

WHAT IS MATERNAL IMMUNIZATION?

Maternal immunization provides protection to the newborn through the transfer of vaccine-induced IgG antibodies across the placenta¹. The aim of maternal immunization is to enhance maternal antibody levels against particular infections, so that a protective level of antibody is transferred from the mother to the infant¹.

WHY IS MATERNAL IMMUNIZATION AN APPROPRIATE STRATEGY?

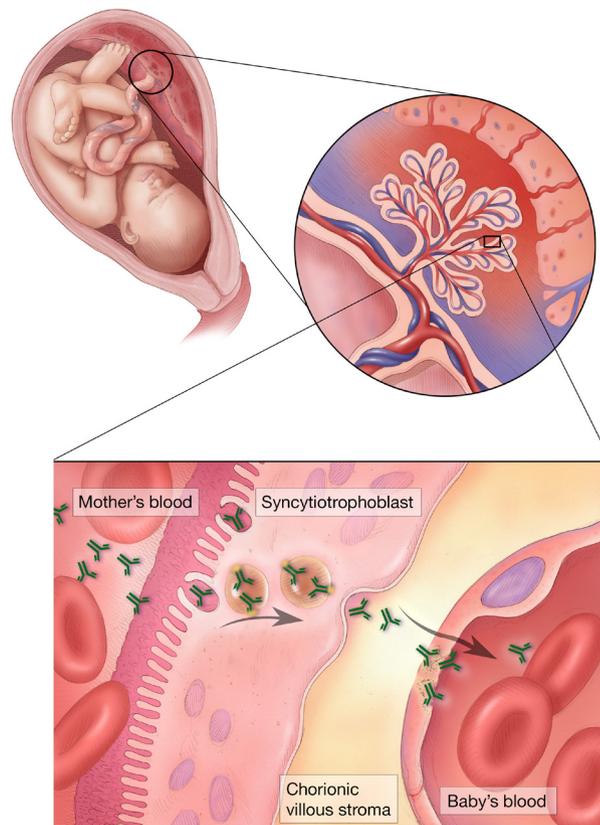
Direct immunization of infants is complicated by the immature immune system, which is unable to fight off infections when infants are most vulnerable. A mother's immunity passed along to her baby during pregnancy can protect the baby from some diseases during the first few months of life, until the baby can be effectively vaccinated².

FOR WHOM IS MATERNAL IMMUNIZATION RECOMMENDED?

The CDC recommends pregnant women in their third trimester receive a tetanus, diphtheria and pertussis (Tdap) vaccine every pregnancy to protect infants³. To maximize the maternal antibody response and passive antibody transfer to the infant, optimal timing for Tdap administration is between 27 and 36 weeks gestation⁴. The CDC also recommends pregnant women receive a seasonal influenza vaccine⁵.

HOW DOES MATERNAL IMMUNIZATION WORK?

Maternally-derived IgG antibodies are understood to be provided entirely *in utero*, via transplacental Fc receptor-mediated antibody transfer⁶. Fc receptor-mediated transport of IgG antibodies across epithelial barriers, from mother's to baby's blood, is well described⁷. Further, the protective effects of human serum IgG, transferred from mothers to infants *in utero*⁶, has been well-described against many infectious disease agents^{8,9,10}.



Novavax is pursuing a maternal immunization strategy as part of our RSV F Vaccine program with the goal of protecting infants.

Respiratory syncytial virus (RSV) is the most common cause of lower respiratory tract infections and the leading viral cause of severe lower respiratory tract disease in infants and young children worldwide, with estimated annual infection and mortality rates of 64 million and 160,000, respectively¹¹. In the US, RSV is the leading cause of hospitalization of infants¹². Despite the induction of post-infection immunity, repeat infection and lifelong susceptibility to RSV is common^{13,14}. Currently, there is no approved RSV vaccine available.

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