GROUP B STREPTOCOCCUS

The bacteria Streptococcus agalactiae or group B streptococcus (GBS) colonizes the vagina or rectum without causing symptoms in 10 to 30% of pregnant women.\(^22,23\) Colonization rates in women vary by geographic location, age, the number of prior pregnancies, and ethnicity. Young women and African American women are more often colonized than women of other ethnic groups.

The gastrointestinal tract is the natural reservoir for GBS and serves as the source of colonization of the perineum, vagina, cervix, urethra and urine. Colonization can be transient, chronic, or intermittent, and is not altered by pregnancy.\(^22,23\) Transmission from mother to infant during pregnancy, labor or birth (called vertical transmission) can result in serious illness, long-term health problems, and/or death of the infant. Nearly two-thirds of infants born to colonized mothers are colonized with GBS on their skin and mucous membranes. Most colonized infants are asymptomatic. However, between 1 and 2% of infants from colonized mothers develop early onset neonatal infection (see below).\(^23\) Women with GBS detected from the cervix or urine are considered heavily colonized and their infants are at increased risk for developing serious GBS disease.

Guidelines for the prevention of perinatal GBS disease were established in 2002 by the Centers for Disease Control and Prevention, American College of Obstetrics and Gynecology and the American Academy of Pediatrics and updated in 2010.\(^23\) The 2010 guidelines continue to recommend:

- Universal screening of pregnant women by rectovaginal culture at 35 to 37 weeks of pregnancy, and
- Use of prophylactic antibiotics during labor and birth for women with:
  - Positive GBS cultures (including positive urine culture with any amount of GBS);
  - Risk factors for neonatal sepsis; and
  - An unknown GBS status.

### Infant Disease

**Early Onset Disease:** Onset of symptoms within 7 days following birth. Symptoms are noted in over 60% within the first 24 hours.\(^23\)

- Transmission is generally vertical, from mother to infant, during pregnancy, labor or birth.
- Symptoms: respiratory grunting, rapid breathing, apnea, cyanosis, hypotension, lethargy, poor feeding, low body temperature or fever, pallor, jaundice.

**Late Onset Disease:** Onset of symptoms between 7 and 89 days (average 36 days) after birth is considered late-onset disease.

- Transmission may be vertical, or from other environmental sources (family, hospital staff, other infants).
- Symptoms: fever, irritability, and/or lethargy, poor feeding, upper respiratory symptoms, middle ear infections, or other localized infections.

### Maternal Disease

- Urinary tract infection
- Chorioamnionitis/Amnionitis/Amniotic Fluid Infection
- Preterm Premature Rupture of Members
- Preterm Birth
- Stillbirth
- Postpartum endometritis
- Wound infection
- Sepsis
- Meningitis
Since the adoption of the guidelines in 2002 the overall rates of neonatal sepsis have declined nationally. However, African American infants born to colonized mothers continue to suffer disproportionately high rates of neonatal sepsis. Rates of neonatal sepsis among African American infants declined initially in 2003, but by 2005, had returned to the pre-guideline rate. Health care improvement efforts to track adherence to recommended screening, treatment and prophylaxis guidelines should help reduce this disparity.

**Complications of GBS in Pregnancy**

GBS can cause serious infections in both pregnant women and newborns. During pregnancy, GBS can rise from the cervix and infect the uterus and fetal tissues. GBS is associated with preterm premature rupture of membranes, preterm birth, amniotic fluid infection, stillbirth, postpartum endometritis, wound infection, maternal sepsis and meningitis. Among infants, GBS is a leading cause of neonatal sepsis, pneumonia and meningitis. Survival rates for GBS disease are high, and decline with gestational age. At term, 98% of infants survive; this decreases to 90% among infants born at 34 to 36-weeks, and 70% for infants born at less than 33 weeks gestation. Babies who survive face possible hearing or vision loss, learning disabilities, cerebral palsy, and other neurological sequelae.
GUIDELINES for Universal Prenatal Screening for Group B Streptococcus to Prevent Neonatal Infection

Screening for GBS by culture is recommended at 35 to 37 weeks gestation for ALL pregnant women.23

- If a woman has previously been identified as having GBS in her urine in this pregnancy, she should be considered GBS positive, and does not need to be rescreened at 35-37 weeks.
- If a woman has previously had an infant with GBS disease, she should be considered positive, and does not need to be rescreened at 35-37 weeks.
- Even if a woman plans to have a cesarean delivery, prenatal screening is recommended because labor or membrane rupture may occur before scheduled surgery.
- If more than 4 weeks passes before delivery, the vaginal/rectal screening should be repeated.23

Specimen Collection

Please see instructions on page 20 for the collection of a genital swab for the detection of GBS.

