

Group Beta Strep (GBS)

Group B Streptococci (GBS)

Group B strep is caused by *Streptococcus Agalactiae*, a gram-positive bacteria. About 30% of all women will culture positive for GBS at some time during pregnancy, often without any symptoms. As many as 50% to 70% of infants born to women who are carriers of GBS will acquire the bacteria during birth. About 1% to 2% of infants will develop early onset GBS disease. Approximately 7,600 babies per year are affected in the United States. Of these about 6% will die. Thirty percent of the survivors will have permanent disabilities such as mental retardation, hearing loss, and blindness. GBS usually appears as bacteremia, pneumonia, or meningitis within 72 hours of birth. Eighty percent of perinatal GBS infections occur within seven days. The other 20% occur after seven days and are less likely to die, although they may still have serious complications.

Risk Factors

Several factors increase the risk of GBS:

- Preterm labor (93% of deaths that occur from GBS are preterm babies)
- GBS colonization late in pregnancy
- Premature rupture of membranes 18 hours or more before delivery
- Fever during labor higher than 100.4
- Low-birth weight infants
- Previously delivery of an infant with GBS disease
- Heavy colonization of GBS (The presence of GBS in the urine during pregnancy shows that the woman is heavily colonized with the bacteria and has an increased risk of transmission to her infant.)

Center's for Disease Control (CDC) recommends:

All pregnant women should be screened at 35--37 weeks' gestation for GBS colonization. At the time of labor or rupture of membranes, intrapartum antibiotics should be given to all pregnant women identified as GBS carriers.

Colonization during a previous pregnancy is not an indication for intrapartum prophylaxis in subsequent deliveries. Screening to detect GBS colonization in each pregnancy will determine the need for prophylaxis in that pregnancy.

If the result of GBS culture is not known at the onset of labor, antibiotics should be administered to women with any of the following risk factors: gestation 18 hours, or a temperature of $>100.4^{\circ}$ F. Women with known negative results from screening cultures within 5 weeks of delivery do not require prophylaxis to prevent GBS disease even if any of the intrapartum risk factors develop.

Women with threatened preterm (<37 weeks' gestation) delivery should be assessed for need for intrapartum prophylaxis to prevent perinatal GBS disease.

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Treatment

Group B streptococcal infection is treated with antibiotics. Studies have not shown that oral antibiotics given to the mother during pregnancy or to the infant after birth decrease the incidence of GBS. The antibiotic of choice is Penicillin G, with Ampicillin as an alternative. Ampicillin is a broader spectrum antibiotic and can produce antimicrobial resistance to other pathogens. If the woman is allergic to penicillin, Clindamycin IV is recommended with Erythromycin IV as an alternative.

Symptoms

Symptoms of neonatal infection often begin with respiratory distress. Temperature, alertness, nursing, fontanelle changes, and muscle stiffness are watched. A physician should be consulted immediately if signs of infection become evident. Group B strep infection can result in a rapid tragic death. In both early and late onset disease, intensive IV antibiotic therapy with penicillin or Ampicillin is recommended for 10 to 14 days.

Possible Complications

A serious risk of these guidelines is that the administration of antibiotics to all women with GBS could result in as many as 10 deaths per year caused by anaphylaxis from severe allergic reactions. Complications may also occur in the baby. Widespread use of antibiotics also increases the risk of resistant organisms. Studies are showing that babies that who have been exposed to antibiotics during labor are more susceptible to other infections during the first year of life.