**Fat and obesity**

*How does fat relate to obesity?*

Body mass index (BMI) is one way to define a healthy weight. The World Health Organization defines obesity as having a BMI of at least 30. Globally, 12.9 per cent of people were obese in 2014. Despite widespread recognition of the problem and public health campaigns designed to address it, obesity rates have doubled since 1980.

We used to think that the amount of fat a person ate in their diet was closely linked to their percentage of body fat. Yet statistics for the UK show that we eat less fat now (as well as less sugar and fewer total calories) than we did in the 1970s but have higher levels of obesity.

This apparent inconsistency may be partly explained by people under-reporting what they are eating. But it also suggests that there are other reasons for the obesity epidemic, such as more sedentary lifestyles where we spend much of our time sitting down – at home, at work or in cars. Broadly speaking, we must be consuming more energy than we expend.

Obesity occurs when excess energy accumulates as fat in cells called adipocytes. It involves increases in both the number of fat cells (hyperplasia) and their size (hypertrophy). Some excess fat cell development is healthy, as without adipocytes, fat would be stored around organs and blood vessels, leading to metabolic disorders. However, there may still be ways to manipulate fat cell development in order to treat obesity.

**REFERENCES**

- European Association for the Study of Obesity: Obesity facts and figures
- Institute of Economic Affairs: The fat lie [PDF]
- NHS: Latest obesity stats for England are alarming
- The fat controller: adipocyte development (2012)

*[continued]*

**ABOUT THIS RESOURCE**

This resource first appeared in ‘Fat’ in December 2015. Published by the Wellcome Trust, a charity registered in England and Wales, no. 210183.

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FURTHER READING

- Big Picture: A healthy weight – an article on BMI

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