

# SCHIZOPHRENIA Factsheet

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## What is memory in schizophrenia?

Memory involves encoding, storage and retrieval of information. Short-term memory is the ability to remember information after several seconds or minutes and long-term memory is the ability to remember information over a longer duration. Working memory involves information being temporarily held as well as manipulated. Episodic memory is long-term memory for autobiographical events. Semantic memory involves memory for general facts, prospective memory involves memory for future actions, and retrospective memory is memory for past events.

## What is the evidence for memory?

Compared to controls, moderate to high quality evidence found medium to large effects of poorer short-term, long-term, working, episodic, prospective, and memory binding in people with schizophrenia. Compared to people with affective psychoses (including bipolar I disorder), high quality evidence found a medium-sized effect of poorer visual and verbal delayed memory, and verbal immediate memory, while moderate quality evidence found poorer verbal working memory in people with schizophrenia. A small effect suggests people with schizophrenia showed impaired performance on working memory tasks compared to people with schizoaffective disorder.

Moderate to high quality evidence found small to medium-sized associations between more severe negative and disorganised symptoms and poorer visual and verbal memory, with moderate quality evidence also suggesting a weak association with poorer executive working memory. There were small to medium-sized associations between poorer prospective memory and more severe general psychopathology, increased medication dose, longer duration of illness, increasing age, and lower education and IQ.

Moderate quality evidence suggests more impaired working memory in people with schizophrenia and an alcohol use disorder compared to people with schizophrenia without any substance use disorder. High quality evidence also found a small impairment in working memory in smokers vs. non-smokers with schizophrenia.

Moderate quality evidence found people taking olanzapine or risperidone showed improvement in working memory after treatment, while people taking clozapine or quetiapine showed no improvement. Moderate quality evidence suggests people taking olanzapine or risperidone showed improvement on working memory with treatment, while people taking clozapine or quetiapine showed no improvement. People taking olanzapine, clozapine, risperidone or haloperidol showed improvement on delayed recall with treatment, while people taking quetiapine showed no improvement.

High quality evidence found people at clinical high-risk of psychosis or familial high-risk of psychosis are similarly impaired on verbal and visual memory, showing small to medium-sized effects compared to controls. However, people at clinical high-risk of psychosis were more impaired on visuospatial working memory than those at familial risk of psychosis. There is a medium-sized effect of better working memory in people at clinical high-risk of psychosis than in people with first-episode psychosis.

For more information see the technical table

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*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.*