

# GROUP BETA STREP INFECTIONS

## What is Group B Strep?

Group Beta Streptococcus (GBS) is one of the many bacteria that live in the human body. GBS is a transient bacteria that develops in our intestine, where bacteria play an important part in the digestion of our food and the absorption of nutrients. GBS can also be found in the vagina of 3/10 healthy pregnant women. GBS is not a sexually transmitted disease and does not cause symptoms. In fact in most healthy adults it is considered a normal organism.

## Why are we concerned about GBS?

In pregnant women, GBS can cause bladder and uterine infections. It can also cause serious infection in the newborn. The baby may be exposed to GBS in the mother's vagina during labour and birth. Of all babies born to mothers with GBS in their vaginas, 40-50% will become colonized by the bacteria. While most of the babies who become colonized will remain healthy, approximately 2% (1/200) will develop GBS infection and 5-9% of these babies may die. This means 1-2 in 10,000 babies will die from systemic GBS infection. Affected babies will usually become ill within the first 12 hours of life.

GBS is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid surrounding the brain) in newborns, and is also a frequent cause of newborn pneumonia. The infection can be early onset (within 7 days of birth) or late onset (7 days to 3 months.)

Pre-term versus Term: The risk of contracting GBS infection is lower in term infants thus there is greater concern for babies that are pre-term, i.e. less than 37 weeks gestation as their immune systems are more susceptible to infection.

## How do you test for GBS?

Between 35-37 weeks of pregnancy a swab, resembling a "Q-tip" is placed about an inch into the vagina and then wiped back along the perineum to the anus. We encourage you to do the swab yourself. The specimen is then sent to the lab for testing. A positive culture means that the mother carries GBS, not that she or her baby will become ill.

## What do we do about GBS?

There is conflicting evidence and differing views about universal screening and treatment. There are also a variety of approaches to treatment for GBS; these are listed below. The professional guidelines and standards in North America (SOGC) have changed over the recent years from guidelines favoring treatment based on risk factors to favoring universal screening and treatment to all women who screen positive. How to approach and deal with the issue of GBS in pregnant women continues to be studied.

## 1. Screen and Treat All GBS Positive Women Approach

The *Society of Obstetricians & Gynecologists of Canada* (SOGC) recommends that all women be screened, and all those that are GBS+ or have any risk factors will be treated with antibiotics in labour. This is the standard of practice in our community.

**If GBS+:** Antibiotics, usually Penicillin G, are given in active labour by IV every 4 hours until birth. Two doses of Penicillin G administered at least four hours before birth is considered adequate coverage against infection. It takes about 15 minutes to administer, and the IV can be capped and left in place for future doses. If water breaks *before* labour starts, it is recommended to start IV antibiotics right away and be induced if contractions do not begin soon after. For women who are allergic to Penicillin there are other options such as Clindamycin.

***Estimated 70-86% drop in early onset GBS disease; 26.7% of labouring women will be given antibiotics. This approach may have the greatest reduction in GBS sepsis.***

## 2. Treat for Risk Factors Alone Approach

The RCOG in the UK has decided that there is no clear evidence to show that universal screening of all pregnant women would be beneficial overall. They feel there is not enough evidence that treating GBS+ women is effective, as study quality has been poor. Their evidence also suggests that almost as many women will be treated using the screen and treat for risk factors approach as using the risk factors approach alone. Most European countries continue to treat according to risk factors.

### **Risk Factors for GBS infection in the baby:**

- Previous baby with GBS infection
- GBS in the urine during pregnancy (2-4% of pregnancies)
- Preterm birth (see previous comment)
- Rupture of membranes (waters broken) for more than 18 hours
- Temp  $\geq 38$  C during labour (fever)

***Estimated 50-68.8% reduction in early-onset GBS infection; 25% of women will be given antibiotics.***

## 3. Screen and Treat for Risk Factors Approach

The *Canadian Task Force on Preventive Health Care* (2002) recommends that all women be screened, but only GBS+ women *with risk factors* be treated with antibiotics.

There is evidence that both the screening and risk factor approaches reduce the number of sick babies, but more women will be given antibiotics with the screening approach. Therefore the CTF feels that screening and treating only with risk factors is more efficient. With either approach, some babies will still get sick.

***Estimated 51% reduction in early-onset GBS infection; 3.4% of women would be receiving antibiotics.***

## What are the side-effects of taking antibiotics in labour?

### Allergies:

1/10 chance of a minor allergic reaction

1/10, 000 chance of anaphylaxis

Antibiotic resistance is a concern with overuse of antibiotics among women with GBS. The widespread use of antibiotics is known to contribute to the development of resistant organisms. Antibacterial resistant strains of GBS are appearing.

### Disturbance in normal flora

In the baby's intestine antibiotics may cause delay of development of normal bacteria in the intestine of the newborn although research shows this is mainly a concern in preterm infants who receive more antibiotics.

Another concern is yeast and bacterial infections on the nipples of breastfeeding mothers which can impact the early experience of breastfeeding for mothers and babies – this is currently under study. A final concern is opportunistic infections in the mother; replacing normal flora is recommended for all women receiving antibiotics for any reason and can be done by taking capsules containing live bacterial culture such as acidophilus or bifidus, or Biogaia (L.reuteri) drops.

### Treatment of your baby:

Women should also know that babies of women of unknown GBS status, needing medical treatment, may be treated more vigorously than those of GBS – women.

Intrapartum antibiotic prophylaxis will not prevent all deaths. Even when treated appropriately some infant will die of early-onset disease particularly when the disease is well established prior to birth.

### The Final Word:

Sometimes women who are GBS+ have fast labours and there is not time to administer two doses or even any antibiotics, your baby is not at any more risk if this should occur. Remember most of the world does not treat for GBS and the incidence of sick babies from exposure to this organism is not significantly higher.

For more information on GBS:

[http://www.sogc.org/health/pregnancy-groupb\\_e.asp](http://www.sogc.org/health/pregnancy-groupb_e.asp)

<http://www.bchealthguide.org/kbase/topic/special/zp3014spec/sec1.htm>

<http://www.ctfphc.org/>

[http://www.cdc.gov/groupBstrep/prevention\\_spot/](http://www.cdc.gov/groupBstrep/prevention_spot/)

<http://www.rcog.org.uk/index.asp?PageID=520>