Group B Strep

Group B Streptococcal Disease

Independent Childbirth

A Short Summary • Key Words: Prevention of GBS, Antibiotics in Labor, GBS • January 7, 2008

What is Group B Strep?

Your body, in optimal health, supports a balanced environment that includes microbes and bacterium that are a vital part of giving balanced health back to you in return. One of these organisms in particular, Group B Streptococcal Disease, resides in the gastrointestinal tract. Sometimes these living organisms can grow in overabundance - but you may not be ill or 'infected' - called a colonization and diagnosed to you as being "GBS positive." When there is a colonization the spread is to the vagina or rectum.

What's the Concern?

Mothers may experience reoccurring urinary tract infections, endometritis and other septic conditions. Babies may contract infections from the organisms before as well as at birth when, it is believed, they could come into contact with the bacteria vaginally and with a surgical delivery as the mother's body and the uterus are exposed and fluids mix. When babies become septic (infected) from Group B Streptococci it is called Group B Strep disease.

Is Every Baby Born To A GBS Colonized Mother At Risk for Group B Strep Disease?

Acquiring Group B Strep disease is serious but it is not cause to treat every woman who is colonized. While the most abundant information presented to parents showing that GBS infections that are not treated immediately can become fatal is correct there is much more information that is not included but bears hearing and weighing in your decision to consent to GBS screening and whether or not you choose to accept IV antibiotics in labor, the protocol advised by ACOG and supported by the CDC.

First, babies do not acquire GBS infection solely at birth. There is evidence that they can become infected in utero meaning the babies become infected while they are in their mother's womb before labor even begins (Characterization of Group B Streptococcal Invasion of Human Chorion and Amnion Epithelial Cells In Vitro). Secondly every newborn has their own biologically normal immune system and not every baby who comes into contact with the bacteria subsequently becomes infected and/or becomes fatally infected (Late-Onset Group B Streptococcal Infection in Identical Twins: Insight to Disease Pathogenesis).

In fact, the percentage of babies who acquired GBS disease with mothers who are GBS+ (colonized) before screening and routine IV antibiotics in labor were implemented as the guidelines to help prevent GBS sepsis in babies was approximately 0.29 per 1,000 live births or 29 per 100,000 (Centers for Disease Control). The guidelines to help prevent GBS disease were introduced for formal implementation in 1996 but had been in place and studied for a few years before then. The rate of GBS infection with these protocols in place was reviewed in 1998. In 1998 approximately 5 years after these prevention guidelines were first introduced on a broad scale the number of septic cases barely dropped, 0.23 per 1,000 live births or 23 per 100,000 (Centers for Disease Control).

What Do I Need To Know?

The more important, but less published and disseminated, observation that has surfaced is the perspective that perhaps not every mother needs screening, not every mother who is screened needs to have antibiotics, the risks of antibiotics to both mother and baby, and further, just why antibiotics sometimes work has not been established.

We all have this bacteria in our bodies. Why we get sick is more important. What in our overall health has created a condition for which we now become ill from the bacteria? Look for the common signs of infection such as elevated temperature, dehydration, dizziness, decreased and concentrated urine. Remember the risks first listed at the beginning, are you experiencing UTIs in your pregnancy that are attributed to GBS? If you screen and are found to be GBS+ and show signs of infection yourself do seek medical help to rule out general illness. Additional guidelines for screening as well as whether or not to use antibiotics in labor also include a history of pre-term labors or a previous baby born and subsequently infected with GBS, you're GBS positive and your water breaks but labor does not begin or your water breaks before 37 weeks.

You also need to know that the use of antibiotics in labor has resulted in low to inconclusive results of aiding in the prevention of GBS (Prenatal screening for group B streptococcal infection: gaps in the evidence). Among the risks to mothers who are given antibiotics in labor is the increased risk to both mother and baby for anaphylaxis (fatal allergic reactions) to penicillin or other antibiotics, an incorrect belief that a surgical delivery is a preventative measure, an incorrect belief that GBS+ is an indication for induction. Among the risks to babies who are given antibiotics in labor (antibiotics cross the placental barrier) are both allergic reactions and more commonly, gastrointestinal (digestive) issues in newborn due to the antibiotics mothers receive in labor actually removing healthy bacteria in the newborn as well (yeast infections postpartum in mothers and babies due to antibiotics in labor). As a result of the digestive irregularities babies may experience the breastfeeding relationship is at risk for disruption if not damaging it completely by exacerbating the baby's health issues through the common but incorrect advice of replacing feedings with formula which is harder for the baby's increasingly sensitive digestive system to process. Among the risks to the public in general, GBS itself will eventually respond by mutating into a strain that has grown resistant to antibiotics.

Again, the GBS bacterium is common. Bacteria in our body can often be regulated through diet. You may wish to seek nutritional counseling in pregnancy to learn more about a healthy diet that includes preventing illness and infections. In births where the cord is not clamped immediately babies first gasps are not for breathing in but for clearing their passages naturally of fluids although immediate cord clamping can certainly lead to an 'urgent' need to breathe with the lungs rather than receiving richly oxygenated blood from their mothers. Therefore, automatic cesarean section for GBS infection would an incorrect recommendation and is not supported by the American College of Obstetricians. There is no evidence to support antibiotics in labor will always prevent early onset (acquired before/during birth) of GBS disease.

If you are suspected of being GBS+ and begin labor spontaneously at term (near your due date) but are not showing signs of infection it is not unreasonable to ask that your bag of waters not be broken artificially as the membranes can help form a barrier against increased exposure to the bacteria. It is also not unreasonable to ask that your baby's cord be allowed to stop pulsating and that aggressive suctioning be avoided so as to decrease the risk of actually forcing bacteria into your baby's respiratory passages. As cesarean delivery also increases your baby's exposure to GBS bacteria you may wish to decline aggressive induction protocols as they increase the risk of your labor resulting in a surgical delivery. The evidence suggests that parents should be taught the warning signs of infection as treatment with antibiotics when a newborn is actually infected is crucial.

Asking for information regarding the benefits, risks and alternatives are a normal part of making decisions about your health care and a necessary part of giving informed consent. GBS disease in your baby is serious, but asking for a 'wait and see' approach rather than "treat all just in case" is not an unreasonable care option.

Sources: Centers for Disease Control; *Treating Group B Strep: Are Antibiotics Necessary?* Christa Novelli in *Mothering*; *International Journal of Epidemiology; Infection and Immunity; The Journal of Obstetrics and Gynecology of India; Midwifery Today; Pediatrics;*