

## Bacterial vaginosis and Group B strep in pregnancy



### Understanding the difference between BV and GBS

Bacterial vaginosis and Group B strep are often discussed together because both involve the lower genital tract, both may be detected during pregnancy, and both can be present without obvious symptoms. They are not the same condition. BV is best understood as a shift in the vaginal ecosystem rather than a single-organism infection. In a typical lactobacillus-dominant vaginal microbiome, lactobacilli help maintain an acidic environment. In BV, lactobacilli are reduced and diverse anaerobic organisms become more prominent, which can change vaginal pH and produce symptoms such as thin discharge or a fishy odor.

Group B Streptococcus, or GBS, is different. It is a specific bacterium, *Streptococcus agalactiae*, that commonly colonizes the gastrointestinal and genital tracts. Colonization means the bacterium is present but not necessarily causing disease. Many pregnant people with GBS have no symptoms at all and do not feel unwell. The concern is not usually maternal discomfort; it is the small but serious risk of newborn infection around labor and delivery.

This distinction matters because BV evaluation is usually symptom-driven or risk-based, while the GBS test in pregnancy is often part of routine

late-pregnancy screening in many care systems. A positive BV test does not mean you have GBS, and a positive group B strep result does not mean you have BV.

## **The vaginal microbiome in pregnancy**

Pregnancy is associated with hormonal, immune, and mucosal changes that can influence the vaginal microbiome. Estrogen-related effects on vaginal epithelial cells and glycogen availability can support lactobacilli, but the microbial environment still varies between individuals. Some people have a stable lactobacillus-dominant pattern, while others have more diverse communities.

Research has explored how vaginal microbial composition may relate to GBS carriage. The relationship is complex: certain microbial taxa and broader community patterns may be associated with whether GBS is present, but the microbiome is not a simple on-off switch for colonization. In practical terms, a person can have GBS with or without BV, and BV can occur with or without GBS.

It can be tempting to try to "fix" the vaginal microbiome with over-the-counter products, douching, boric acid, herbal suppositories, or probiotics. In pregnancy, caution is especially important. Some products may irritate mucosa, mask symptoms, alter test results, or be unsafe depending on gestational age and formulation. If you notice new discharge, odor, itching, burning, pelvic pain, or bleeding, it is safer to ask your maternity-care clinician for assessment rather than self-diagnosing.

## **Why bacterial vaginosis matters during pregnancy**

BV may cause no symptoms, but when symptoms occur they often include thin gray-white discharge, a noticeable fishy odor, and sometimes vaginal irritation. Itching and marked inflammation are not classic BV features and may suggest yeast, trichomoniasis, dermatitis, or another condition, which is one reason testing can be useful.

In pregnancy, BV has been studied because of possible associations with adverse outcomes, including preterm birth, premature rupture of membranes, intra-amniotic infection, and postpartum endometritis. The strength of these associations can vary across populations and study designs. Importantly,

association does not always mean that treating every asymptomatic person will prevent complications. Clinical decisions usually consider symptoms, history of preterm birth, gestational age, exam findings, local guidelines, and available diagnostic tests.

If BV is suspected, clinicians may use history, pelvic examination when appropriate, vaginal pH, microscopy, whiff testing, Gram stain criteria, or molecular tests. Treatment, when recommended, typically uses antibiotics that have established roles in pregnancy care, but the specific medication and timing should be chosen by a healthcare professional. Completing prescribed treatment and returning if symptoms persist are both important, because recurrent symptoms are common and may have more than one cause.

### **Why Group B strep matters for newborns**

GBS colonization in pregnancy is common and usually harmless for the pregnant person. The major concern is early-onset GBS disease in the newborn, which can occur in the first week of life, often within the first 24 hours. Newborn infection may present as sepsis, pneumonia, or meningitis and can be life-threatening. Although the absolute risk for any one colonized pregnancy is limited, prevention is a major public-health priority because the consequences can be severe.

Transmission can occur during labor or after rupture of membranes when the baby is exposed to colonized genital tract bacteria. Risk is higher in certain situations, such as preterm labor, prolonged rupture of membranes, fever during labor, or a previous infant with invasive GBS disease. GBS found in urine during pregnancy can also be clinically important because it may indicate heavier colonization; your clinician may interpret this differently from a routine vaginal-rectal swab.

The reassuring part is that prevention strategies are well established. When a person is identified as needing prophylaxis, antibiotics during labor for GBS substantially reduce the chance of early-onset newborn disease. These antibiotics are given intravenously during labor, not as a routine course weeks before birth, because recolonization can occur and the goal is to reduce bacterial exposure at delivery.

