Individuals who have a non-familial form of schizophrenia are approximately eight times more likely than those without the disease to harbour copy number mutations in their genomes, reports a paper online in *Nature Genetics*[1]. These newly occurring (de novo) mutations are not present in the unaffected parents, and may explain a significant portion of the occurrence of schizophrenia in individuals with no strong family history of the disease.

Maria Karayiorgou, Joseph Gogos and colleagues scanned the genomes of 152 individuals with schizophrenia and their unaffected parents for changes in copy number, and compared the results to a genome scan of 159 individuals without schizophrenia. They found copy number mutations in 15 of the 152 individuals with schizophrenia, but only in 2 of the 159 unaffected individuals. The mutations include deletions of a region on chromosome 22 -- previously implicated in schizophrenia -- but also involve changes in copy number on several other chromosomes, which reflects the genetic heterogeneity of the disease. These regions are somewhat enriched in genes affecting neural development, and some contain good individual candidate genes that warrant further scrutiny.

Finally, the authors note that the significant number of de novo mutations may explain why schizophrenia persists in the population despite the low rates of fertility and fecundity in individuals with the disease.

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