Obesity and genetics: Researchers have found 14 genes that cause weight gain and three that help prevent it, opening door to new treatments

Obesity has become an epidemic, driven in large part by high-calorie diets laden with sugar and high-fructose corn syrup. Increasingly sedentary lifestyles play a big part as well. But our genes play an important role too, regulating fat storage and affecting how well our bodies burn food as fuel. So if we can identify the genes that convert excessive food into fat, we could seek to inactivate them with drugs and uncouple excessive eating from obesity.

In new work just published in the scientific journal PLOS Genetics, [researcher Eyleen] O’Rourke and her collaborators used [C. elegans] worms to screen 293 genes associated with obesity in people, with the goal of defining which of the genes were actually causing or preventing obesity. They did this by developing a worm model of obesity, feeding some a regular diet and some a high-fructose diet.

This obesity model… allowed them to identify 14 genes that cause obesity and three that help prevent it. Enticingly, they found that blocking the action of the three genes that prevented the worms from becoming obese also led to them living longer and having better neuro-locomotory function. Those are exactly the type of benefits drug developers would hope to obtain from anti-obesity medicines.

This is an excerpt. Read the original post here.