## **Testing: what to expect and what results mean**

Group B strep screening is commonly performed late in pregnancy, often with a vaginal and rectal swab test. Timing matters because colonization can come and go; a result from much earlier in pregnancy may not reliably predict colonization at birth. If the result is positive, it does not mean poor hygiene, sexual transmission, or anything you caused. It simply means GBS was detected and your birth team can plan prevention.

BV testing is different. There is no universal approach that applies to every pregnancy in every setting. A clinician may evaluate for BV if you have symptoms, if you have risk factors for preterm birth, or if local practice supports testing in a particular circumstance. BV is not the same as routine prenatal STI screening, although some symptoms overlap with sexually transmitted infections and your clinician may test for several causes of discharge at the same visit.

A positive result for either condition should be interpreted in context. For example, GBS colonization without symptoms generally does not require treatment immediately before labor unless it appears in urine or another infection is present. BV, by contrast, may be treated when symptomatic or when your clinician determines that treatment is appropriate. If you are unsure what a result means, ask: "Is this colonization or infection?", "Does it need treatment now?", and "Will it change my labor plan?"

## **Can BV and GBS affect preterm birth risk?**

Both BV and GBS have been examined in relation to preterm delivery, but they do not carry identical implications. BV has a more established association with preterm birth in some studies, particularly in people with certain risk profiles. However, preventing preterm birth by screening and treating all asymptomatic BV in low-risk pregnancies has not been consistently demonstrated, which is why guidelines often take a selective approach.

GBS is primarily discussed in relation to neonatal infection prevention rather than as a direct cause of preterm birth. Some studies have evaluated whether GBS colonization, BV, or their combination is associated with preterm delivery in low-risk populations. Findings have not always shown a simple or strong

predictive relationship. This is clinically important: having GBS, BV, or both does not mean preterm birth is inevitable.

Preterm birth is multifactorial. Cervical factors, prior obstetric history, uterine overdistension, bleeding, inflammation, urinary tract infection, placental conditions, and many other issues may contribute. If you have contractions, pelvic pressure, low backache, bleeding, watery fluid leakage, or a major change in discharge before 37 weeks, contact your care team promptly. These symptoms deserve evaluation regardless of prior BV or GBS results.

### **Treatment and prevention conversations with your care team**

Management should be individualized. For BV, your clinician may recommend treatment if symptoms are present or if your pregnancy history suggests a particular risk-benefit balance. Avoid using leftover antibiotics or medications prescribed for someone else. The wrong treatment can delay the correct diagnosis, increase side effects, and contribute to antimicrobial resistance.

For GBS, the key plan is usually documentation and labor management. If your screening result is positive, if you previously had a baby with invasive GBS disease, or if you have GBS bacteriuria in pregnancy, your team may recommend intrapartum antibiotic prophylaxis. If labor begins before your GBS result is available, clinicians use risk-based criteria and local protocols. If you have a penicillin allergy, tell your team early so susceptibility testing or alternative planning can be considered when appropriate.

General prevention is not about sterilizing the vagina. In fact, douching and unnecessary intravaginal products can disrupt normal flora. Supportive steps include attending prenatal visits, reporting symptoms early, taking prescribed medications exactly as directed, and making sure your birth facility knows your GBS status. If you are planning a cesarean birth, ask how GBS guidance applies to your specific situation, especially if labor starts or membranes rupture before surgery.

### **Emotional reassurance and practical next steps**

It is very common to feel embarrassed, worried, or even guilty after hearing

words like "bacteria," "positive," or "infection" in pregnancy. These reactions are understandable, but BV and GBS are common medical findings, not reflections of cleanliness, effort, or character. Many people who follow every recommendation still have microbiome shifts or bacterial colonization.

Practical next steps can make the situation feel more manageable. Keep a copy or note of your test results, ask whether follow-up is needed, and clarify what symptoms should prompt a call. If you are close to delivery, make sure your labor support person knows to mention a positive GBS result when you arrive, especially if you are in active labor or your waters have broken.

You deserve clear, nonjudgmental care. If an explanation feels rushed, it is reasonable to ask for it again in plain language. Helpful questions include: "What condition are we treating or preventing?", "What are the benefits and risks of treatment in pregnancy?", "Could this affect my baby after birth?", and "When should I seek urgent care?" A calm plan, written down if possible, is often the best antidote to anxiety.