If the patient is allergic to penicillin, it is important to request that the lab do susceptibility testing for clindamycin and erythromycin, if the screen is positive for GBS. Attach a special note to the specimen.

Follow-up for GBS-positive Pregnant Women23

Medical records should be prominently labeled as GBS positive. If the woman is penicillin allergic, susceptibility testing for clindamycin and erythromycin should be prominently recorded as well.

Education: Women should be informed of their GBS status, and provided educational materials about GBS in pregnancy.

- Advise women to go to hospital as soon as labor begins, when fetal membranes rupture (with or without labor), or for signs and symptoms of infection
- Advise women to notify their pediatric healthcare provider of GBS status, either prenatally or immediately after birth.
Further Recommendations

**Antepartum Treatment** for GBS Asymptomatic Bacteriuria (any colony count level) IS recommended.

**Antepartum Treatment** for Colonization is NOT recommended. Antepartum antibiotics for maternal colonization with GBS is NOT recommended, NOT shown to reduce early-onset GBS disease, and may cause adverse consequences.

**Antenatal Obstetrical Practices**: Since the practice of “stripping membranes” has little benefit in starting labor, and has been shown to introduce bacteria into the lower uterine segment, LA Best Babies Network recommends against “stripping membranes” in GBS colonized women, because of the potential for introducing bacteria into the lower uterine segment, and because it is not effective for starting labor. The CDC’s position is that there is insufficient evidence of harm to recommend against this practice.

**Intrapartum Antibiotic Prophylaxis Protocols**: CDC and ACOG guidelines for intrapartum antibiotic prophylaxis should be followed.

Figure 3 presents an algorithm for management of GBS in pregnancy.
Antenatal Algorithm to Prevent Group B Streptococcal Early Onset Neonatal Disease

ALL Pregnant women at onset of care

Positive GBS¹

Urine Culture

Negative GBS

Prior Infant with GBS Disease

Yes

No

ALL Other Pregnant Women

Labor / ROM unknown GBS Status

<37 wks

≥37 wks

Labor / Rupture of Membranes

Intrapartum Prophylaxis Indicated

• Notify in-patient and out-patient pediatric providers of GBS status

Scheduled cesarean birth at any gestational age performed in the absence of rupture of membranes or labor

NO Intrapartum Prophylaxis

Treatment for GBS Bacteriuria (any colony count amount)
• Ampicillin 250 mg, 4 times daily × 7 days OR
• Amoxicillin 500 mg, 3 times daily × 7 days
If PCN Allergic- treat based on susceptibilities to erythromycin or clindamycin
Education- GBS in pregnancy; Treatment; Labor precautions; Intrapartum antibiotics

* NOTE: For General Management of urine culture results see Asymptomatic Bacteriuria section

* NOTE: For General Management of urine culture results see Asymptomatic Bacteriuria section

Instructions for the collection of a genital swab for the detection of a group B streptococcus (GBS)

1. Remove swab from packaging. Insert swab 2cm into vagina, (front passage). Do not touch cotton end with fingers.

2. Insert the same swab 1cm into anus, (back passage).

3. Remove cap from sterile tube.

4. Place swab into tube. Ensure cap fits firmly.

5. Make sure swab container is fully labelled with name, u.r. number, date and time of collection. Place swab container into transport bag and hand it to a staff member.

PATIENT EDUCATIONAL MATERIALS

In this section you will find examples of patient education materials for group B streptococcus in pregnancy.

Please also consult the links below for the most up-to-date patient education materials.

