Association of Ontario Midwives
Delivering what matters.

GROUP B STREPTOCOCCUS in pregnancy

What do I need to know?

During your pregnancy, your midwife will talk to you about group B streptococcus (GBS).

This handout explains the research on GBS, gets you thinking about the decisions[1] your midwife will ask you to make about GBS, and helps you understand how they may affect you and your baby.

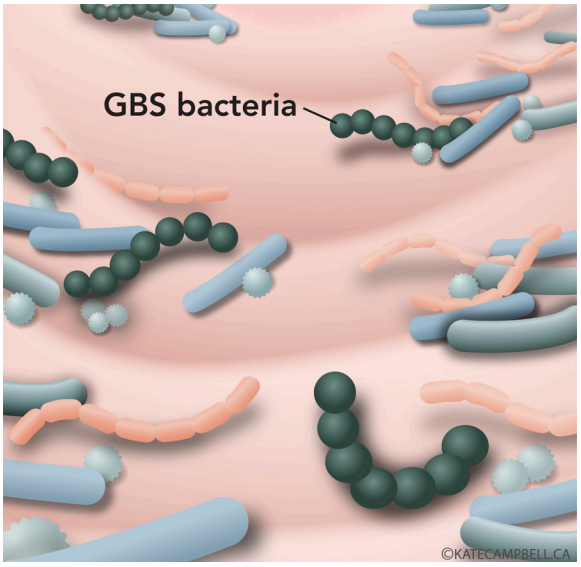
This document supplements but does not replace the discussions about GBS you will have with your midwife.

What is GBS?

GBS is a common bacteria found in all people's bodies. It lives in the intestines (gut) and can sometimes grow inside the rectum (bum), the birth canal (vagina) and the urinary tract (where your urine comes out).

Fifteen to 40% of pregnant people will have GBS in their rectum, birth canal or urinary tract at any given time. The bacteria can come and go in these areas. We use "GBS positive" to describe having GBS in your rectum, birth canal or urinary tract during pregnancy. Being GBS positive has nothing to do with hygiene (how clean you are) or sexually transmitted infections.

While most healthy adults do not get sick from GBS, it can make some babies very **sick**.



Why do we talk about GBS during pregnancy?

1. **GBS bacteria can cause some babies to get very sick**.
2. **There is a test** to find out if you have GBS while you are pregnant.
3. **There is a treatment** given during labour that lowers the chances that your baby will get sick from GBS.

[1] The freedom to choose and the ability to exercise all available options are not equally accessible to all groups. For many clients, oppression related to race, ethnicity, gender, sexual orientation, age, disability, and the intersectionality that results from these and other ways of identifying can impact the decision-making process.

References for information included in this document can be found in the accompanying Clinical Practice Guideline (CPG), Association of Ontario Midwives' Clinical Practice Guideline No. 19: Antepartum, Intrapartum and Postpartum Management of Group B Streptococcus.

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How do babies get sick from GBS?

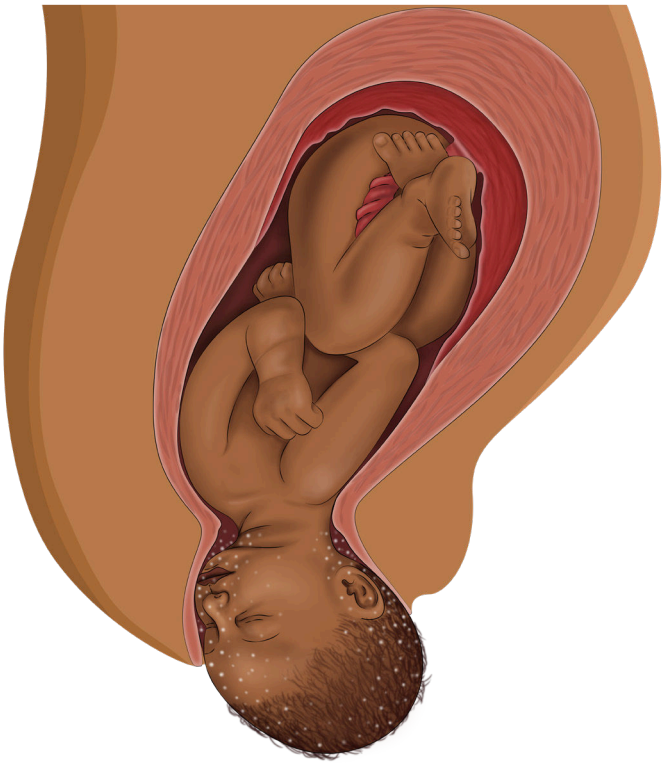
Babies born to a parent with GBS can pick up the bacteria:

- As they move through the birth canal when being born; and/or
- If GBS moves up into the uterus after the water breaks.

