

# Cognition already seriously impaired in first episode of schizophrenia

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Significant and widespread cognitive problems appear to exist in schizophrenia in its earliest phase, making it very hard for people with the disorder to work, study or be social, according to a new study published by the American Psychological Association.

Understanding the early and central role of cognitive problems may help clinicians to more accurately diagnose incipient schizophrenia by telling it apart from other neuropsychiatric disorders that also have cognitive problems, such as [attention-deficit hyperactivity disorder](#) (ADHD). It could also allow them to provide more appropriate treatment. Combining schizophrenia's cognitive warning signs with family history and signs of worsening daily functioning may also aid early diagnosis. Should improved early treatments become available, early diagnosis could make it possible to ease or even prevent these problems.

These were among the conclusions of a meta-analysis conducted by researchers at Harvard Medical School and SUNY Upstate Medical University in Syracuse, N.Y. The researchers examined 47 previously published, peer-reviewed studies of first-episode schizophrenia that involved 43 separate samples comprising 2,204 patients and 2,775 largely age- and gender-matched control participants. Results of this new analysis appear in the May issue of *Neuropsychology*, which is published by the American Psychological Association.

The psychologists sorted the studies' collective findings into 10 areas of neurocognition, including general cognitive ability, attention, memory,

and various verbal, motor and visuospatial skills. Among their main findings:

- In the very first episode of schizophrenia, cognitive problems were already broad and serious. Early impairment approached or matched the severity of problems seen in patients who had been sick for a while.
- People experiencing their first episode of schizophrenia had significantly worse performance on all cognitive measures than healthy controls who were largely matched for gender and age.
- Patients struggled the most with processing speed and with verbal learning and memory, especially when encoding information. Although many psychiatric and neurological illnesses, such as bipolar disorder, affect processing speed, schizophrenia seems to disrupt it more profoundly.
- Measured IQ and other cognitive abilities dropped the most between the high-risk period just before symptoms appear and the first acute phases. After that, these cognitive abilities were stable. This cognitive pattern, when combined with other signs such as clinical symptoms and family history, could suggest a diagnosis of schizophrenia.

The first episode of schizophrenia, which is typically in the late teens or early 20s, brings "a sense of tremendous terror, trauma and shock, along with prominent cognitive disorganization, increasingly compelling unusual and/or paranoid thoughts, altered perceptions, and loss of insight," according to lead co-authors Raquelle Mesholam-Gately, PhD, and Anthony Giuliano, PhD. Popular images of schizophrenia focus on its auditory and visual hallucinations, and strange or distressing behaviors.

However, as the authors noted, people with schizophrenia have

experienced a high-risk period for a few months to two years before illness sets in, showing increased problems with daily living that foreshadow full-blown illness. Early intervention for cognitive problems might lessen their intensity and duration, allowing for a better prognosis, lower relapse rates, and better preservation of cognitive and social skills, and of family and social supports, according to the authors. The high-risk, or "prodromal," period is now a focal point for prevention, diagnosis and treatment.

Cognitive testing could also be useful for older children who have a family history of schizophrenia and emerging clinical symptoms. Doctors viewing cognitive impairments in a vacuum might think of something like [ADHD](#), but the researchers said the new findings play up the importance of family history (schizophrenia has a genetic component) and better characterization of clinical or behavioral symptoms, especially around the age of peak risk.

At this time, there are no effective treatments for cognitive problems in schizophrenia. In the United States, the National Institute of Mental Health recently sponsored two nationwide initiatives to develop assessment standards for cognition in schizophrenia and to evaluate medicines that may potentially treat its [cognitive problems](#). They are called Measurement and Treatment Research to Improve Cognition in Schizophrenia, or MATRICS, and Treatment Units for Research on Neurocognition and Schizophrenia, or TURNS.

More information: "Neurocognition in First-Episode [Schizophrenia](#): A Meta-Analytic Review," Raquelle I. Mesholam-Gately, PhD, and Anthony J. Giuliano, PhD; Kirsten P. Goff, PhD, Harvard Medical School and Private Practice, Kentfield, California; Stephen V. Faraone, PhD, SUNY Upstate Medical University; Larry J. Seidman, PhD, Harvard Medical School; [Neuropsychology](#), Vol. 23, No. 3.

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