

Evidence lacking for sleep length, energy metabolism link

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difficult to draw conclusions on the effect of [short sleep](#) on [energy metabolism](#) under relevant free living conditions," the authors write. "To explore this area further, more studies using suitable methodology under relevant conditions to mimic real-life situations are needed."

More information: [Abstract](#)
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(HealthDay) -- Short sleep duration may affect total daily energy expenditure or directly affect energy metabolism, although more study is required, according to a review published online March 22 in *Obesity Reviews*.

Lars Klingenberg, of the University of Copenhagen in Denmark, and colleagues reviewed the literature from 1970 through March 2011 to investigate the effects of short sleep duration on energy metabolism in humans.

The authors found that short sleep duration does not seem to affect total daily energy expenditure, although the limited number of studies prevents definitive conclusions about causality. There is insufficient evidence to support any consequential effect of short sleep duration on components of energy metabolism, including resting metabolic rate, physical activity, diet-induced thermogenesis, and substrate utilization. Following total or severe sleep deficit, there was some evidence of the up-regulation of [thyroid hormones](#) and glucocorticoids and increased [heat dissipation](#).

"Although we found some evidence also in humans that suggests a possible effect on energy metabolism, the limitations of the studies make it

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