For most babies who pick up GBS, the bacteria will live on their skin and won't make them sick. A very small number of babies can develop an infection called early-onset group B streptococcus disease (EOGBSD).

In babies who develop EOGBSD, the bacteria could get into the:

- Blood (bacteremia)
- Lungs (pneumonia)
- Brain or spine (meningitis)



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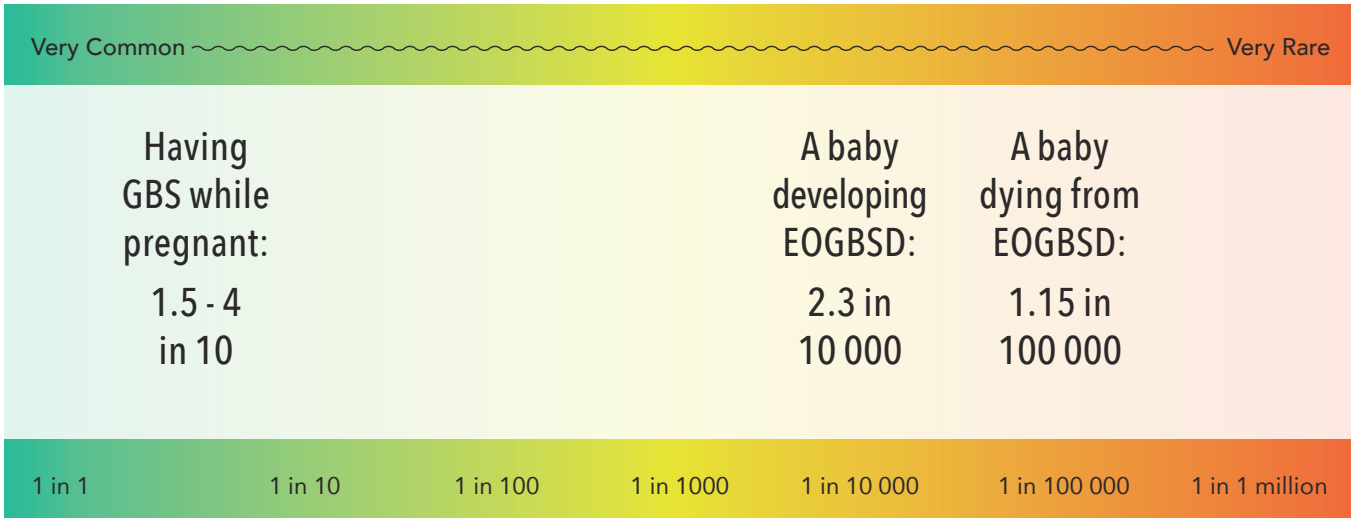
How often do babies get sick with EOGBSD?

In Ontario, where we have GBS testing and treatment options, about 2.3 in every 10 000 babies gets sick with EOGBSD. Of the 2.3 out of 10 000 babies who get sick with EOGBSD, five out of every 100 can become so sick that they die.

To put this in perspective, here are the chances of:



What can increase the chances of my baby developing EOGBSD?

Your baby is more likely to get sick with EOGBSD if:

