

For the Primer, visit [doi:10.1038/nrdp.2015.67](https://doi.org/10.1038/nrdp.2015.67)

➔ Schizophrenia is a psychiatric disorder that is expressed as a heterogeneous set of positive, negative and cognitive symptoms. Disease onset, in the form of reduced cognitive and social functioning, often begins in adolescence — before the occurrence of psychosis in adulthood.

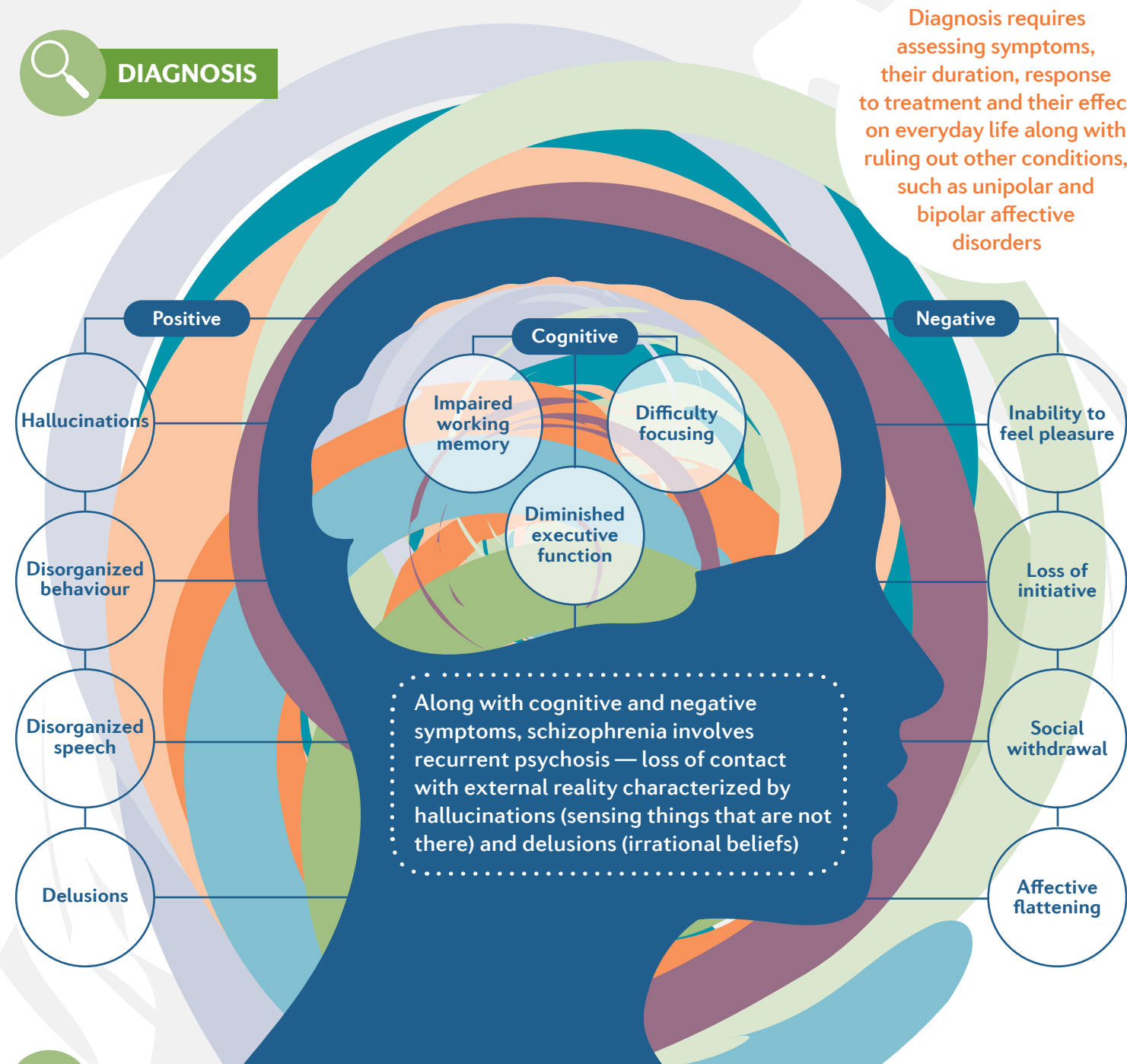
R_x MANAGEMENT

Antipsychotic drugs are the most effective treatments for schizophrenia. Although they improve positive symptoms, aggression and agitation, they do not address the negative and cognitive symptoms of the disorder. Treatment with antipsychotics combined with psychological and psychosocial approaches — such as cognitive-behavioural therapy, social skills training and supported employment — can improve some of these other symptoms. In general, the effects of treatment are not stable once treatment has been stopped. Individuals who have a high risk of developing schizophrenia can be reliably identified on the basis of their family history of psychotic disorders, and on the cognitive and social symptoms and behaviours that often precede psychotic illness. Pharmacological or psychological treatment can partially improve outcomes for these individuals.



Antipsychotics usually act by inhibiting dopamine signalling

DIAGNOSIS



Diagnosis requires assessing symptoms, their duration, response to treatment and their effect on everyday life along with ruling out other conditions, such as unipolar and bipolar affective disorders

QUALITY OF LIFE

The quality of life of those with schizophrenia can be negatively affected by various factors. These include medical health issues, such as diabetes and cardiovascular disease, that often accompany the disorder, an increase in the risk of suicide and adverse effects of antipsychotic medications such as weight gain, Parkinsonism, sedation and cardiac abnormalities.

Negative stereotypes about schizophrenia contribute to substantial problems with social and internalized stigma



MECHANISMS

Schizophrenia involves abnormal neurodevelopment arising from a complex interplay between genetic and environmental risk factors. The disorder is thought to be characterized by impaired function and

connectivity of specific neural cell populations rather than gross brain pathology. For instance, pharmacological therapies and genetic and post-mortem brain studies have implicated dopamine,

N-methyl-D-aspartate (NMDA) and γ -aminobutyric acid (GABA) signalling in the pathophysiology of schizophrenia. Despite these findings, the direct causes of the disorder remain poorly understood.

OUTLOOK

In the long term, improved understanding of the aetiology of schizophrenia will undoubtedly lead to better screening, diagnosis and treatment strategies. Nonetheless, the gap between research findings and how many patients experience care is considerable. Better implementation of current knowledge into standard clinical practice will arguably have substantial and immediate benefits for those with schizophrenia.