How a Single Gene Mutation Leads to Uncontrolled Obesity

ScienceDaily (Mar. 18, 2014) -- Researchers at Georgetown University Medical Center have revealed how a mutation in a single gene is responsible for the inability of mammals to effectively pass along appetite-suppressing signals from the body to the right place in the brain. What results is obesity caused by an uncontrolled appetite.

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Their study, published March 18th in Nature Medicine's website, suggests there might be a way to stimulate expression of that gene in brain circuits caused by uncontrolled eating.

The research team specifically studied mutations in the (pair of) neurons in the hypothalamus, one of the areas of the brain that regulates food intake. This gene, known as Npy, is the main fat and carbohydrate appetite suppressor.

Referring to the Npy gene, the researchers found that when a mutation in this gene occurs, it results in an increase of the appetite, which is then transmitted to the hypothalamus, the area of the brain that controls food intake.

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