

# Ten years gone to waist: Scots have become fatter

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(Medical Xpress)—A study by Human Nutrition researchers at the University of Glasgow has revealed that Scots' waistlines have become bigger in the last 10 years.

The research by Professor Mike Lean and colleagues in the School of Medicine also suggests that [muscle mass](#) is falling.

The researchers compared data from the Scottish Health Surveys from 1998, 2003, 2008 and concluded that people were heavier and fatter in 2003 than in 1998, with a less marked increase between 2003 and 2008. There were proportionally greater increases in [waist circumference](#) than in [BMI](#), especially in [older women](#).

Over the period, men's BMI increased from an average of 26.9 to 28 while women's was up more modestly, from 26.7 to 27.5. However, the average man's waist circumference grew from 93.7cm (37 inches) to 99cm (39 inches) while the average woman's had expanded from 82.7cm (32.5 inches) to 89.1cm (35 inches). At most ages, compared with people of the same age ten years previously, the proportional increases in waist were greater than those of BMI.

The study was not primarily concerned with explaining any effects but the researchers suggested future studies could look at the socio-economic and behavioural factors which influence BMI and waist circumference.

Prof Lean said: "Our results demonstrate striking increases in both BMI and waist circumference over a 10-year period in the population as a whole, and among people at almost every age. The changes are most marked among women: women now have waists 8-10cm bigger than women of the same age 10 years ago, while men have waists 5-7cms bigger.

"The data suggest a disproportionate increase in body fat, compared with muscle, at all ages, but particularly among older women.

"The patterns indicate substantial increases in body fat, relative to muscle, or an exaggerated shift towards more central fat distribution. These changes appear to continue in older age-groups than in the past. They herald loss of physical capacity and also metabolic decline, with even more diabetes.

"Whichever of these is responsible, and whatever the socioeconomic and behavioural influences, this shift in body composition is likely to herald poorer health.

"It seems reasonable to hypothesise that adverse changes in dietary habits and reduced physical activity are the primary causes of the observed trends. We see both a change with age, and a difference compared with people of the same age in the past over time."

This study started as a MSc [Human Nutrition](#) research project, in which the Glasgow scientists combined the data from the three Scottish Health Surveys and organised the 20,423 respondents, who were aged 18-72, firstly by age-groups, and second by constructing 'synthetic birth-cohorts', by grouping individuals according to their years of birth.

**More information:** [www.ncbi.nlm.nih.gov/pubmed/22945606](http://www.ncbi.nlm.nih.gov/pubmed/22945606)

Provided by University of Glasgow

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