

New Year's resolutions for 2016: Fight your obesity genes with exercise

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From left to right: Hudson Reddon, study's first author and a PhD student in the Department of Clinical Epidemiology and Biostatistics. and David Meyre, an associate professor in the Department of Clinical Epidemiology and Biostatistics

People from around the world can use a physically active lifestyle to

blunt the effect of inherited obesity genes, McMaster University researchers have found.

In a paper published today by the journal *Scientific Reports*, David Meyre and his team have shown that a physically active lifestyle can substantially decrease the genetic effect of the major [obesity](#) gene FTO on [body weight](#) in a multiethnic population.

"This provides a message of hope for people with obesity predisposing genes that they can do something about it. Our body weight destiny is not only written in our genetic blueprint," said Meyre, an associate professor of [clinical epidemiology](#) and biostatistics for McMaster's Michael G. DeGroot School of Medicine.

His team looked at data from up to 17,400 people from six ethnic groups (South Asian, East Asian, European, African, Latin American, Native North American) who were recruited from 17 countries and followed for more than three years.

"To strengthen the confidence in our results, we used both basic and precise (metabolic equivalent score) measures of physical activity, and we compared the traditional body mass index to the recently developed body adiposity index," said Hudson Reddon, the study's first author and a PhD student in the department of clinical epidemiology and biostatistics.

They analysed the impact of 14 obesity predisposing genes and found that physical activity can blunt the [genetic effect](#) of FTO, the major contributor to common obesity, by up to 75 per cent.

"These promising results encourage us to investigate how additional lifestyle factors, such as diet, stress and sleep patterns, may impact the genetic predisposition to obesity," said Meyre.

More information: Hudson Reddon et al. Physical activity and genetic predisposition to obesity in a multiethnic longitudinal study, *Scientific Reports* (2016). [DOI: 10.1038/srep18672](https://doi.org/10.1038/srep18672)

Provided by McMaster University

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