American Congress of Obstetricians and Gynecologists:
Group B Streptococcus Infection Fact Sheet
http://www.acog.org/publications/patient_education/bp105.cfm

American Academy of Family Physicians
Group B Streptococcus Fact Sheet

Centers for Disease Control and Prevention:
Protect Your Baby from Group B Strep!
http://www.cdc.gov/groupbstrep/resources/flyer-protect-baby.html
About Group B Strep
http://www.cdc.gov/groupbstrep/about/index.html
GROUP B STREP  WHAT YOU NEED TO KNOW

1. What is group B strep?
   Group B strep (streptococcus) is a type of bacteria that can cause serious illness and death in newborns. Until recent prevention efforts, hundreds of babies died from group B strep every year. This type of bacteria can also cause illness in adults, especially the elderly, but it is most common in newborns.

2. Why do I need to get tested for group B strep during each pregnancy?
   Group B strep bacteria can be passed from a mom who is a carrier for the bacteria (tests positive) to her baby during labor. Since the bacteria can come and go in your body, you need to be tested for group B strep every time you are pregnant, whether you tested negative or positive during the last pregnancy.

   Toward the end of pregnancy (35-37 weeks), the doctor will swab your vagina and rectum. This is sent to a lab, where they test for group B strep bacteria. The bacteria take a few days to grow, and the results are sent to your doctor.

3. What happens to babies born with the group B strep bacteria?
   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. Most newborn disease happens within the first week of life, called “early onset” disease. In the year 2001, there were 1,700 early-onset cases in the U.S.

4. How can group B strep disease in babies be prevented?
   Most early onset group B strep disease in newborns can be prevented by giving antibiotics (medicine) through the vein (IV) during labor to women who tested positive during their pregnancy. Because the bacteria can grow quickly, giving antibiotics before labor has started does not prevent the problem. Any woman who has a positive test for group B strep during this pregnancy should get antibiotics. Also, any pregnant woman who has had a baby in the past with group B strep disease, or who now has a bladder (urinary tract) infection caused by group B strep should get antibiotics during labor.

5. What if I’m allergic to some antibiotics?
   Women who are allergic to some antibiotics, such as penicillin, can still get other types of antibiotics. If you think you are allergic to penicillin, talk with your doctor.

6. How does someone get group B strep?
   Anyone can be a “carrier” for group B strep. The bacteria are found in the gastrointestinal tract (guts) and may move into the vagina and/or rectum. It is not a sexually transmitted disease (STD). About 1 in 4 women carry these bacteria. Most women would never have symptoms or know that they had these bacteria without a test during pregnancy.

7. If I know that I’m a group B strep carrier, why can’t I just take some antibiotics now?
   For women who are group B strep carriers, antibiotics before labor are not a good way to get rid of group B strep. Because they naturally live in the gastrointestinal tract (guts), the bacteria often come back after antibiotic treatment. Antibiotics during labor are effective at protecting your baby because they greatly reduce the amount of bacteria the baby is exposed to during labor. Even if you had IV antibiotics for your last baby, you may not need them for this pregnancy if you are not a carrier now. That’s why it’s important to get tested during every pregnancy.

8. What do I need to do during pregnancy or labor if I’m group B strep positive?
   Talk with your doctor and create a labor plan that includes getting antibiotics for group B strep prevention in your newborn. When your water breaks, or when you go into labor, make sure to get to the hospital at least four hours before delivery to make sure there is enough time for the antibiotics to work. When you get to the hospital, remind the staff that you are group B strep positive.

For more information, go to the Centers for Disease Control and Prevention (CDC) website at <www.cdc.gov/groupbstrep>, or ask your doctor.
Ask your doctor for a GBS test when you are 35 to 37 weeks pregnant (in your 9th month). The test is an easy swab of the vagina and rectum that should not hurt.

Finding the GBS bacteria does not mean that you are not clean, and it does not mean that you have a sexually transmitted disease. The bacteria are not spread from food, sex, water, or anything that you might have come into contact with. They can come and go naturally in the body.

The medicine to stop GBS from spreading to your baby is an antibiotic given during labor. The antibiotic (usually penicillin) is given to you through an IV (in the vein) during childbirth.

It does not work to take antibiotics for GBS before labor. The bacteria can grow back so fast that taking the medicine before you begin labor does not prevent the bacteria from spreading to your baby during childbirth.

My doctor explained that I should not take antibiotics now. To protect my baby, I have to wait until my labor starts.

