



January 2011

# Group B Streptococcal Infection in Newborn Infants

## Group B Streptococcus infection in newborns

Group B Streptococcus (GBS) is a type of bacteria that can cause serious infections in newborns. GBS is the most common cause of blood infection and meningitis (infection of the fluid and lining surrounding the brain) in newborns and is also a frequent cause of newborn pneumonia.

Many people carry GBS without knowing it. A person who carries GBS but does not show signs of infections is said to be “colonized” with GBS.

It is estimated that 10 to 30 percent of women are colonized with GBS in their vagina or lower intestine. Group B Strep does not typically cause problems for most women who carry the bacteria, but can cause infections in their newborn babies.

The risk of serious disease is greatest among premature infants who are more vulnerable to GBS infections than older infants because of their less-developed bodies and immune systems. Premature babies infected with GBS are at higher risk for long-term complications and/or death. Since most babies are born full term, however, full term babies account for 75 per cent of the cases of GBS disease in newborns.

### How infants become infected with GBS

Typically, babies are exposed to GBS at some point during labour and delivery. They may be exposed to GBS after the mother’s amniotic membranes rupture (water breaks), or while passing through the birth canal. The babies become infected when they swallow or inhale the bacteria.

Babies can become infected with GBS prior to labour and delivery if the bacterium travels upward from the mother’s vagina into the uterus.

Newborns can also become infected with GBS after they’re born by being in contact with their GBS positive mother or another person who is a carrier of the disease.

Information sheet

For further information, please call:  
**York Region Health Connection 1-800-361-5653**  
**TTY 1-866-252-9933 or visit [www.york.ca](http://www.york.ca)**

## Types of GBS infections

There are two types of GBS infections that can happen to newborn babies.

**Early-onset disease:** This is the most common type of GBS infection, occurring in babies whose mothers carry GBS in their vaginas. The babies become infected with GBS during their journey down the birth canal. Symptoms of early-onset infections appear before the baby is seven days old. Early-onset disease can cause infections in a baby's lungs, brain, spinal cord or blood. This type of GBS infection can be very serious and frequently hard for a newborn baby to fight off. Babies with early-onset disease are at greater risk of dying than babies with late-onset disease. This is the infection that antibiotic treatment in labour is aimed at preventing.

**Late-onset disease:** The second type of GBS infection is called late-onset disease. In this case, babies don't show signs of a GBS infection until after they are more than seven days old. About half of these babies were infected during their birth. The other half became infected after through contact with their GBS positive mother or another person who was a carrier of the disease. Late-onset infections can also cause serious problems for the newborn. The most common problem is meningitis - an infection of the membranes which surround the brain and spinal cord. The risk of late-onset disease is not decreased by antibiotic treatment in labour but antibiotics are available for the baby once it is born.

## Preventing GBS infection in newborns

There are currently two preventive approaches that have been successfully used to prevent early onset GBS disease in newborns:

1. Screening all pregnant women between 35 to 37 weeks of pregnancy. The test involves collecting a swab or swabs from the lower vagina and rectum. Women who test positive and meet the high-risk criteria listed below are given antibiotic treatment during labour.
2. Antibiotic treatment for all women with the following criteria:
  - Pre-term labour (less than 37 weeks gestation)
  - Prolonged rupture of membranes (greater than 18 hours)
  - Maternal fever during labour (greater than 38 oC)
  - Previous delivery of a newborn with GBS
  - Have group b streptococci isolated from urine in any concentration during their current pregnancy

## Treatment for newborns who develop GBS infections

Babies who develop GBS infections are treated with antibiotics and the appropriate forms of supportive care under the supervision of a doctor.

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