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SCHIZOPHRENIA Factsheet

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How is substance use related to schizophrenia?

Various lines of evidence suggest an association between substance use and psychosis. Experimental studies and surveys of users provide evidence that cannabis and amphetamine use can produce transient, and usually mild, psychotic experiences or recurrence of psychotic symptoms in individuals with a history of psychosis. Further, neuroimaging studies have found clear similarities between functional networks impaired by cannabis use and those known to be implicated in the pathogenesis of schizophrenia.

What is the evidence for substance use as a risk factor for schizophrenia?

Tobacco

Moderate quality evidence finds a small to medium-sized increased risk of developing schizophrenia in smokers versus non-smokers. There is also a small increased risk of developing schizophrenia after exposure to tobacco smoke prenatally. Moderate to low quality evidence finds people with first-episode psychosis smoked tobacco for an average of 5.3 years prior to their first psychotic episode. There is also an earlier age of psychosis onset in smokers compared to non-smokers.

Cannabis

High quality evidence shows there is an increased risk of psychotic symptoms with cannabis use. Moderate to high quality evidence suggests this is a dose-dependent relationship for psychotic symptoms, or for a diagnosis of any psychotic disorder, with increased use increasing the risk of psychosis. A small, but non-significant association was found between cannabis use and transition to psychosis in people with subclinical psychotic symptoms, with lifetime cannabis use rates in that group being around 49%. Further, 34% of people diagnosed with a cannabis-induced psychosis developed schizophrenia at follow-up (mean 4 years). Initiation of cannabis use is around 6-7 years prior to the onset of psychosis.

Other substances

Moderate quality evidence finds a medium-sized increase in the rates of subclinical psychotic symptoms in people with alcohol or other drug use. Around one-quarter of people with a substance-induced psychosis had a follow-up diagnosis of schizophrenia (mean follow-up 4 years). The rates were highest for cannabis (34%), hallucinogens (26%), and amphetamines (22%), and lowest for opioids (12%), alcohol (10%), and sedatives (9%).

For more information see the technical table



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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.