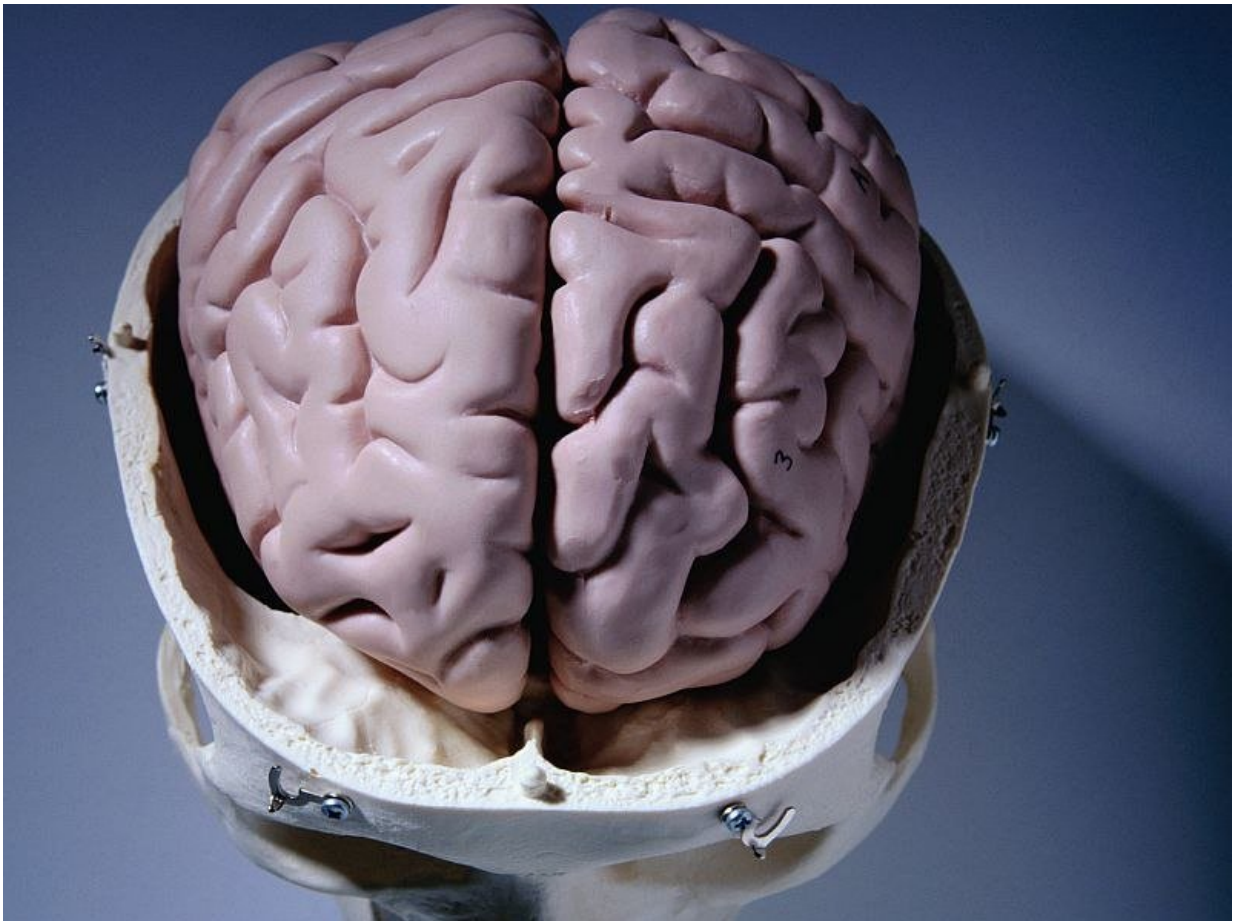


Specific white matter patterns linked to youth psychopathology

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(HealthDay)—General psychopathology is a heritable trait in youth that

may be detected early in life through brain structural connectivity, according to a study published online Jan. 24 in *JAMA Psychiatry*.

Dag Alnæs, Ph.D., from Oslo University Hospital in Norway, and colleagues analyzed clinical symptoms, as well as cognitive function, in 6,487 individuals (aged 8 to 21 years from Nov. 1, 2009, to Nov. 30, 2011) participating in the Philadelphia Neurodevelopmental Cohort. A subset of 748 participants had diffusion magnetic resonance imaging brain scans.

The researchers observed a significant association with general psychopathology levels and cognition. The feature most associated with both of these traits was a brain white matter pattern reflecting frontotemporal connectivity and crossing fibers in the uncinate fasciculus. Across a range of clinical domains and cognitive test scores, this feature's transdiagnostic importance was confirmed with univariate analysis. Both the general psychopathology (16 percent; $P = 0.05$) and cognitive factor (18 percent; $P = 0.01$) were heritable, with a negative genetic correlation.

"Dimensional and heritable general cognitive and [psychopathology](#) factors are associated with specific patterns of white matter properties, suggesting that dysconnectivity is a transdiagnostic [brain](#)-based phenotype in individuals with increased susceptibility and symptoms of psychiatric disorders," the authors write.

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