



## SCHIZOPHRENIA Factsheet

August 2020

### How are infectious agents related to risk for schizophrenia?

Exposure to infection in utero is often cited as a risk factor for schizophrenia. Much focus is given to the influenza virus, despite studies yielding inconsistent findings. This topic summarises the available evidence for the risk of developing schizophrenia following exposure to infectious agents, both before and after birth. The physiological mechanisms of any association of these agents with schizophrenia are largely unclear. Also see the topic in the Physical Features section on markers of infectious agents in adults with schizophrenia.

### What is the evidence for infectious agents as risk factors for schizophrenia?

Moderate to high quality evidence finds a medium-sized increased risk of schizophrenia in adulthood after having had a central nervous system viral infection in childhood.

Moderate quality evidence finds a small increase in levels of *Toxoplasma gondii* antibodies before the development of schizophrenia, and a medium-sized increase in recent-onset schizophrenia. *Toxoplasma gondii* is a parasitic protozoa, hosted by domestic cats and other warm-blooded animals, including humans. *Toxoplasma gondii* infection is usually of minor consequence to an adult but can have serious implications for a foetus.

Moderate to low quality evidence finds a medium-sized increased risk of schizophrenia in adulthood following exposure to infections in utero, particularly maternal upper respiratory tract, genital or reproductive infections, also herpes simplex virus and *Toxoplasma gondii*, but not influenza. There may also be an increased risk of schizophrenia following exposure to inflammatory cytokines TNF- $\alpha$  and IL-8 in utero.

For more information see the technical table



*NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.*

*Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.*

*Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.*

*While we hope you find this information useful, it is always important to discuss any questions about schizophrenia or its treatment with your doctor or other health care provider.*

### HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at [neura.edu.au/donate/schizophrenia](http://neura.edu.au/donate/schizophrenia).