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Scientists reveal new insight into combating the middle-aged spread

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Research led by University of Aberdeen scientists could lead to new treatments to help tackle the middle-aged spread

Those stubborn pounds that creep on around the stomach in mid-life are the bane of many.

Now research led by University of Aberdeen scientists could lead to new treatments to help tackle the middle-aged spread.

Their study is part of a £1.4 million project funded by the Wellcome Trust and published in *Endocrinology*.

Signals in the brain that tell us to stop eating function less efficiently as we approach mid-life.

Now scientists at Aberdeen in collaboration with experts at the universities of Cambridge and Michigan have worked together to unlock the role obesity drugs can play in reigniting these signals.

Lead scientist, Professor Lora Heisler, Chair in Human Nutrition, at the University of Aberdeen[1]s Rowett Institute of Nutrition and Health said: "From young adulthood approaching middle age people commonly experience progressive weight gain around the stomach area that is commonly referred to as middle-aged spread.

"One of the reasons for this can be attributed to a small subset of cells in an area of the brain where appetite is controlled.

"These cells make important brain hormones called pro-opiomelanocortin (POMC) peptides that are responsible for regulating our appetite and body weight.

"As we approach mid-life these 'fullness' cells slow down and become lazier in sending these signals, which leads to a misjudgement of how much food our body needs.

"Our research has focused on understanding how obesity medications formerly available on prescription around the globe -namely d-fenfluramine and sibutramine - and the new medication lorcaserin which has just been launched in the US, work.

"What we have found is that the small subset of cells that make POMC peptides are the key to these particular drugs working effectively.

"These drugs spark POMC into action, triggering important signals to

the brain to let us know when we have had enough to eat."

The findings could have implications for the development of new treatments to tackle the obesity epidemic in the future.

Professor Heisler continued: "More than half of people in the UK are overweight and 1 in 4 are clinically obese. This is an enormous percentage of the population, and given the links established between obesity and serious medical illnesses including cancer, heart disease and diabetes, it is essential that we strive to find new methods to tackle this epidemic to improve our health.

"Our new understanding of the crucial role POMC plays in combating the middle-aged spread opens the door to new medications that could be developed to jumpstart the signals these neurons send to control appetite and our waistline."

Provided by University of Aberdeen

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