

# Does sleep duration affect cardiac metabolic risk in young children?

May 15 2017

Volume 13, Number 2 • April 2017 • ISSN 2153-2168

# Childhood OBESITY

Sustained Behavior Change  
After a Prenatal Obesity Program

Childcare Influences Adiposity:  
Analysis from the ROLO Study


Multi-level Correlates of a Healthy BMI  
Among Children in Massachusetts

Efficacy of the Feeding Exercise  
Randomized Trial

Metabolic Consequences of  
Sleep Apnea in Obese Adolescents

Effects of Enhancing BMI Screening  
in Schools with Parent Education



Mary Ann Liebert, Inc.  publishers

[www.liebertpub.com/chi](http://www.liebertpub.com/chi)

*Childhood Obesity* is a bimonthly peer-reviewed journal, published in print and online, and the journal of record for all aspects of communication on the broad spectrum of issues and strategies related to weight management and obesity

prevention in children and adolescents. Credit: Mary Ann Liebert, Inc., publishers

How many hours a day young children (1-3 years) sleep does not appear to affect their cardiometabolic risk (CMR) at ages 3-8, based on an assessment of factors including blood pressure and cholesterol and blood glucose levels. Most unexpectedly, less sleep was associated with increased levels of high density lipoprotein (HDL), the "good" form of cholesterol, as reported in a new study published in *Childhood Obesity*.

The article entitled "Longitudinal Analysis of Sleep Duration and Cardiometabolic Risk in Young Children," was coauthored by Lesley Plumptre, PhD, Catherin Birken, MD, and colleagues from The Hospital for Sick Children, University of Toronto School of Medicine and Dalla Lana School of Public Health, Toronto, and St. Michaels Hospital, Toronto, Canada, on behalf of the TARGet Kids! Collaboration.

The researchers collected sleep duration data for children 12-36 months of age. At a follow-up visit at age 36-96 months they determined a CMR score for each child by totaling the child's age, standardized waist circumference score, systolic blood pressure, triglyceride measurement, [blood glucose level](#), and the inverse HDL. The authors suggest that a relationship between sleep duration early in life and CMR could appear at a later age. Sleep quality could also have a greater effect on CMR than sleep duration.

"Recently, [sleep duration](#) has emerged as an influence on [cardiometabolic risk](#) factors and obesity in childhood and among adults using mostly cross-sectional analyses. It is not clear when this relationship starts," says *Childhood Obesity* Editor-in-Chief Tom Baranowski, PhD, Baylor College of Medicine, Houston, TX. "Plumptre

and colleagues conducted the first such analysis using a longitudinal design testing the relationship between sleep in early childhood (12 to 36 months) with a cardiometabolic risk score later in childhood (36 to 96 months), and found no such relationship. This important finding indicates that the relationship between sleep and cardiometabolic risk emerges later in childhood."

**More information:** Lesley Plumptre et al, Longitudinal Analysis of Sleep Duration and Cardiometabolic Risk in Young Children, *Childhood Obesity* (2017). [DOI: 10.1089/chi.2016.0279](https://doi.org/10.1089/chi.2016.0279)

Provided by Mary Ann Liebert, Inc

Citation: Does sleep duration affect cardiac metabolic risk in young children? (2017, May 15) retrieved 13 January 2023 from <https://medicalxpress.com/news/2017-05-duration-affect-cardiac-metabolic-young.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--