Group B Streptococcus (GBS): Reminder — Best Specimen Collection for Best Results

Background
Streptococcus agalactiae (or Group B Streptococcus [GBS]) colonizes the vagina and rectum and is carried asymptotically in women at rates ranging approximately from 10% to 30%.1

- GBS is one of the leading causes of neonatal infection in the US and other Western countries.
- Early-onset GBS infection occurs after the bacteria have passed from mother to baby, either before or during delivery. Infection of the neonate during delivery can lead to severe disease or death, primarily from sepsis, pneumonia, or meningitis.
- Such risks can be prevented by prophylactic antibiotic treatment immediately prior to and during labor.

Administration of prophylaxis is generally based on risk factor assessment and by direct screening for GBS colonization on properly collected clinical specimens between 35 and 37 weeks of gestation.2

Guidelines and Advantage of Co-Collection of Vaginal and Rectal Specimens
It has been reported that there is both vaginal and rectal carriage of GBS during pregnancy with indications that the intestinal tract may be the primary site of colonization by GBS and the likely source of vaginal colonization.3-5

- GBS recovery was found to be 75% higher in rectal cultures of women as compared to vaginal cultures.4
- GBS carriage was demonstrated in 18% of women by anorectal culture and in only 4% by vaginal culture.5

GBS in the gastrointestinal tract is considered a risk factor for vaginal GBS.6

CDC Guidelines for Specimen Collection
Current guidelines from the CDC recommend both a vaginal and rectal swab specimen because the sensitivity of a vaginal/rectal swab is higher than a vaginal swab alone for detection of GBS. Failure to culture both sites substantially decreases detection. In order to reach the sensitivity required for maximizing GBS detection and preventing neonatal GBS disease, co-collection is vital.7,8

If performed within five weeks of delivery, at 35 to 37 weeks, a positive GBS test result indicates there is an 87% chance that a woman will carry GBS at delivery. Similarly, a negative result has been shown to be 96% predictive that a woman will not be carrying GBS at delivery.9 LabCorp offers a nucleic acid amplification (NAA) test that has been shown to provide a sensitivity of 99% and a specificity of 92.4% for GBS detection.10

- Testing before 35 weeks of pregnancy has been shown to be less effective at predicting GBS colonization at delivery, with a sensitivity of only 43%.9
- Testing later than 37 weeks of pregnancy increases the chance that the baby will be born before the result is available.

For additional information, including specimen requirement, consult the Test Menu at labcorp.com, or review the Specimen Collection Requirements on the reverse.
Specimen Collection Requirements

As per revised CDC guidelines, a vaginal and rectal swab specimen is recommended. The following specimen collection steps must be followed:

1. Use an Amies gel bacterial swab transport (or similar non-nutritive transport medium). E-swabs are not acceptable.
2. Remove the swab from the packaging, being careful not to contaminate it.
3. Collect both a vaginal and rectal specimen, using a single swab (alternatively a double swab can be used). Swab the lower vagina (vaginal introitus), followed by the rectum (swab should be inserted through the anal sphincter) preferably using the same swab. Move swab from side to side, or rotate the swab at the collection site, allowing several seconds for absorption of organisms by the swab. Cervical, perianal, perirectal or perineal specimens have been shown to be less sensitive than collection of vaginal and rectal specimens and are not acceptable; pelvic examination or visualization of the cervix by speculum examination should not be performed for collection of specimens for this testing.
4. Place swab (or swabs) into the transport tube.
5. Specimen should be kept at room temperature and transported to the laboratory within 24 hours of collection. Specimens that might be received in the testing lab more than 24 hours after collection should be kept refrigerated (but not frozen).

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<td>Group B Streptococcus Colonization Detection Culture With Reflex to Susceptibilities</td>
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For the most current information regarding test options, including specimen requirements and CPT codes, please consult the online Test Menu at www.LabCorp.com.

References