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SCHIZOPHRENIA LIBRARY

SCHIZOPHRENIA Factsheet

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How is diabetes related to schizophrenia?

People with schizophrenia may show increased rates of co-occurring illnesses, one example is diabetes. Diabetes is a state of impaired insulin function, either as a result of reduced insulin production (type I diabetes) or reduced insulin responsiveness (type II diabetes). Insulin regulates blood glucose levels, and reduced insulin function effectively increases blood glucose levels (hyperglycaemia). This is a dangerous state in the long term, and can ultimately damage the retina, kidneys, nerves and blood vessels. Consequently, effective management of diabetes is crucial. It is unclear if any increased risk in people with schizophrenia is purely a consequence of biological risk, the metabolic impact of antipsychotic administration, or unhealthy lifestyle choices, but it is likely a combination of many factors.

What is the evidence for comorbid diabetes?

Moderate quality evidence shows people with multi-episode schizophrenia have increased rates of diabetes compared to age and gender-matched population controls, although when only type 1 diabetes was assessed, there were no increases found. People with multi-episode schizophrenia have similar rates of diabetes as people with first-episode psychosis (9.5% vs. 8.7%), while drug naïve patients have slightly lower rates (6.4%). There was a medium to large effect of increased odds of type 2 diabetes in patients with a family history of type 2 diabetes compared to patients without a family history of type 2 diabetes.

Moderate to high quality evidence finds a large increase in 2-hour oral glucose tolerance test results in unmedicated patients with first-episode psychosis or first-episode mood disorder compared to controls. There were significant, medium-sized increases in insulin levels and insulin resistance in first-episode psychosis patients compared to controls, but no differences between controls and patients with a first-episode mood disorder. There were no significant differences in fasting glucose or haemoglobin A1c.

High quality evidence finds small effects of more impaired global cognition and memory, and a medium-sized effect of more impaired processing speed in people with schizophrenia and diabetes compared to people with schizophrenia without diabetes.

Moderate to high quality evidence finds second generation antipsychotics clozapine, olanzapine, risperidone and quetiapine may be associated with a small increased risk of diabetes mellitus when compared to first generation antipsychotics.

Moderate to high quality evidence suggests a small effect of greater adherence to diabetes medication in people with schizophrenia than in people without schizophrenia (approximately 17 more days per year).

For more information see the technical table

NeuRA
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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**.

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