

Pregnancy And The Flu: A Link To Schizophrenia

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When mothers become infected with influenza during their pregnancy, it may increase the risk for schizophrenia in their offspring. Influenza is a very common virus and so there has been substantial concern about this association. A new study in the June 15th issue of *Biological Psychiatry*, published by Elsevier suggests that the observed association depends upon a pre-existing vulnerability in the fetus.

Specifically, Dr. Lauren Ellman and colleagues determined that fetal exposure to influenza leads to cognitive problems at age 7 among children who later develop a psychotic disorder in adulthood, but fetal exposure to influenza does not lead to cognitive problems among children who do not later develop a psychotic disorder. It is important to note that these results were dependent upon the type of influenza, with this association present only after fetal exposure to influenza B as opposed to influenza A.

This research was conducted as part of the Collaborative Perinatal Project, which followed pregnant women and their offspring in the 1950's and 60's, collecting blood throughout pregnancies for later analyses. A series of cognitive assessments were conducted with the children of study participants and then psychotic diagnoses were determined in adulthood.

The findings from this study suggest that a genetic and/or an additional environmental factor associated with psychosis likely is necessary for the fetal brain to be vulnerable to the effects of influenza, given that

decreases in cognitive performance were only observed in influenza-exposed children who developed a psychotic disorder in adulthood.

“The good news is that most fetuses exposed to influenza virus while in the womb will not go on to develop schizophrenia. The bad news is that the prior association between influenza infection and later development of psychotic disorders was supported,” comments John Krystal, M.D., the editor of *Biological Psychiatry*.

This finding has the potential to influence efforts to develop prevention, early intervention and treatment strategies, such as taking steps to maintain careful hygiene and, if clinically appropriate, administration of the influenza vaccination to reduce infection among women prior to [pregnancy](#). Dr. Krystal notes, “It also raises an important unanswered question: How does influenza virus affect the vulnerable developing brain and how can we prevent or reverse the consequence of fetal influenza infection in vulnerable individuals before they develop schizophrenia?” More research is needed to elicit answers to these vital issues.

Citation: “Cognitive Functioning Prior to the Onset of Psychosis: The Role of Fetal Exposure to Serologically Determined [Influenza](#) Infection” by Lauren M. Ellman, Robert H. Yolken, Stephen L. Buka, E. Fuller Torrey, Tyrone D. Cannon.

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