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News & Comments

Body Weight Does Not Depend on Genetics or Social Background

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With all the advancement and research, it is still unknown whether genetics or environmental factors are the prime cause of obesity. Those who are in favor of later argue that the Obesity rates have tripled since the 1980s, which shows that genetics couldn't change so quickly, so it must be environmental elements. However, identical twins are more likely to have similar body weights than non-identical twins, suggesting weight is influenced by genetics. According to a recent study, there were differences in how much environmental or genetic factors influenced whether a person became obese throughout their lifetimes. To study how genes and social disadvantage are linked with body weight from age two to 69, the team of scientists collected data from the MRC National Survey of Health and Development.

It consisted of a sample of 5,362 people from when they were born in 1946 until the present day. The study found little connection between genetics and obesity rates during childhood, but that relationship strengthened with age (from adolescence to age 69). Body weight and social background showed a similar pattern. From adolescence onwards, people from disadvantaged backgrounds were heavier. Childhood and infancy, however, showed little difference. The authors of the study noticed that people's weights changed as they got older, regardless of genetics or social background. Thus, neither of those factors can accurately predict a person's body weight. The study suggests that the number of obesity-related genes was greater in those with higher body weight. The genetic risk of obesity is highest in the top 25% of the population. People in the bottom 25% of the population are 11.2 kg heavier than those in the top 25%. By age 63, people from the most disadvantaged backgrounds on average weighed 7.4kg more than those from the most advantaged backgrounds. As a result, we can still attribute much of body weight to factors other than genetics or social disadvantage, suggesting that other factors also play a key role.

KEYWORDS

Social stratification, Genetics, Human genetics, Body mass index, Single nucleotide polymorphisms, Cohort studies, Body weight, medical risk factors, Obesity, Social environment