

KNOW WHO IS AT RISK

Up to 40% of women are carriers of GBS¹

Group B Streptococcus is the leading cause of meningitis and sepsis in a newborn's first week of life.

Carried in the rectum or vagina of approximately 25% of pregnant women, Group B strep is typically present without causing symptoms in the adult woman. Given the transient and asymptomatic nature of colonisation, the CDC guidelines recommend that a pregnant woman be tested for group B strep when she is 35 to 37 weeks pregnant.

A pregnant woman who tests positive for Group B strep and receives antibiotics during labor has only a 1 in 4,000 chance of delivering a baby with Group B strep disease, compared to a 1 in 200 chance if she does not get antibiotics during labour.²

1. Infectious Diseases in Obstetrics and Gynecology 7:206-209 (1999) ©1999 Wiley-Liss, Inc.
2. <http://www.cdc.gov/groupbstrep/about/fast-facts.html>

An Innovative Diagnostic should be able to identify a mother with GBS... **at Delivery!**

Group B Streptococcus (GBS) is a leading cause of infant mortality and serious neonatal infections such as sepsis, pneumonia and meningitis. In a 2009 study published in the NEJM, it was observed that 61.4% of full-term infants born with GBS disease were born to women who had previously screened negative during their 35–37 week of gestation⁷, as the transmission of GBS occurs from GBS-colonized women to their babies during childbirth,^{3,4,5,6,7} The impact of knowing a woman's GBS colonisation status at the time of labour and delivery can potentially impact treatment decisions for both mother and newborn.

Impact

Rapid, accurate and easy-to-use results are available in 45 minutes or less.
On-demand results faster than conventional real time PCR (5 to 36 hours) or culture (2–3 days).
Xpert® GBS test results are available for use 24 hours a day, 7 days a week.
Confidence clinicians can use when discussing prophylactic antibiotic treatment with expectant mothers and families.

Why Xpert® GBS at delivery?

- El Helali CID 2009.
 - The PPV of antenatal culture to identify colonization at delivery is low (58.3%), leaving women who screened positive at 35–37w negative at delivery (antepartum vs intrapartum culture)
 - The NPV of antenatal screening is “imperfect” (92.1%), leaving 7.9% of women screened negative at 35–37w gestation positive.
 - “49.2% of women who tested positive at intrapartum screening did not have GBS detected at 35–37 weeks gestation.” Intrapartum screening for GBS using real-time PCR on GeneXpert has allowed a significant reduction in the overall rate of EONGBS from 8.96‰ in 2009 to 4.22‰ in 2010 (p=0.04), Saint Joseph Hospital in Paris
- *Evaluation of a rapid RT intrapartum group B streptococcus assay*, Young, Dodge, Gupta, Rhee, Hacker AJOG June 2011
 - GBS prevalence was 19.5% by antepartum culture and 23.8% by intrapartum culture. A antepartum culture had 69.2% sensitivity and 96% specificity. The NAAT demonstrated sensitivity of 90.8%, specificity of 97.6%, and predictive values exceeding 92%. The intrapartum NAAT has excellent characteristics, superior to antepartum culture for detecting intrapartum GBS—allowing more accurate management of laboring mothers and reducing neonatal GBS sepsis.
- *Assessment of Intrapartum Antibiotic Prophylaxis for the prevention of Early-onset group B streptococcal disease*, Lin, Pediatric Infectious Disease Journal, Sep 2011,
 - Approximately 10% of women previously GBS-negative during labor and missed IAP, whereas the approximate 50% of prenatally GBS-positive women tested negative during labor but received IAP. These findings emphasize the need for rapid diagnostics during labor.

Every year, hospitals across Europe are making Xpert® GBS their choice for intrapartum testing.

What do you expect?

3. Schrag et al. A population-based comparison of strategies to prevent early-onset group B streptococcal disease in neonates. *NEJM*. 2002; 247(4): 233–239.
4. Centers for Disease Control and Prevention. Prevention of Perinatal Group B Streptococcal Disease. *MMWR* 2002; 51 (No. RR-11): 1–26.
5. Schuchat A. Epidemiology of Group B Streptococcal Disease in the United States: Shifting Paradigms. *Clin Micro Rev*. 1998; 11(3): 497–513.
6. P. Melin, G Verschraegen, L. Mahieu, G Claeys & P. De Mol. Towards a Belgian consensus for prevention of perinatal group B streptococcal disease. *Indian J Med Res*. 2004; 119: 197–200.
7. S Hansen, N. Uldbjerg, M. Kilian & U. Sorensen. Dynamics of *Streptococcus agalactiae* Colonization in women during and after pregnancy and in their infants. *Journal of Clinical Microbiology*. 2004; 83–89.

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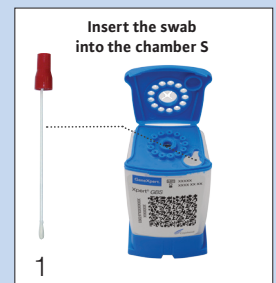
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