I talked with my doctor and made a plan for labor. It helps put my mind at ease to be prepared.

Talk to your doctor or nurse if you have any questions. You can also get information from the CDC website: www.cdc.gov/groupbstrep

more info

Protect your baby from group B strep!
If you are pregnant, you need to know about group B strep. This type of bacteria is very common to all types of women and can be passed on to your baby during childbirth. Your baby can get very sick and even die if you are not tested and treated.

Group B strep (sometimes called GBS) is a type of bacteria that is often found in the vagina and rectum of healthy women. In the United States, about 1 in 4 women carry this type of bacteria. Women of any race or ethnicity can carry these bacteria.

Being a carrier for these bacteria does not mean you have an infection. It only means that you have group B strep bacteria in your body, usually living in the rectum or vagina. You would not feel the bacteria or have symptoms like a yeast infection. These bacteria are usually not harmful to you — only to your baby during labor.

The antibiotic is only given during labor — you do not need to worry about getting it for yourself before labor. Other people in the house, including kids, are not at risk of getting sick from GBS.

Your baby’s doctor will check on the baby once he or she is born. There is no need for the baby to get extra antibiotics or other medicine after he or she is born, unless the doctor tells you that they are needed.

If you are allergic to penicillin, there are still other choices to help treat you during labor. Talk with your doctor and nurses about it.

Each time you are pregnant, you need to be tested for GBS. It doesn’t matter if you did or did not have this type of bacteria before — each pregnancy is different.

If you think you might have a C-section or go into labor early (premature), talk with your doctor or nurse about your personal GBS plan.

I found out that my girlfriend had to have IV antibiotics when she had her son. He’s a healthy toddler now, which makes me feel better about all this GBS stuff.

If you never heard of GBS before, but my doctor told me anyone could carry these bacteria.

What you can do before you go into labor:

- Ask your doctor for a GBS test when you are 35 to 37 weeks pregnant (9th month).
- If you are allergic to penicillin or other antibiotics, make sure to tell your doctor or nurse about any reactions you have had.
- If your test shows that you carry the bacteria, talk with your doctor about a plan for labor.
- Continue your regular check-ups, and always call your doctor or nurse if you have any problems.

When your water breaks or when you go into labor:

If you have not had your GBS test when labor starts, remind the staff that you do not know your GBS status.

If you are a GBS carrier:

- Go to the hospital. The antibiotics work best if you get them at least 4 hours before you deliver.
- Tell the labor and delivery staff at the hospital that you are a group B strep carrier.
- Speak up if you are allergic to penicillin.
- Expect to get IV antibiotics (medicine through the vein) during labor.
- It is fine to breastfeed after your baby is born.

Talk to your doctor or nurse if you have any questions. You can also get information from the CDC website: [www.cdc.gov/groupbstrep](http://www.cdc.gov/groupbstrep)

From: [http://www.cdc.gov/groupBstrep/resources/print-materials.html](http://www.cdc.gov/groupBstrep/resources/print-materials.html)
¿Estás embarazada?

Pídele a tu médico que te haga una prueba de GBS a las 35 - 37 semanas de embarazo (3º mes). La prueba es fácil y no duele. Consiste en tomar una muestra de la vagina y del recto con un hisopo.

La presencia de la bacteria estreptococo del grupo B (o GBS) no significa que no seas una persona limpia, ni TAMPOCO que tengas una enfermedad de transmisión sexual. La bacteria GBS no se transmite a través de los alimentos, las relaciones sexuales, el agua ni de ninguna otra cosa con la que hayas estado en contacto, sino que puede entrar y salir del cuerpo de manera natural.

La medicina que evita la transmisión de la bacteria GBS al bebé es un antibiótico que se administra durante el trabajo de parto. El antibiótico (por lo general, penicilina) es administrado a la mamá por vía intravenosa (IV, por sus siglas en inglés) antes de que nazca el bebé.

De nada sirve tomar el antibiótico contra esta bacteria antes de que comience el trabajo de parto. La misma se reproduce nuevamente con tanta velocidad que tomar la medicina antes de comenzar el trabajo de parto no evita que sea transmitida al bebé durante el parto.