RISK FACTOR	HOW DOES THIS INCREASE THE CHANCES OF EOGBSD?
YOU ARE **GBS POSITIVE**	Your baby can only get sick with EOGBSD if you have the bacteria in your birth canal during labour.
YOU ALREADY **HAD A BABY WITH EOGBSD**	If you've had a baby with EOGBSD before, you are more likely to have another baby with EOGBSD. For this reason, you will be considered GBS positive, and you will not need to test for GBS during this pregnancy.
YOU HAVE **GBS IN YOUR URINE DURING PREGNANCY**[2] (also called GBS bacteriuria)	If you have GBS in your urine during this pregnancy, you likely have high levels in your intestines, which is associated with a greater chance that your baby will have EOGBSD. For this reason, you will be considered GBS positive, and you will not need to test for GBS in the birth canal during this pregnancy.
YOUR **WATER BREAKS MORE THAN 18 HOURS** BEFORE YOUR BABY IS BORN	The bag of waters protects the baby from bacteria. The longer the time between your water breaking and the baby being born, the higher the chances that GBS can reach the baby in the uterus. When the baby is exposed to GBS for longer, there is a greater chance that the baby can get sick.
YOU GET A **FEVER DURING LABOUR**	A fever may be a sign that you have an infection caused by GBS, which makes it more likely that the baby is also infected with GBS.
YOUR BABY IS **BORN BEFORE 37 WEEKS** (also called preterm)	Preterm babies have weaker immune systems than babies born after 37 weeks, which means they can get sick more easily.

How can I find out if I have GBS?

Between 35 and 37 weeks of pregnancy, your midwife will offer a test to see if you have GBS. The bacteria can come and go in the birth canal, which is why this test is done near the end of your pregnancy. This way, the test will most likely show whether you will have GBS in your birth canal during delivery. The test involves inserting a cotton swab, like a Q-tip, into the birth canal and rectum. The swab will be sent to a lab for testing. You can do the test yourself, or your midwife can do it for you. If you choose to self-test, your midwife will explain how.

[2] Pregnant people are routinely offered a urine test to see if they have bacteria growing in their urinary tract that can cause an infection. This test usually happens within the first couple of prenatal visits. Sometimes GBS is picked up by that test. If you had tested positive, your health-care practitioner would likely have discussed this with you. If you're not sure whether you received this test or what the results were, check with your midwife.

Do I have to test for GBS?

You don't have to test for GBS. However, it's important to understand that:

Testing for GBS does not mean you'll need to be treated with antibiotics during labour. If you test GBS negative, you won't need to be treated. If you test GBS positive, you can still select the treatment approach that works best for you. The advantage of testing is that you and your midwife will know your GBS status, and this can help you make more informed decisions. See the chart on p. 6 to learn about treatment options.

If you choose not to test, this would make you "GBS unknown," which means you and your midwife wouldn't know whether you have GBS when you go into labour. **Being GBS unknown can be a disadvantage** if you develop risk factors in labour that increase the chances of your baby getting sick with GBS (listed on p.3). In this situation, you will be offered antibiotics because you may have GBS. The benefit of testing is that it will help you avoid taking antibiotics you don't need.

For example, having your water break before contractions start is one example of a risk factor for EOGBSD that could develop in labour. This occurs in about one in 10 pregnancies. If this happens to you, decision-making in labour (for example, whether to treat with antibiotics, or whether to try to get labour started with drugs or other methods) is much easier if you have tested for GBS and know if you are positive.

How can I lower the chances of my baby developing EOGBSD?

If you are GBS positive, getting antibiotics through an IV (a very small plastic tube connected to your veins, usually in the hand) during labour can help prevent your baby from developing EOGBSD. The antibiotic given is usually penicillin.

The antibiotics go into your body and destroy GBS bacteria. The antibiotics don't get rid of all the GBS, but they get rid of most of it. When your baby moves through your birth canal to be born, they will be exposed to far less GBS bacteria and will be less likely to get sick from it.

The antibiotics work best if they are given at least four hours before your baby is born. If they are given less than four hours before your baby is born, they will still eliminate some of the bacteria, which can help lower the chances that your baby will get sick with EOGBSD.

If you are allergic to penicillin and want to have IV treatment during labour, your midwife will speak to you about other antibiotic options.

Midwives can start an IV and give antibiotics in your home, in the hospital or in a birth centre, so choosing to treat for GBS shouldn't affect where you plan to labour or give birth.

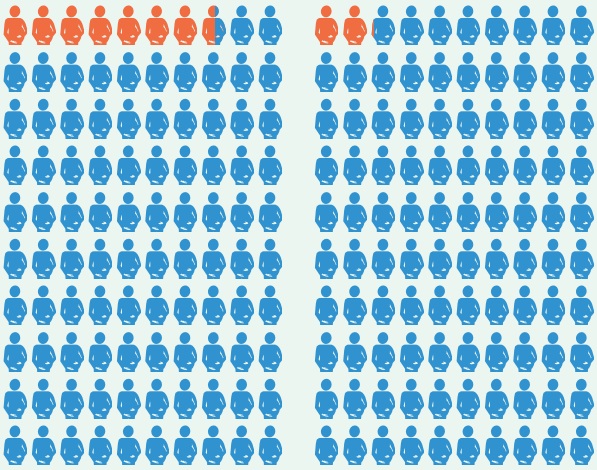
What are the positives and negatives of GBS treatment with antibiotics?

