

A **severe** mental illness characterised by significant impairment in perception, delusions, changes in behaviour and **considerable disability**, which may affect all areas of life^{1,2}



24 million people

or 1 in 300 people (0.32%) are affected worldwide¹

At any one time, around **220,000 people**

are being treated for schizophrenia in the UK³



Lower levels of SV2A, a signalling protein, found between neurons in the living brains of patients with schizophrenia⁴

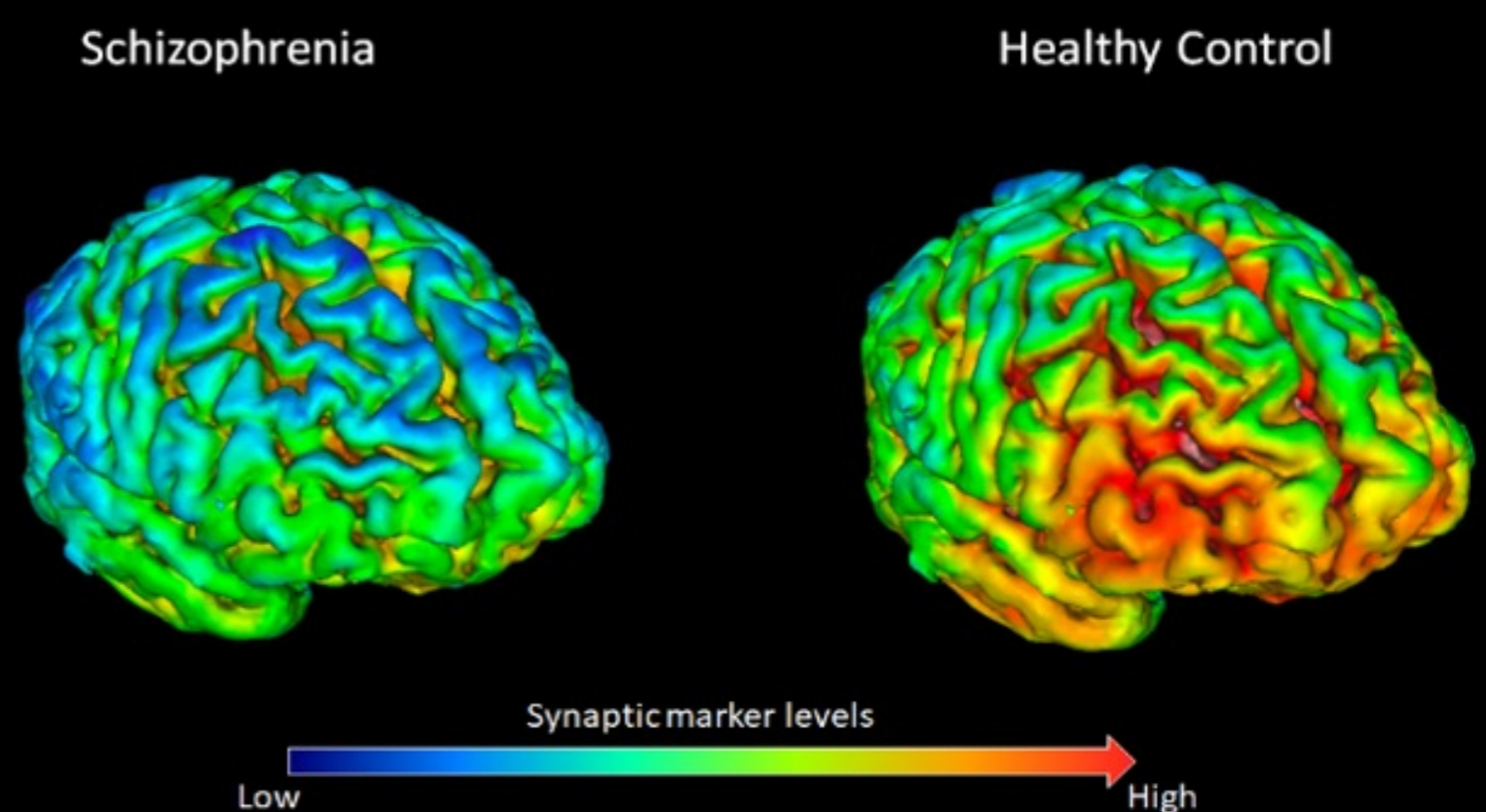


Image courtesy of Onwordi EC, et al. *Nat Commun.* 2020;11(1):246.

The causes of schizophrenia are poorly understood, but several structural and functional changes have been found in areas of the brain related to cognition and behaviour:



Thinner cortical grey matter and smaller cortical surface area



Smaller brain structures, including the hippocampus, which is hyperactive and may disrupt connected brain circuits



Impaired synaptic structure, neurotransmission and connectivity

With variable presentation, course and outcome, there is no cure for schizophrenia, but treatment can reduce symptoms and the chance of further episodes



Antipsychotics

Most act on dopamine receptors in the brain and can have dramatic benefits, reducing symptoms, preventing relapse, and improving quality of life and functioning^{8,9}

Novel antipsychotics not acting on dopamine receptors have been discovered in recent years, such as trace amine-associated receptor 1 agonist¹⁰



Psychological treatment

Interventions including cognitive behavioural therapy, family therapy and arts therapy can help people to better cope with symptoms, particularly in combination with antipsychotic medication⁹



Emerging treatments

Drug discovery has been challenging, in part because schizophrenia pathophysiology is complex and poorly understood¹¹ Recent insights suggest many potential targets for new therapeutic strategies, for example, genes and proteins implicated in abnormal synaptic plasticity and cognitive impairment⁷

1. WHO. <https://www.who.int/news-room/fact-sheets/detail/schizophrenia>. Accessed 14 July 2022. 2. WHO. <https://www.who.int/news-room/fact-sheets/detail/mental-disorders>. Accessed 14 July 2022. 3. Living with Schizophrenia. <https://livingwithschizophreniauk.org/facts-and-figures/>. Accessed 14 July 2022. 4. Onwordi EC, et al. *Nat Commun.* 2020;11(1):246. 5. Thompson PM, et al. *Transl Psychiatry.* 2020;10(1):100. 6. Grace AA, Gomes FV. *Schizophr Bull.* 2019;45(1):148–157. 7. Wu XL, et al. *World J Psychiatry.* 2022;12(4):541–557. 8. Lawrie SM. *Ther Adv Psychopharmacol.* 2018;8(11):319–326. 9. NHS. <https://www.nhs.uk/mental-health/conditions/schizophrenia/treatment/>. Accessed 14 July 2022. 10. Koblán KS, et al. *N Engl J Med.* 2020;382(16):1497–1506. 11. Frontiers. <https://www.frontiersin.org/articles/10.3389/fpsy.2020.562660/full>. Accessed 14 July 2022.