

# Gene variations may explain weight gain among men, women

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People with specific 'polymorphisms' were more likely to put on pounds in 10-year study.

(HealthDay)—Weight gain in men and women is predicted by two different genetic variations—so-called polymorphisms, according to a new study from the Netherlands.

Men with a certain mutation of the [FTO gene](#) had an 87 percent greater risk for [gaining weight](#) over 10 years. Meanwhile, [women](#) with a different variation on the MMP2 gene had a two and a half times increased risk for [weight gain](#) over the course of a decade, the researchers found.

The research involved two groups of people: The first group, which consisted of 259 people, maintained a stable weight; the second group

consisted of 237 people who were considered weight gainers. These participants gained about 17 pounds over 10 years.

Starting body-mass index—a measurement of body fat based on a person's ratio of height to weight—for the participants ranged from normal to obese. Participants were between 20 and 45 years old when the study began.

The research, led by Freek Bouwman, from Maastricht University, and Dr. Jolanda Boer, from the Netherlands' National Institute for Public Health and the Environment, focused on several different polymorphisms associated with weight gain in previous studies.

The genetic distribution of a particular FTO polymorphism in men was consistently different between the weight-stable group and the weight-gainer group, the study revealed, according to a news release from the European Congress on Obesity.

Similarly, among the women, the genetic distribution of the [MMP2 polymorphism](#) varied between those considered weight stable and those in the weight-gainer group.

"We found that FTO in men and MMP2 in women are predictors for weight gain over a 10-year follow-up period," the study authors wrote.

They suggested that more research into these polymorphisms could help determine who is at greatest risk for weight gain and improve weight-control strategies. They said differences in male and female hormone levels also could play a role in weight regulation.

The study was presented Tuesday at the European Congress on Obesity in Liverpool, England. Findings presented at medical meetings should be viewed as preliminary until published in a peer-reviewed journal.

**More information:** The U.S. National Library of Medicine provides more information on [polymorphisms](#).

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