POSITIVES

Your baby is less likely to get sick or die from EOGBSD

Treatment with antibiotics during labour is a way to lower the chances of your baby getting sick from GBS.

For example, if we have 100 babies born to birthing parents who are GBS positive:



If the parent doesn't get IV antibiotics during labour, 7.6 of those babies will develop EOGBSD

If the parent does get IV antibiotics during labour, 2.1 of those babies will develop EOGBSD

Treating with antibiotics in labour lowers the chances that your baby will need special testing or monitoring after they are born

Special testing or monitoring could mean your baby stays in the hospital for longer, and:

- You may be separated from your baby.
- You may be unable to chest/breastfeed as you otherwise would.
- Your baby might get their blood taken and/or need an IV for treatment.

NEGATIVES

You may experience an allergic reaction

Around four to 40 out of 100 000 people can have a very serious reaction to antibiotics, sometimes resulting in death. About one in 10 people have a less serious reaction to penicillin, such as a skin rash.

Your baby's gut bacteria could change

Antibiotic treatment may change the amount of good bacteria in your baby's gut. We know these bacteria are important for the immune system and disease prevention, but we need more research to understand the long-term effects of antibiotics on babies' gut bacteria.

You and/or your baby could get a yeast infection

Excessive yeast can sometimes grow when you get antibiotic treatment. A yeast infection on your chest/breasts or in the baby's mouth could affect chest/breastfeeding. However, yeast can be treated.

You may not like the idea of an IV

You may be uncomfortable with or afraid of IVs. Having an IV may not be what you were hoping for your labour. You may not like the idea of being connected to long tubing and an IV pole. If you do have IV antibiotic treatment for GBS in labour, you can be disconnected from the tubing and the pole between doses so you can move around more freely. You can talk about this with your midwife.

With widespread use of antibiotics, bacteria may become resistant

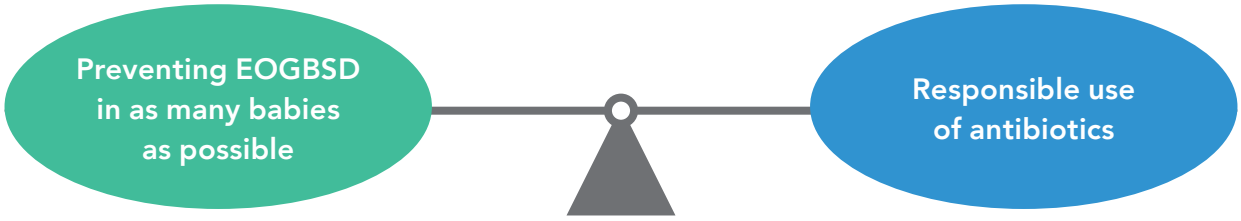
We know that in general:

- We are overusing antibiotics.
- Bacteria are always changing.
- Antibiotics are becoming less effective against bacteria over time.

This means that illnesses could become harder to treat, and that in the future we could see more serious illnesses caused by new bacteria.

Why doesn't everyone get antibiotics?

We can't predict with 100 percent certainty which babies will get EOGBSD. Giving all birthing people antibiotics during labour would address this problem. However, we know that there are also important things to think about with widespread antibiotic use (for example, the risk of a severe allergic reaction or antibiotics becoming less effective over time). Deciding who should get antibiotics by targeting babies who are more likely to get sick with EOGBSD, and balancing this with avoiding overuse of antibiotics, can be hard.



