

Habitual Sleep Duration and Risk of Childhood Obesity: Systematic Review and Dose-response

Meta-analysis of Prospective Cohort Studies

Huijuan Ruan^{1†}, Pengcheng Xun^{2†}, Wei Cai^{1,3,4}, Ka He^{2*} and Qingya Tang^{1*}

¹Department of Clinical Nutrition, Xin Hua Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China;

²Department of Epidemiology and Biostatistics, School of Public Health-Bloomington, Indiana University, Bloomington, IN, USA;

³Shanghai Key Laboratory of Pediatric Gastroenterology and Nutrition, Shanghai, China; Shanghai Institute of Pediatric Research, Shanghai, China;

⁴Department of Pediatric Surgery, Xin Hua Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.

[†]These authors contribute equally to this work.

***Corresponding authors:**

Dr. Qingya Tang; Address: No. 1665, Kongjiang Rd, Shanghai, China; Phone: +86-21-25078670; Fax: +86-21-25078972; E-mail: tangqingya@163.com

Dr. Ka He; Address: Department of Epidemiology and Biostatistics, School of Public Health-Bloomington, Indiana University, 1025 E. Seventh Street, C034, Bloomington, Indiana 47405, USA; Phone: 812-856-2260; Fax: 812-855-7345; E-mail: kahe@indiana.edu

Supplemental Table Influence of single study on the association between sleep duration and risk of overweight/obesity or annual BMI gain

Outcome	Comparison	Cohort omitted	OR (95% CI)
Overweight/obesity	Lowest vs. highest	None	1.76(1.39, 2.23)
		Reilly, 2005	1.83 (1.42, 2.34)
		Taveras, 2008	1.74 (1.35, 2.24)
		Touchette, 2008	1.69 (1.33, 2.15)
		Bell_younger, 2010	1.76 (1.36, 2.29)
		Bell_older, 2010	1.86 (1.49, 2.33)
		Seeger, 2011	1.59 (1.30, 1.93)
		Silva, 2011	1.72 (1.35, 2.19)
		Teveras_0.5-2 years, 2014	1.82 (1.42, 2.32)
		Teveras_3-4 years, 2014	1.81 (1.42, 2.30)
		Teveras_5-7 years, 2014	1.75 (1.36, 2.24)
	↑ 1 hour/day	None	0.79 (0.70, 0.89)
		Reilly, 2005	0.76 (0.65, 0.88)
		Lumeng, 2007	0.80 (0.71, 0.91)
		Snell, 2007	0.73 (0.61, 0.87)
		Calamaro, 2010	0.74 (0.63, 0.86)
		Seeger, 2011	0.83 (0.74, 0.93)
		Carter, 2011	0.85 (0.76, 0.94)
		Silva, 2011	0.80 (0.70, 0.91)
		Teveras_3-4 years, 2014	0.77 (0.68, 0.88)
		Teveras_5-7 years, 2014	0.79 (0.69, 0.90)
Outcome	Comparison	Cohort omitted	β (95% CI)
Annual BMI gain	Lowest vs. highest	None	0.13 (0.01, 0.25)
		Diethelm, 2010	0.19 (0.03, 0.35)
		Silva, 2011	0.09 (-0.02, 0.19)
		Lee_1 st grader, 2012	0.10 (-0.02, 0.23)
		Lee_4 th grader, 2012	0.19 (0.01, 0.36)
		O'Dea, 2012	0.10 (-0.02, 0.22)
	↑ 1 hour/day	None	-0.05 (-0.09, -0.01)
		Silva, 2011	-0.04(-0.07, -0.01)
		Lee_1 st grader, 2012	-0.04 (-0.08, -0.01)
		Lee_4 th grader, 2012	-0.06 (-0.10, -0.02)
		Lytle_females, 2012	-0.06 (-0.10, -0.02)
		Lytle_males, 2012	-0.05 (-0.09, -0.01)
		Mitchell, 2013	-0.05 (-0.11, -0.00)

BMI: body mass index; CI: confidence interval; OR: odds ratio.