

## Researchers link genetic mutation to psychiatric disease and obesity

McGill researchers have identified a small region in the genome that conclusively plays a role in the development of psychiatric disease and obesity. The key lies in the genomic deletion of brain-derived neurotrophic factor, or BDNF, a nervous system growth factor that plays a critical role in brain development.

To determine the role of BDNF in humans, Prof. Carl Ernst, from McGill's Department of Psychiatry, Faculty of Medicine, screened over 35,000 people referred for genetic screening at clinics and over 30,000 control subjects in Canada, the U.S., and Europe. Overall, five individuals were identified with BDNF deletions, all of whom were obese, had a mild-moderate intellectual impairment, and had a mood disorder. Children had anxiety disorders, aggressive disorders, or attention deficit-hyperactivity disorder (ADHD), while post-pubescent subjects had anxiety and major depressive disorders. Subjects gradually gained weight as they aged, suggesting that obesity is a long-term process when BDNF is deleted.

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