

Study finds link between warm homes and low body fat

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(Medical Xpress)—Recent rises in energy prices may lead to an increase in obesity, according to new research by behavioural scientists from the University of Stirling.

The price increases may discourage people from turning on their heating systems over the winter months which could impact negatively upon their weight.

In recent years scientists have suggested that warmer [indoor temperatures](#) have been a major contributing factor to rises in [obesity](#) levels in the UK and across the northern hemisphere during winter time.

However, researchers from Stirling's Behavioural Science Centre studied more than 100,000 adults across England and found a direct link between higher temperatures and lower levels of body fat.

The 13-year study used the Body Mass Index (BMI) levels to indicate levels of body fat and noted those who live in well heated homes are more likely to have low (BMI) levels, while people who spend less time with their heating turned up - or on at all - tend to be heavier.

"We set out to investigate the scientific claims that cooler indoor temperatures help us maintain a healthy weight by pushing our bodies to expend more energy through shivering and generating heat through tissues," explained behavioural scientist and senior lecturer Dr Michael Daly.

"In fact, the research suggests people may eat less and burn more energy when residing in a warmer indoor environment."

Recent UK statistics revealed more than a quarter of people aged 16 and over are now classed as obese. A MORI poll in August billed Scotland as second only to the USA, with two thirds of adults overweight or obese.

Obesity leads to major health problems and puts a strain on the national health system. The Stirling study, to be published in leading journal *Obesity*, acknowledges contributing factors such as excessive calorie intake and low levels of physical activity – but it is the first to examine the association between indoor household temperature and population BMI levels.

Dr Daly said: "We contrasted BMI levels for people living in different temperature groups and found reduced weight levels among people living in homes heated to above 23 degrees Celsius, which was reflective of about 15 000 of the households studied.

"As national gas bills continue to rise faster than the rate of inflation, this research suggests the obesity epidemic could worsen where heating is turned down below comfortable levels, or off, for lengthy periods to cut costs.

"This is not just about people who live in well-heated homes being in the financial position to afford more expensive low-calorie foods, exercise classes and sporting activities and therefore finding it easier to maintain a low BMI level. The study took age, gender, social class and other factors into account.

"The comfortable ambient temperature of 20.3-23 degrees Celsius is where we feel comfortable in our clothes and are neither hot, nor cold. At temperatures above this we expend more energy and we eat less

because our appetite is suppressed."

More information: "Association of ambient indoor temperature with body mass index in England." Michael Daly. *Obesity*, 2013.

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Provided by University of Stirling

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