Sleep affects HOMA-IR in overweight, obese teens

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(HealthDay)—Overweight and obese adolescents have persistently higher homeostasis model assessment of insulin resistance (HOMA-IR), with significant contributors including total sleep time and sleep efficiency, according to research published in a supplement to the September issue of *Diabetes, Obesity and Metabolism*.

Elke Dorenbos, from Maastricht University in the Netherlands, and colleagues conducted a literature review to examine anthropometric and lifestyle characteristics associated with insulin sensitivity in overweight and obese adolescents. In addition, they included new data from 137 overweight and obese adolescents.

The researchers found that adolescents with unfavorable fat partitioning and family history of noninsulin-dependent diabetes mellitus were at risk for persistent insulin resistance. In the new cohort, overweight and obese adolescents showed a higher HOMA-IR post-pubertally. Significant contributors included body mass index (BMI) z-score, age, pubertal stage and prepubertally total sleep time and sleep efficiency.

"Overweight and obese adolescents showed a persistently higher instead of transiently higher HOMA-IR during puberty, associated with BMI z-score, age, pubertal stage and prepubertally less total sleep time and sleep efficiency," the authors write.

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