It might be helpful to think about where this balance lies for you if you choose to treat GBS with antibiotics during labour. The most common treatment approaches are described in the table below:

Do you have GBS during this pregnancy?	I AM **GBS POSITIVE**		I AM **GBS UNKNOWN** (I didn't test for GBS)
Treatment approach?	**Antibiotics**	**Antibiotics only if I have additional risk factors**	**Antibiotics only if I have additional risk factors**
What is this option?	You will be offered antibiotics in labour if: • Your test showed that you are GBS positive; or • You already had a baby with EOGBSD; or • You had GBS in your urine during this pregnancy.	You will be offered antibiotics during labour if, in addition to being GBS positive, any of the following happens: • You go into labour early (before 37 weeks). • Your water breaks more than 18 hours before the baby is born. • You have a fever during labour.	You will be offered antibiotics if one of the following happens: • You go into labour early (before 37 weeks). • Your water breaks more than 18 hours before the baby is born. • You have a fever during labour. • You already had a baby with EOGBSD. • You had GBS in your urine during this pregnancy.
How many birthing parents will receive antibiotics during labour with this option?	About 31% of all birthing parents get antibiotics in labour.	About 3% of all birthing parents get antibiotics in labour.	About 29% of all birthing parents get antibiotics in labour.

Do you have GBS during this pregnancy?	I AM **GBS POSITIVE**		I AM **GBS UNKNOWN** (I didn't test for GBS)
Treatment approach?	**Antibiotics**	**Antibiotics only if I have additional risk factors**	**Antibiotics only if I have additional risk factors**
How many babies will develop EOGBSD with this option?	About 3 in 1000 babies	About 5 in 1000 babies	About 8 in 1000 babies
How many babies will die from EOGBSD with this option?	About 3 in 10 000 babies	About 5 in 10 000 babies	About 8 in 10 000 babies
How does this approach compare with the two other approaches?	Of these three approaches: • The lowest number of babies will develop EOGBSD and die; but • A small proportion of birthing parents and babies will get antibiotic treatment when it wasn't needed.	Of these three approaches: • The lowest number of birthing parents will receive antibiotics in labour; but • Some babies who needed antibiotic treatment will be missed.	Of these three approaches: • The highest number of babies will develop EOGBSD and die. • The highest number of babies who needed antibiotic treatment will be missed. • Many parents and babies will get antibiotic treatment they didn't need.

How can I decide what's best for me and my baby?

Your decision-making around GBS may not feel easy. It's important to understand your own values and priorities and what the statistics mean to you. It might be helpful to think about these questions:

- Do you feel as if you understand how testing or not testing for GBS can affect your labour and your baby?
- Do you feel as if you understand how treating or not treating with antibiotics (if you are GBS positive) can impact your labour and your baby?
- How do you feel about having or avoiding antibiotics?
- How important is it for you to avoid an IV in labour? If you don't like the idea of having an IV in labour, have you explored with your midwife how to make this a more comfortable experience and ways you can still move around with an IV?
- How important is it for you to avoid your baby needing special observation or testing and a longer hospital stay?
- What are the screening and treatment standards in your community and at your hospital? It may feel important for you to know these standards and what views hospital staff may have on the choices you make. Ask your midwife about this. Some clients may feel that this information is less important to consider.

A final note

Testing for GBS is not 100 percent accurate, and antibiotic treatment is not 100 percent effective. It is very important to watch your baby and report any signs of illness to your midwife, regardless of your GBS status and whether you were treated with antibiotics during labour. You can learn about normal newborn behaviour and signs of illness in the AOM Normal Newborn Behaviour Client Resource.

Further resources

Normal Newborn Behaviour – This Association of Ontario Midwives resource helps parents understand what to expect from their newborn and what to do if signs of illness arise. Available at https://www.ontariomidwives.ca/sites/default/files/2017-06/Normal-newborn-behaviour-English.pdf

GBS (Group B Strep) – Authored by Amanda Montañez on behalf of the University of Toronto, this is a visual tool designed to support informed choice for midwifery clients. Available at https://www.renaissancemidwifery.ca/docs/visual-tools-gbs.pdf

The Evidence on: Group B Strep – This is a resource developed by Evidence Based Birth, an organization that aims to provide accurate, accessible information using an anti-racist and inclusive lens. Available at https://evidencebasedbirth.com/groupbstrep

Group B Strep (GBS) in Pregnancy and Birth: What's a Mom to Do? – This online article was published by Aviva Romm, an American midwife, physician and herbalist. Available at https://avivaromm.com/group-b-strep-gbs-in-pregnancy-whats-a-mom-to-do

Notes