

Genetic risk factor for binge eating discovered

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Researchers have identified a gene (CYFIP2) associated with binge eating.

This finding represents one of the first examples of a genome-wide significant genetic factor to be identified for binge eating in model organisms or humans. In addition, the researchers discovered a network

of downregulated genes involved in myelination (the process of forming a sheath around a nerve fiber to allow [nerve impulses](#) to move quickly) that also was associated with binge eating.

These findings, which appear online in the journal *Biological Psychiatry*, could potentially lead to treatments targeted to normalize eating behaviors.

Eating disorders are among the most lethal of [neuropsychiatric disorders](#). Compulsive binge eating affects millions of people suffering from eating disorders and obesity in the United States. It is characterized by episodes of eating large quantities of food, often very quickly and to the point of discomfort. Binge eaters often experience a loss of control during the binge as well as shame, distress or guilt afterwards.

Genome-wide association studies of eating disorders in humans have been limited in their power to detect significant associations between genotype and disease or disease traits such as binge eating.

Using gene mapping and gene validation, researchers from Boston University School of Medicine (BUSM) were able to identify cytoplasmic FMR1-interacting protein 2 (CYFIP2) as a major [genetic risk factor](#) for binge eating. In addition, they observed that decreased myelination could be a neuropathological consequence of binge eating. "Because we found changes in the brain as a consequence of binge eating that were predictive of decreased myelination, therapeutically promoting remyelination may represent a novel treatment avenue for promoting recovery from negative feeding behaviors in eating disorders," explained corresponding author Camron Bryant, PhD, assistant professor of Pharmacology and Experimental Therapeutics & Psychiatry at BUSM.

Bryant and his colleagues believe these findings may lead to new therapeutic treatments which could ultimately save lives and restore

healthy eating behaviors in conditions such as compulsive overeating, bulimia nervosa, anorexia nervosa and even substance use disorders.

Provided by Boston University Medical Center

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