



Group B Strep: A Dangerous Infection in Infants and Adults

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Despite advances in treatment and prevention, Group B strep continues to be the leading cause of dangerous infections in newborns, pregnant mothers and

adults.

An estimated 10% – 30% of pregnant women in the U.S. carry Group B streptococcus (GBS), bacteria that live in the intestine, vagina and rectum, and usually show no symptoms.

During childbirth, however, the situation can change. Colonized mothers can pass GBS via amniotic or vaginal fluids to their babies causing infections which may have potentially serious long-term effects. GBS is the leading cause of dangerous infection in newborns, including sepsis (blood infection) and meningitis. Surviving infants may suffer blindness, deafness or neurological damage. About one in 2,000 babies develop the infection in the U.S. In low- and middle- income countries, where the incidence is estimated to be as high as one in 1,000, the burden of GBS may be underreported due to lack of access to screening. GBS also can cause infection in the pregnant mother and under certain circumstances cause antibiotic-resistant infections in older adults

Prevention Methods

In the U.S., for example, it is recommended that women be screened for GBS during weeks 35 to 37 of pregnancy. Pregnant women testing positive are given an intravenous antibiotic before delivery to prevent GBS disease that could manifest shortly after birth (early onset disease). In developing countries, the infrastructure to provide screening and preventative antibiotics is either non-existent or limited resulting in much higher observed GBS disease burden in babies. “Despite efforts at preventing GBS disease, babies around the globe continue to be vulnerable to this dangerous infection,” says Annaliesa Anderson, Vice President and Chief Scientific Officer Bacterial Vaccines at Pfizer.

In a bid to reduce these potentially dangerous infections, scientists and public health experts are advocating for the development of a GBS maternal vaccine. It is thought that a vaccine could help protect against early-onset GBS, as well as late-onset disease, which occurs in infants up to three months of life. A prevention strategy could have the added benefit of helping reduce the reliance on antibiotics, which are linked to driving antibiotic resistance and potentially to changes in the gut microbiome, which may have long-term effects on human health.

Passing Through The Placenta

Currently, researchers are working on several potential maternal vaccine candidates, including maternal vaccines to prevent GBS. A maternal vaccine is delivered to the pregnant mother in the last trimester of pregnancy, which allows time for the immune system of the pregnant mother to develop potentially protective antibodies that pass to the unborn baby through the placenta.

“In recent years, maternal immunization has steadily gained acceptance as a proven approach to prevent life-threatening infections for the most vulnerable newborn infants,” says Annaliesa Anderson, Vice President and Chief Scientific Officer of Bacterial Vaccines at Pfizer’s Pearl River research site.

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