagina, or rectal areas. Group B strep colonization is not a sexually transmitted disease (STD). Approximately 25% (1 in 4) of pregnant women carry group B strep bacteria in their vagina or rectum. For most women there are no symptoms of carrying group B strep bacteria.

Will group B strep go away with antibiotics?
Antibiotics that are given when labor starts help to greatly reduce the number of group B strep bacteria present during labor. This reduces the chances of the newborn becoming exposed and infected. However, for women who are group B strep carriers, antibiotics before labor starts are not a good way to get rid of group B strep bacteria. Since they naturally live in the gastrointestinal tract (guts), the bacteria can come back after antibiotics. A woman may test positive at certain times and not at others. That’s why it’s important for all pregnant women to be tested for group B strep carriage between 35 to 37 weeks of every pregnancy. Talk to your doctor or nurse about the best way to prevent group B strep disease.

What if I’m allergic to some antibiotics?
Tell your doctor or nurse about your allergies during your checkup. Try to make a plan for delivery. When you get to the hospital, remind your doctor if you are allergic to any medicines. There are a variety of different antibiotics that can be used, even if you are allergic to some.

Is there a vaccine for group B strep?
There is not a vaccine right now to prevent group B strep. The federal government is supporting research on a vaccine for the prevention of group B strep disease.

Are yeast infections caused by group B strep?
Yeast infections are not caused by group B strep bacteria. Taking antibiotics can sometimes increase the chances of having a yeast infection. When bacteria that are normally found in the vagina are killed by antibiotics, yeast may have a chance to grow more quickly than usual.

Is group B strep the same as strep throat?
No. Strep throat is caused by group A streptococcus bacteria. Group A and group B streptococcus are different kinds of bacteria. They both belong to the same family, but they are different species.

Adapted from the CDC. Available at: http://www.cdc.gov/groupbstrep/about/fast-facts.html

FAQ for adult disease available at: http://www.cdc.gov/groupbstrep/about/adults.html