'Thinness gene' could offer genetically engineered weight control strategy

While others may be dieting and hitting the gym hard to stay in shape, some people stay slim effortlessly no matter what they eat. In a study publishing [May 21] in the journal Cell, researchers use a genetic database of more than 47,000 people in Estonia to identify a gene linked to thinness that may play a role in resisting weight gain in these metabolically healthy thin people. They show that deleting this gene results in thinner flies and mice and find that expression of it in the brain may be involved in regulating energy expenditure.

"We all know these people: it's around one percent of the population," says senior author Josef Penninger, the director of the Life Sciences Institute and professor of the department of medical genetics at the University of British Columbia.

. . .

The researchers say that therapeutics targeting the gene might help scientists fight obesity in the future. "If you think about it, it's realistic that we could shut down ALK and reduce ALK function to see if we did stay skinny," says Penninger. "ALK inhibitors are used in cancer treatments already. It's targetable. We could possibly inhibit ALK, and we actually will try to do this in the future."

Read the original post