New link between obesity and body temperature
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Rosa Señarís and colleagues from the University of Santiago de Compostela and the Institute of Neuroscience/University Miguel Hernandez of Alicante (Spain) found that, in a mildly cold environment, mice lacking the cold-sensing ion channel TRPM8 consumed more food during the day, when mice are usually asleep. The increased daytime eating started at a young age and led to obesity and high blood sugar in adulthood, which may have been caused in part by reduced fat utilization.

Compared to control animals, the TRPM8-deficient mice lost more body heat in mild cold, particularly during periods of fasting when their body temperature dropped below 30 degrees Celsius (86 degrees Fahrenheit). The research represents a previously unrecognized link between thermal sensing systems, thermoregulation and food intake, which may open up new avenues for preventing and treating obesity.

More information: Deletion of the cold thermoreceptor TRPM8 increases heat loss and food intake leading to reduced body temperature and obesity in mice, JNeurosci (2018). DOI: 10.1523/JNEUROSCI.3002-17.2018

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