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## Group B Streptococcus

### Frequently Asked Questions

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#### 1. What is Group B Streptococcus?

Group B streptococcus (GBS, group B strep), also known as *Streptococcus agalactiae* is a bacterium which can cause serious illness in newborn babies and pregnant women. It is commonly found in the gastro-intestinal or genital tract of humans but causes no symptoms.

#### 2. Who can get GBS disease?

Approximately one in four women have GBS bacteria in their body, and often this does not cause any symptoms for the woman or problems with her pregnancy. However, sometimes the bacteria may cause disease: most commonly in newborns, who get infected during pregnancy and/or childbirth from GBS in their mother's genital tract.

GBS is usually harmless in healthy adults, but certain groups have a higher risk of getting GBS disease. These include pregnant women, older adults, and people with medical conditions like diabetes, heart disease, congestive heart failure, cancer, or obesity.

#### 3. What are the most common types of GBS infection?

GBS can cause milder infections of the urinary tract or skin but at other times, GBS infections can become serious and invade the body, causing invasive diseases such as meningitis (infection of the membranes around the brain and spinal cord), septicaemia (blood poisoning), pneumonia (infection of the lungs), bone and joint infections, and infections of the uterus in women. When people develop invasive GBS disease the infection is usually very severe. The person will need to be hospitalised and may even die from the infection.

#### 4. What can happen if I develop GBS disease in pregnancy?

Approximately one in four women have GBS bacteria in their body, and often this does not cause any symptoms for the woman or problems with her pregnancy. However, if the pregnant woman were to develop GBS disease this could show as a urinary tract infection, bacteraemia (blood infection), endometritis (inflammation of the uterus lining), or chorioamnionitis (infection of the amniotic fluid and tissue that surround a baby during pregnancy). Sometimes these infections lead to the onset of premature labour or stillbirth (death of the child whilst in the uterus).

If your doctor finds GBS in your urine or genital tract during your pregnancy, or if you had a baby before who had a serious GBS infection, you may be given antibiotics during labour to prevent passing GBS to your newborn.

## 5. What is invasive GBS in the newborn?

Newborn babies can get infected by GBS while in their mother's womb, where the bacteria moves from the mother's genital tract up into the uterus before birth, or when the baby passes through the birth canal during delivery. GBS disease in newborn babies is split into two types: early-onset disease (EOD) and late-onset disease (LOD). EOD shows up within the first 6 days of life, while LOD appears between 7 and 89 days after birth.

Newborns with EOD usually show signs of pneumonia (infection of the lungs) and sepsis (a severe infection that spreads throughout the body) right from the start, often on their very first day of life. One in five very preterm newborns (born before 33 weeks gestation) with EOD will die from the infection, whereas only 1 in 50 full-term newborns may die from early-onset GBS disease.

LOD most often shows up as meningitis (an infection of the membranes surrounding the brain and spinal cord) followed by sepsis (a severe infection that spreads throughout the body). Globally, one in five newborns with LOD will die from the infection.

## 6. What are the risk factors for newborn GBS disease?

- A mother carrying GBS in the genital tract
- Premature labour (earlier than 37 weeks)
- Prolonged rupture of membranes - the mother's water breaks 12 hours or more before delivery
- Maternal infection of the placental tissues and amniotic fluid (chorioamnionitis)
- Urinary tract infection during the pregnancy
- Maternal fever - temperature is greater than 38°C during labour
- The mother previously delivered an infant with GBS infection

## 7. What are the signs and symptoms of GBS in newborns?

- Fever
- Low body temperature
- Difficulty feeding
- Sluggishness, limpness or weak muscle tone
- Difficulty breathing
- Irritability
- Jitteriness
- Seizures
- Rash
- Jaundice

## 8. How does GBS disease present in adults?

Adults with invasive GBS disease often show symptoms like skin and/or soft tissue infections, arthritis (joint inflammation), urinary tract infections, or bacteraemia (blood infection).

## 9. What are the signs and symptoms of GBS disease in adults?

### Urinary tract infection

- A strong, persistent urge to urinate
- A burning sensation or pain when urinating
- Passing frequent, small amounts of urine
- Urine that appears red, bright pink - a sign of blood in the urine
- Pelvic pain

### Blood infection (bacteraemia)

- Fever
- Chills
- Confusion or lack of alertness

### Skin or soft-tissue infection

- Swelling, warmth or redness in the area of the infection
- Pain in the area of the infection
- Lesions with pus or drainage

### Bone or joint infection

- Fever
- Chills
- Swelling, warmth or redness over the area of the infection
- Pain in the area of the infection
- Stiffness or inability to use a limb or joint

## 10. How is GBS infection treated?

Penicillin (or related antibiotic) is recommended as the first-line antibiotic for treatment of GBS infections in all age groups. For people who are allergic to penicillin, secondary antibiotics such as clindamycin or vancomycin are used as an alternative.

## 11. How can I prevent transmission of GBS to my baby?

There are currently no vaccines available for the prevention of GBS disease. In order to prevent the transmission of GBS from mother to baby during childbirth, doctors may take a swab from pregnant women at a time close to delivery, to test for GBS colonisation/carriage, and give antibiotics to mothers who test positive for GBS. If a

pregnant woman's GBS status is unknown, antibiotics are also given during labour if she has any of the risk factors listed in section 4. This process is called intrapartum antibiotic prophylaxis (IAP).

For IAP, a penicillin (or related antibiotic) is administered when labour begins, followed subsequent doses every four hours (depending on the antibiotic being used) until delivery. For women allergic to penicillin or related drugs, secondary antibiotics such as clindamycin or vancomycin are used as an alternative.

## 12. Is there a vaccine against GBS?

Unfortunately, there is no licenced vaccine against GBS. However, there are multiple vaccines in development and some have reached clinical trials, bringing them a step closer to being available to the public.

## 13. Where can I find out more information?

Guidelines and other documents:

- NICD website at [www.nicd.ac.za](http://www.nicd.ac.za) under the 'Diseases A-Z' tab.

For Healthcare Workers:

- Medical/clinical related queries: NICD Hotline 0800 212552 (**for use by healthcare professionals only**).
- Laboratory related queries: Centre for Respiratory Diseases and Meningitis: Linda de Gouveia: +27 11 555 0327, [lindad@nicd.ac.za](mailto:lindad@nicd.ac.za); Mignon du Plessis: +27 11 555 0387, [mignond@nicd.ac.za](mailto:mignond@nicd.ac.za).