Hablé con mi médico y preparamos un plan para el momento del parto. Estar preparada me hizo sentir más tranquila.

Hablé con tu médico o enfermera si tienes alguna pregunta. También puedes conseguir información en el sitio web de los CDC: www.cdc.gov/groupbstrept

Para más información

Protege a tu bebé contra la bacteria GBS

From: http://www.cdc.gov/groupBstrep/resources/print-materials.html
Protege a tu bebé contra la bacteria GBS

GBS es la forma abreviada de referirse en inglés a la bacteria estreptococo del grupo B (Group B Strep).

Si estás embarazada, es necesario que sepas de la existencia de esta bacteria y las consecuencias que puede tener en tu bebé.

La bacteria GBS es muy común en todos los tipos de mujeres, y las madres pueden transmitirla a su bebé en el momento de su nacimiento. El bebé puede presentar muy mal y hasta morir si tú no te haces las pruebas necesarias y no recibes tratamiento.

La bacteria GBS se encuentra en el vagina y el recto de mujeres sanas. En los Estados Unidos, cerca de 1 de cada 4 mujeres es portadora de este tipo de bacteria. La bacteria puede vivir en cualquier tipo de suero, no importa su raza o grupo étnico.

Ser portadora de la bacteria GBS no significa que esté infectada. Solamente significa que la tienes en el cuerpo, usualmente en el recto o en la vagina. Más aún, no sentirás su presencia ni tendrás síntomas como los de la infección por levadura (yeast infection, en inglés). Por lo general, esta bacteria no te causará ningún daño a ti, pero sí podría afectar a tu bebé durante el parto.

Nunca habla oído hablar de la GBS en el pasado, pero mi médico me dijo que es una bacteria que cualquiera puede tener.

El antibiótico es administrado solamente durante el trabajo de parto, por lo que no tienes que preocuparte por recibir el medicamento antes del trabajo de parto. Las otras personas que viven contigo, entre ellas los niños, no corren ningún riesgo de enfermarse con la bacteria GBS.

El médico del bebé le hará un chequeo general una vez que haya nacido. No es necesario administrar el bebé ningún otro antibiótico ni medicina después de que nazca, a menos que el doctor indique que sí lo necesita.

Si eres alérgica a la penicilina, existen otras opciones de tratamiento que se te pueden aplicar durante el trabajo de parto. Habla con tu médico y enfermera sobre este tema.

Es necesario que te hagas la prueba de GBS siempre que estés embarazada. No importa si has tenido o no esta bacteria en el pasado porque cada embarazo es diferente.

Si crees que vas a tener tu bebé por cesárea o que se te adelante el parto (prematuro), habla con tu médico o enfermera acerca de tu plan personal para controlar la bacteria GBS.

Qué hacer antes de que comience el trabajo de parto

- Pídele al médico que te haga la prueba de GBS a las 36 – 37 semanas de embarazo (9º mes).
- Si eres alérgica a la penicilina u otros antibióticos, no dejes de informarle al médico o a la enfermera acerca de las reacciones que has tenido en el pasado.
- Si la prueba indica que eres portadora de la bacteria GBS, habla con tu doctor para que preparen un plan para el trabajo de parto.
- Sigue con tu control habitual y no dejes de llamar al médico o a la enfermera si tienes algún problema.

Cuando rompas fuente y cuando comienza el trabajo de parto

Si todavía no te han hecho la prueba de GBS para cuando comience el trabajo de parto, recuérdale al personal médico que no sabes si tienes la bacteria GBS.

Si eres portadora de la bacteria GBS,

- Ve para el hospital. Los antibióticos son más eficaces si se toman por lo menos 4 horas antes del parto.
- Infórmale al doctor o a la enfermera que te asista en el hospital durante el trabajo de parto que eres portadora de la bacteria GBS.
- Si eres alérgica a la penicilina, asegúrate de informar al médico.
- No te sorprendas cuando te administran los antibióticos por vía intravenosa durante el trabajo de parto.
- Puedes amamantar a tu bebé sin problema.

Para más información

Habla con tu médico o enfermera si tienes alguna pregunta. También puedes conseguir información en el sitio web de los CDC: www.cdc.gov/groupbstrep

From: http://www.cdc.gov/groupBstrep/resources/print-materials.html