‘Obesity’ gene linked to eating more

June 19 2008

People with a variant of the first common gene linked to obesity on average eat more, according to new research.

Scientists in Aberdeen have found that people who carry a variant of the FTO gene that is linked to increased obesity - called the 'at risk' variant - eat more food than those who do not have the 'at risk' variant.

The Rowett Research Institute and the University of Aberdeen team studied 150 people from the North East of Scotland.

The volunteers were a normal cross section of the UK population aged between 21 and 60 - 20% of them were obese and 34% were overweight.

The researchers examined their food intake over seven days and took

blood samples as well as other measurements which included checks of their physical fitness and how much energy they burned when they were resting.

They found that people with the variant of the FTO gene, on average, ate between 120 and 290 calories per day more than those who did not have the 'at risk' variant. Some examples of calories could be an apple which has between 60 and 80 calories, a chocolate bar which can have around 120 calories or a sandwich which may contain approximately 300 calories.

There was no association between the variants in the FTO gene and energy expenditure or physical fitness. Volunteers were also eating normally - not preferentially consuming any particular food group such as carbohydrates.

The findings are published online in the journal Obesity.

The link with obesity and the FTO gene was revealed last year by another group of UK scientists - although it was not known at that stage how it makes people fat.

Subsequent studies in mice have gone on to show that FTO is expressed in areas of the brain that are associated with the regulation of food intake.

Professor John Speakman, an author of the paper and Director of the Institute of Biological and Environmental Sciences at the University of Aberdeen, said of this latest study: "We have found the first hard evidence linking the 'at risk' variant of the gene with increased food intake in humans.

"Our data clearly suggests that people with this variant of the FTO gene

may become fatter because they are driven to consume more food.

"Because this over consumption may be driven by their genes, it may be far harder for such people to control their intake than people who do not carry 'at risk' variants of food intake control genes.

"Greater consumption of food does not mean that people are being greedy."

Dr Alex Johnstone, a co-author of the paper, based at the Rowett Research Institute which will soon merge with the University of Aberdeen, added: "There are many factors involved in the development of obesity and this research suggests that the FTO gene contributes to differential food intake between volunteers."

Source: University of Aberdeen

Citation: 'Obesity' gene linked to eating more (2008, June 19) retrieved 23 April 2024 from https://medicalxpress.com/news/2008-06-obesity-gene-linked.html

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