

Appetite hormone works in two brain areas

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British scientists have discovered that a major hormone regulating appetite in humans operates through two areas of the brain.

University College London researchers determined brain activity in the hypothalamus and the orbitofrontal cortex, measured by functional magnetic resonance imaging, successfully predicted how much food would be eaten by the eight normal-weight men who participated in the study.

The men without food for 14 hours and then were given an intravenous dose of a hormone called peptide YY, or a placebo, while their brains were being scanned. The researchers then measured how much the men ate.

Each participant ate less after the peptide YY infusion. However, after the placebo, activity within the hypothalamus predicted how much the men ate. After the peptide YY infusion, brain activity within the orbitofrontal cortex predicted the amount eaten.

Study leader Rachel Batterham, a clinician scientist for Britain's Medical Research Council at UCL, said the findings might lead to treatment for obesity, which she said is "one of the biggest health burdens western societies face today."

The study appears in the journal *Nature*.

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