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Genetics of Schizophrenia - Where to Go Next?

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Recent genomic studies of schizophrenia have begun to reveal the genetic architecture of the disorder and have important implications for future research. We can draw two broad sets of conclusions from these findings. The first is that schizophrenia is highly polygenic, with hundreds and possibly thousands of distinct loci involved at the population level, and alleles with a spectrum of population frequencies contributing to risk. This complexity will prove challenging as we move towards trying to gain biological and mechanistic insights from genetic findings. However, despite this and the fact that much of the genetic risk for schizophrenia remains unaccounted for at the DNA level, there are some encouraging signs of convergence on to a set of plausible biological processes. The second is that genetic risk appears to be highly pleiotropic and does not map onto current definitions of disease. This, along with the lack of clear boundaries between disorders in clinical studies, suggests that there are likely to be overlapping mechanisms at work and that current diagnostic categories may not be optimal for stratifying cases for research into aetiology and pathogenesis.