

Vaccine against CMV shows promise in clinical trial

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A new vaccine has the potential to be the first to prevent maternal and congenital cytomegalovirus (CMV) infection, according to a University of Alabama at Birmingham (UAB) study published in the March 19 edition of the *New England Journal of Medicine*.

Each year in the US, nearly 30,000 babies are born with congenital CMV, the most common virus transmitted by a pregnant woman to her unborn child, and nearly 8,000 of these children suffer permanent hearing, cognitive or motor impairments.

Although the first [vaccine](#) trials for CMV took place nearly 30 years ago, an effective [vaccine](#) has remained elusive.

"The most striking result from this study is that the vaccine showed efficacy in the mothers, and is the first to do so," said study lead author Robert Pass, M.D., professor in the UAB Department of Pediatrics. Pass is an expert in pediatric infectious diseases.

Pass and his colleagues, in a Phase II clinical trial, looked at 441 CMV-negative women who received either the vaccine or a placebo within one year of giving birth. The trial evaluated an [experimental vaccine](#) made from a single CMV protein, glycoprotein B, which is known to induce an immune response. The vaccine, supplied by Sanofi Pasteur, included an experimental adjuvant, MF59, supplied by Novartis. An adjuvant is a substance added to a vaccine to improve the [immune system response](#) it elicits.

Women who received the vaccine were significantly more likely to remain uninfected throughout the 42-month follow-up period than those who received the placebo. Eight percent of vaccine recipients eventually became infected with CMV, while 14 percent of placebo recipients acquired a CMV infection by the time of the interim analysis conducted once all participants had at least 6 month follow up after the last study vaccine dose.

Pass said that while a larger Phase III trial is needed to confirm the efficacy of the vaccine, these results are very promising.

"For everyone interested in CMV vaccine development, this is an encouraging result," he said. "It shows that it is indeed possible to reduce the rate of maternal CMV infection via vaccination."

Source: University of Alabama at Birmingham

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