GBS - Group B Streptococcus and Pregnancy

What is Group B Strep (GBS)?

Group B Streptococcus (GBS) is a bacteria that is commonly found in the genital, urinary and/or lower intestinal tracts of adults. It is related to, but not the same as, Group A Steptococcus, which occurs mainly in the throat. Many of us live with or "carry" GBS bacteria without ever knowing it -- the bacteria are simply one of many bacteria that live within our bodies.

Any bacteria may multiply and disrupt the body's normal balance. This is called an "infection." GBS infections may be chronic or intermittent. People who have GBS infections may not feel sick (this is called "asymptomatic"), or may have symptoms that make them feel unwell (such as a fever or symptoms of a bladder infection).

GBS and Pregnancy

Around 20% of all pregnant women carry GBS bacteria. They are not sick, and most of the time the bacteria will cause no problems for either her or her baby. However if a woman develops a GBS **infection** during her pregnancy, it may cause a urinary tract infection, or infection of her kidneys or reproductive organs. GBS **infections** have been associated with early miscarriage, premature rupture of the membranes ("waters breaking"), premature birth, stillbirth, and neonatal death.

How Your Baby Can Get GBS

During pregnancy, your baby is protected from GBS and other bacteria by the amniotic sac (membranes that surround the baby in the uterus). Once your membranes rupture (or your waters break), the bacteria may be able to reach the baby. This happens 40-50% of the time when the mother has GBS bacteria in her system (not necessarily an infection).

Your baby is more likely to get GBS if:

- your vagina is heavily colonized with GBS bacteria
- your membranes are ruptured for more than 18 hours before the baby's birth
- your baby is premature (less than 37 weeks)
- you develop a fever of 37.8° C or more in labour
- you had a urinary tract infection caused by GBS bacteria during pregnancy

These factors are therefore called "**risk factors**," because they are known to increase the risk that your baby might be affected by GBS if you have GBS.

How GBS Affects Babies

Of the 40 to 50% of babies who do get GBS bacteria from their mothers during labour, only 1% to 2% -- **or around one or two babies in one hundred** born to a GBS positive mother will become "sick." Premature or low birth weight babies are more at risk than healthy, full term babies. **Most babies (98 - 99%) will have no problems even if they pick up GBS bacteria during labour.** The mother's antibodies, which are shared with the baby during pregnancy, help the baby to fight infection.

"Early Onset" GBS Infection

Of the very few babies who do get sick with GBS, most will get sick in the first few hours after birth. Almost all become ill within 72 hours from the birth. This is "early onset" GBS infection. The symptoms are:

- respiratory distress (difficulty breathing)
- cyanosis (blue lips, face, or body, with or without a pale, mottled or grey complexion)
- shock
- symptoms of infection (poor feeding, lethargy).

Babies with these symptoms will likely be admitted to the special care nursery, have blood tests to identify the cause(s), be watched carefully and be treated with IV antibiotics.

Most of the babies who become sick with early onset GBS will recover, especially if the disease is noted and treated promptly. However some babies will suffer permanent damage (such as blindness, deafness, mental retardation or leaning disabilities) or will die.

"Late Onset" GBS Infection

Very rarely babies may become sick with GBS infection as late as three months after birth. This is called "late onset" GBS disease. These babies were likely not infected during the birth, but later, as a result of transmission from someone with GBS.

Babies with late onset GBS infection may initially have a fever, poor appetite, and be irritable. If not treated, they will become progressively more ill, with lethargy and poor muscle tone. Other signs of late onset GBS infection can include eye and ear infections and impetigo (skin infections). Treatment involves giving the baby antibiotics. **Late onset GBS infection can be prevented if everyone practices good hygiene, especially careful handwashing, when caring for your new baby**

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How do I know if I have GBS?

All women are offered testing for GBS at 35 to 37 weeks gestation. The test involves taking a swab of the lower vagina and anus. It can be done by you or your caregiver. Results are usually available in 3 to 5 days and are valid for 5 weeks.

How can I prevent GBS?

Recent research indicates using lactobacillus rhamnosus GR-1 and reuteri RC-14 may help prevent GBS. Two capsules of each should be placed in the vagina starting at 32 weeks gestation.

What if I test positive for GBS?

Around 30% of women will test positive for GBS. All GBS positive women are offered IV antibiotics when they are in active labour or when their membranes rupture. This treatment is very effective in preventing their baby from getting sick from GBS. The antibiotic that is usually given is Penicillan G. (If you are allergic to Penicillin, other antibiotics may be used.)

The antibiotics are given intravenously every 4-8 hours. It is recommended that you receive at least one dose of antibiotics 4 hours before your baby is born.

If you are GBS positive and your waters break before you go into labour, it is recommended that your labour be induced and your baby be delivered as soon as possible to minimize the risk of GBS infection.

If you have had a previous baby with GBS infection, or if you have had a bladder infection caused by GBS in your pregnancy, it is strongly recommended that you receive treatment. Additional testing is not needed.

If you test negative, no treatment is required.

What are my chances of having a reaction to the antibiotics?

If you are given IV antibiotics, you have:

- a 1 in 10 chance of a mild reaction
- a 1 in 10,000 chance of a severe reaction.
- You and your baby may also be more susceptible to yeast or thrush infections. These may require treatment with antifungal medications. Thrush infections in the baby's mouth may also cause nipple soreness for the mother and problems with breastfeeding for mother and baby.

Risk factors for GBS disease in baby

Your baby is at increased risk of getting sick from GBS disease if you have some or all of the following **risk factors:**

- GBS bladder infection in pregnancy
- Previous baby with GBS infection
- Prolonged rupture of the membranes
- (more than 12 -18 hours)
- Premature labour (less than 37 weeks)
- Maternal fever in labour (>37.5-38• C.)

What are my chances of having a baby with early onset GBS Disease?

If you are GBS Negative:

- ***and have no risk factors,*** you have a 1 in 3200 chance of having a baby with GBS
- **and have any risk factors**, you have a 1 in 1100 chance of having a baby with GBS

If you are GBS Positive:

- ***and have no risk factors,*** *you have:*
  - a 1 in 200 chance of having a baby with GBS if you are **not** treated with antibiotics
  - a 1 in 4000 chance of having a baby with GBS if you **are** treated with antibiotics
- **and have any risk factors**, you have a 4 in 100 chance of having a GBS baby if you are **not** treated with antibiotics

What if I don't get tested for GBS?

If you choose not to be tested for GBS, or if your GBS status is unknown at the time of labour, IV antibiotics may be recommended, especially if you have any of the risk factors above. With no risk factors, you have a 1 in 800 chance of having a GBS affected baby. With no risk factors, the chance is 1 in 800.

Treatment for Babies with GBS

Babies with symptoms of GBS infection are treated with intravenous antibiotics.

If you are GBS positive, or if your GBS status is unknown and you have any of the risk factors above, **and you do not receive antibiotics in labour**, or if you do not receive at least one dose of antibiotics at least 4 hours before your baby is born, it may be recommended that your baby stay in the hospital for 24-48 hours for obsrvation for signs of GBS disease.