



Question: What is the relationship between sedentary behaviors (including recreational, occupational and screen time) and dietary intake and body weight in adults?

Table 3: Summary of studies examining the relationship between sedentary behavior during childhood and body weight in adults

Author, Year, Data Source, Country, Risk of Bias*	Sample Size, Age, Gender, Race/Ethnicity, Study Duration	Sedentary Behavior, Outcome Measures	Results
<p>Boone, 2007</p> <p>National Longitudinal Study of Adolescent Health (Add Health), Wave II (adolescent) and Wave III (young adult), USA</p> <p>Risk of bias: 4/25</p>	<p>N=9,155</p> <p>Wave II 15.9y (SD=0.12), wave III 21.4y (SD=0.11); 53.3% female</p> <p>Varies by study wave, White (10.0-21.7%), Black (12.1-35.8%), Native American (17.0-42.2%), Asian (2.6-18.5%), Hispanic (12.4-28.6%)</p> <p>5y</p>	<p>Sedentary Behavior: Hours TV and video viewing/week; Reported activity level and measured moderate to vigorous physical activity</p> <p>Outcomes: Measured height and weight</p>	<p>Adolescent screen time, MVPA, and risk of obesity in early adulthood</p> <p>For those with 1 instance MVPA/week in adolescents: 4 hours/week screen time in adolescents (referent: 40 hours/week):</p> <p><i>Female:</i> OR=0.58 (95% CI=0.43-0.80) <i>Male:</i> OR=0.78 (95% CI=0.61-0.99)</p> <p>For those with 6 instance MVPA/week in adolescents: 4 hours/week screen time in adolescents (referent: 40 hours/week): 6 instances of MVPA/week (referent: 1 instance MVPA/week)</p> <p><i>Female:</i> OR=0.55 (95% CI=0.36-0.84) <i>Male:</i> NS</p> <p>Screen time/week in adolescents and longitudinal association with early adulthood obesity</p> <p><i>Male:</i> $\beta=0.0070$ (95% CI=0.0002-0.0139), P=0.043 <i>Female:</i> $\beta=0.0150$ (95% CI=0.0062-0.0237), P=0.001</p>



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<p>Hancox, 2004</p> <p>1972/1973 Birth Cohort Dunedin, Otago Province, New Zealand</p> <p>Risk of Bias: 4/24</p> <p>Landhuis, 2008</p> <p>1972/1973 Birth Cohort Dunedin, Otago Province, New Zealand</p> <p>Risk of Bias: 4/24</p>	<p>N=980</p> <p>5-26y; 48% female</p> <p>Predominately European, Maori (7.4%), Pacific Islanders (1.5%)</p> <p>~15y</p> <p>Sample Size: 972</p> <p>5-32y; 48% female</p> <p>Predominately European, Maori (7.4%), Pacific Islanders (1.5%)</p> <p>27y</p>	<p>Sedentary Behavior: Reported mean TV viewing hours/weekday (age 5-15y); mean viewing hours/day including weekends (age 13-15y, 26y (Hancox, 2004), and 32y (Landhuis, 2008)</p> <p>Outcomes: Measured height and weight</p>	<p>BMI (measured) at 26y:</p> <p>Childhood TV viewing (age 5-15y) and high</p> <p>BMI: β(SE)=0.48 (0.19), P=0.0121</p> <p>Adult obesity at 32y:</p> <p><i>Hours of childhood weekday TV viewing and risk of obesity in adulthood: OR=1.25 (95% CI=1.01-1.53)</i></p>
<p>Mamun, 2013</p> <p>Mater–University of Queensland Study of Pregnancy (MUSP) Cohort, Australia</p> <p>Risk of Bias: 2/24</p>	<p>Sample size: 2,439</p> <p>Age: 14-21y; 50.7% female</p> <p>Race/ethnicity: White (90.2%), Asian (3.5%), Aboriginal-Islander (3.8%)</p> <p>Study Duration: 7y</p>	<p>Sedentary Behavior: Reported hours of weekday TV viewing (age 14y and 21y)</p> <p>Outcomes: Measured height and weight, waist circumference, and waist-to-hip ratio</p>	<p>Odds ratios for risk of overweight/ obese at age 21 years (referent group: TV viewing <3 hours/day at 14 and 21 years): TV viewing <3 hour/day at age 14y, but >3 hour/day at age 21y:</p> <p><i>Overweight:</i> NS <i>Obesity:</i> OR=2.33 (95% CI=1.41-3.85)</p> <p>TV viewing >3 hour/day at age 14 and 21 years:</p> <p><i>Overweight:</i> NS <i>Obesity:</i> OR=2.31 (95% CI=1.52-3.51)</p> <p>Odds ratios for normal weight at age 14y, but overweight at age 21y (referent group: healthy weight age 14y and 21y, and TV <3 hours/day at 14y and 21y):</p> <p><i>TV <3 hours/day at age 14y, but >3 hours/day at age 21y:</i> OR=4.30 (95% CI=1.43-12.90) <i>TV >3 hours/day at age 14y, but <3 hours/day at age 21y:</i> NS <i>TV >3 hours/day at age 14y and 21y:</i> NS</p>



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<p>Parsons, 2008</p> <p>1958 British Birth Cohort</p> <p>Risk of Bias: 2/24</p>	<p>Sample size: 9,216</p> <p>Age: 11-45y; 49% female</p> <p>Race/ethnicity: NR</p> <p>Study Duration: 33y</p>	<p>Sedentary behavior: TV viewing: Self-reported TV viewing frequency (age 11y, 16y, and 23y), and daily viewing duration (age 45y)</p> <p>Outcomes: Measured height and weight (age 11y, 16y, 33y, and 45 y); self-reported height and weight (age 23y); measured waist-to-hip ratio (age 45y)</p>	<p>Linear change in BMI per year by age 45y (referent: "sometimes" views TV)</p> <p><i>Watch TV "Often" at age 11y:</i> NS</p> <p><i>Watch TV "Often" at age 16y:</i></p> <p><i>Males:</i> $\beta=0.011$ (95% CI=0.003-0.019), P=0.006</p> <p><i>Females:</i> $\beta=0.013$ (95% CI=0.003-0.023), P=0.009</p> <p>Childhood TV viewing and estimated difference in mean waist-to-hip ratio at 45 years:</p> <p><i>"Often" at age 11 y:</i> NS</p> <p><i>"Often" at age 16 y:</i> NS</p>
<p>Viner, 2005</p> <p>1970 British Birth Cohort</p> <p>Risk of Bias: 4/24</p>	<p>Sample size: 8,158</p> <p>Age: 5-30y; NR</p> <p>Race/ethnicity: White (96.3%), Black (0.6%), South Asia (1.8%), Chinese or other Asian (0.8%), Mixed Ethnicity (0.6%)</p> <p>Study Duration: 25y</p>	<p>Sedentary behavior: Reported mean daily TV viewing time (age 5y) and frequency (age 10y)</p> <p>Outcomes: Measured height (age 5y), measured height and weight (age 10y); self-reported height and weight at 30y</p>	<p>Television viewing and BMI z-score at age 30 years:</p> <p><i>Mean TV hour/day (weekday) at age 5y:</i> NS</p> <p><i>Mean TV hour/day (weekend) at age 5y:</i> $\beta =0.03$ (95% CI=0.01-0.05), P=0.01</p> <p><i>"Often" views TV at age 10 y</i> (referent: "never"): NS</p>

*Risk of Bias as determined using the Nutrition Evidence Library Bias Assessment Tool