

Link found between inactivity and poor child health

17 February 2012

Time spent being inactive (particularly TV viewing) is linked to unfavourable health outcomes, according to a systematic review. The review, published by researchers from the Children's Hospital of Eastern Ontario Research Institute, the Public Health Agency of Canada, and Johns Hopkins University, USA, also discovers that efforts to reduce sedentary time in children and youth can lower health risk.

Sedentary behaviours are characterised by little physical movement and low energy expenditure (e.g. periods of sitting). Children and youth spend a large proportion of the day being sedentary. This study was the first to systematically review the evidence of sedentary behaviour and health outcomes in 5-17 year olds to inform recommendations of safe and healthy amounts of sedentary time.

A first literature search by the US-Canadian research team retrieved 828 articles. Upon closer inspection, 232 studies (8 randomised controlled trials (RCTs), 10 intervention studies, 37 longitudinal studies, 177 cross-sectional studies; published 1958-2009) met the predefined inclusion criteria. Studies included explicitly measured sedentary behaviour (directly or indirectly), plus 1 of 6 selected health indicators.

The evidence suggests spare time sedentary behaviour (often TV viewing) in excess of 2 hours per day is associated with unfavourable body composition, decreased physical fitness, lower self-esteem, lower academic achievement and behavioural problems. The health risks increased with each additional hour of TV viewing.

Interventions decreasing children's sedentary time, including 7 of 8 RCTs, generally reported positive outcomes on bodyweight. Only 4 of these RCTs provided consistent data to allow a joint analysis, which showed an overall significant effect of -0.89 kg/m² mean change in Body Mass Index (BMI).

Overall the evidence presented was considered as moderate-quality. The authors noted that few studies measured sedentary behaviour directly (but rather indirectly, such as self-reported activity), and often categorised participants using a threshold of 2 hours television viewing per day. Further study, using direct continuous measures of movement, is required before recommendations on a limit can be confirmed. Similar work is needed to issue guidance on sedentary behaviour of younger children and adults.

For more information, see

[Tremblay MS et al. \(2011\). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *Int J Behav Nutr Phys Act* 8:98. doi: 10.1186/1479-5868-8-98](#)