Obesity genes? Scientists isolating mutations that promote weight gain, spurring hopes gene editing could dramatically curtail the disease

Over the last twenty years, genetics have been increasingly implicated in the incidence of obesity. The MC4R gene in particular has been studied, although the extent of its role in obesity has previously been elusive.

The MC4R gene encodes the melanocortin 4 receptor, which is a part of the leptin-melanocortical system… Unfortunately, in individuals with MC4R mutations, this process becomes dysregulated, leading to excessive food intake and obesity.

The team estimated that 0.3 per cent of the sample group harboured MC4R mutations, which equates to one in every 337 people in the UK… Body mass index statistics from the [Avon Longitudinal Study of Parents and Children] were also used to investigate the significance of the relationship between MC4R and body weight. Evidence found that the gene does indeed contribute to an increased body mass index, with the effects starting to take hold from as early as five years of age.

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