

## TV viewing and obesity in children and young people

Increased TV viewing time among children and young people is associated with a raised likelihood of overweight.<sup>1,2</sup> This results from a combination of unhealthy dietary habits,<sup>3,4,5,6</sup> sedentary behaviour,<sup>7,8</sup> and exposure to TV advertising.<sup>9,10,11,12</sup> It also appears that excessive TV viewing among adolescents may lead to poor dietary patterns in later years.<sup>13,14</sup> Reducing television time can lead to decreases in BMI.<sup>15,16</sup>

TV viewing is a good marker of other factors which are associated with obesity, although the exact nature and strength of the relationship is unclear.<sup>17,18</sup> These include parental TV viewing and diet quality,<sup>19</sup> socioeconomic status,<sup>4</sup> number of TVs in the household, presence of a TV in the child's room, and household rules about television viewing.<sup>20</sup>

**Unhealthy dietary habits:** When children and young people watch TV they appear to be more likely to engage in unhealthy dietary habits such as consuming more snacks and soft drinks and less fruit and vegetables.<sup>3,4,5,6</sup> Experimental studies show that television viewing acts as a distraction resulting in a lack of awareness of actual food consumption, leading to overconsumption and increased energy intake.<sup>21</sup> TV viewing whilst eating a meal can also reduce satiety signals.<sup>22</sup>

**Sedentary behaviour:** TV viewing is normally a sedentary behaviour and there is some evidence that high levels of sedentary behaviour are linked to obesity, independently of physical activity levels.<sup>7,8</sup> It is important to distinguish this from the level of physical activity, as children can have high levels of both physical activity and TV screen time.<sup>20</sup> Interventions to reduce sedentary behaviour associated with TV viewing in young people show some promise.<sup>23,24,25</sup>

**Exposure to TV advertising:** Children's food preferences and consumption are influenced by television advertising for highly processed, energy dense products.<sup>9</sup> Overweight and obese children and those who watch high levels of TV are particularly susceptible to food promotion on TV, and boys are more susceptible than girls.<sup>10,11,12</sup> In April 2007, Ofcom introduced legislation with the aim of reducing 'the exposure of children to HFSS (foods high in fat, salt or sugar) advertising'.<sup>26</sup> Ofcom's evaluation of the impact of their controls indicated a 37% reduction in children's exposure to advertisements for HFSS.<sup>27</sup> However, a recent study using different methodology questioned these findings, showing no change in the exposure of children to HFSS advertising.<sup>28</sup> More work is needed to understand the impact of changes to advertising regulations on obesity and overweight.

TV viewing is associated with overweight and obesity in children and young people. In some countries it is recommended that children should watch less than two hours TV per day<sup>a,b</sup> and refrain from snacking and eating meals in front of the TV. The evidence for these effects comes primarily from observational studies, so it is not possible to establish a causal relationship. In order to identify the most effective approaches to tackling these problems there needs to be more research into interventions.

**Note:** This paper focuses on the link between TV viewing obesity in children and young people. It does not cover any similar associations found in adults, nor does it cover the evidence around other screen time activities such as playing video games.

a. Australia<sup>29</sup> and the US<sup>30</sup> have adopted guidelines that advise parents to restrict the viewing time of children and adolescents to no more than 2 hours per day, but there is no similar recommendation in Britain.

b. A recent survey found that children and adolescents aged 5-16 across Great Britain spend on average 2.7 hours per day watching TV.<sup>31</sup>

**Search Strategy:** Medline and Embase: (appetite or energy intake or energy expenditure) and (television or t.v.) and (child\* or adolescent\*) Limits: English language and last 10 years.

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