

New study suggests connection between body temperature and obesity

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A new study suggests that a biological inability to create sufficient core body heat could be linked to the obesity epidemic. "Evidence of a diurnal thermogenic handicap in obesity" is featured in this year's second issue of *Chronobiology International*.

The study found that obesity is associated with a significant reduction of body core temperature during daytime hours. Journal Editor Francesco Portaluppi explains that the reduced ability of [obese people](#) to spend energy as heat compared to lean individuals could result in long term weight gain (about 2 kg (4.5 lb.)) per year, depending on the lifestyle.

Originally understood as an imbalance between energy intake and expenditure, obesity is viewed in this article by comparing the body core temperature of obese subjects to lean, healthy controls. The study concluded that a significantly reduced temperature was much more prevalent in the obese subjects. This biological handicap, the authors believe, can predispose subjects to becoming obese.

"Since body core temperature represents a marker of energy expenditure, results from this study suggest that a diurnal thermogenic handicap can play a crucial role in favoring [weight gain](#) in obese subjects," said article co-author Pietro Cortelli, MD, Ph.D.

Cortelli stresses the importance of this study, which strongly supports the possibility of a new therapeutic target for the treatment of obesity.

Although there will be more studies needed, Portaluppi said this study can open the door for more innovative ways to treat [obesity](#).

More information: Chronobiology International, "Evidence of a diurnal thermogenic handicap in obesity" Daniela Grimaldi, Federica Provini, Giulia Pierangeli, Natalia Mazzella, Giovanni Zamboni, Giulio Marchesini, Pietro Cortelli. [DOI: 10.3109/07420528.2014.983603](https://doi.org/10.3109/07420528.2014.983603)

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