

# The Research File



Summary from the Canadian Fitness and Lifestyle Research Institute and ParticipACTION

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## Health Benefits of Outdoor Play for Children and Youth

The benefits of physical activity in chronic disease prevention and management have been well established in the literature. Physical activity has been shown to reduce the risk of; coronary heart disease, type 2 diabetes, osteoporosis, obesity and certain types of cancers. In children, physical activity is important for healthy growth and development and has also been shown to improve psychosocial well-being<sup>1</sup> (refer to Table 1 for a list of obesity related diseases found in children).<sup>2</sup> Despite the known benefits of physical activity, physical inactivity levels in children continue to be high. The rising rate of obesity among the pediatric population is a significant cause of concern given its relationship to other chronic diseases which may track through into adulthood. The outdoor environment is increasingly being recognized as an effective venue for increasing physical activity and reducing sedentary behaviors among children and youth. Of interest, is what aspects of the



natural environment foster increased activity; and what health benefits can children and youth accrue from being active outdoors? Two recent studies explored these questions; one study by Mc Curdy and colleagues examined

the evidence of health benefits of outdoor play and a second study by Flett et al. explored parental and youth preferences for nature-based activities.



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**Table 1: Obesity related chronic diseases in children**

Childhood obesity increases the risk of<sup>2</sup>...

- Type 2 Diabetes
- Cardiovascular disease
- Non-alcoholic fatty liver disease
- Metabolic disorders
- Sleep apnea
- Asthma
- Vitamin D deficiency
- Psychosocial disorders (e.g., depression)

### Health benefits of Nature-based activities

According to a review by Mc Curdy et al. time spent engaged in outdoor pursuits is associated with increased physical activity.<sup>2</sup> As noted previously, regular physical activity has the potential to reduce and/or mitigate the risks associated with various chronic diseases.<sup>2</sup> Mc Curdy et al. note that several factors may determine whether children will engage in physical activity outdoors. For instance, they note that the amount and intensity of activity of grade school children may be influenced by the amount and diversity of 'green' or environmental features available (i.e.: trees, and gardens) on school grounds. Perhaps equally as important for participating outdoors is the amount of 'green space' surrounding residential areas and proximity to parks as it contributes to activity, healthy weight and reducing health inequalities.<sup>2</sup> The most commonly reported health benefit of exposure to the natural environment is improved psychological health.<sup>2, 3</sup> According to a review by Mc Curdy et al. the amount

of nature surrounding a child's living environment is closely related to the prevalence of psychological disorders such as depression and anxiety.<sup>2</sup> Mental health issues among children have become increasingly prevalent, and researchers propose that this increase may be partly attributable to high levels of stress among children (e.g., as a result of increased workload of school and extracurricular activities).<sup>2</sup> One study in the review showed lower stress for children with higher amounts of exposure to the natural environment.<sup>2</sup> Mc Curdy et al. identified a number of studies that have shown that the natural environment may improve attention (particularly among children with attention deficit hyper active disorder).<sup>2</sup> It is proposed that the natural environment may enhance mental well-being by reducing mental fatigue caused by prolonged attention.<sup>2, 3</sup> Additional potential health benefits of outdoor activity identified by Mc Curdy and associates include improved asthma, chronic pain, growth and development, and myopia.<sup>2</sup> According to Flett et al., the benefits of being outdoors include reduced stress, blood pressure, heart rate and muscle tension, as well as elevated mood.<sup>3</sup> In addition to motivating children/youth to be more active, being outdoors may decrease the time spent in sedentary pursuits. Specifically, in the study by Flett et al. parents' noted that physical activity outdoors allowed children and youth to 'unplug' themselves from technology.<sup>3</sup>

### Outdoor physical activity preferences among youth

In the study conducted by Flett and colleagues within a remote rural region in the US, parents and youth

were asked to describe the type of outdoor activities they considered enjoyable. Youth enjoy a wide range of outdoor land and water based activities.<sup>3</sup> Although some of these activities may not cause much physical exertion, they note that these activities may create opportunities for youth to begin engaging in activity outdoors.<sup>3</sup> In talking with youth, Flett and colleagues found that competitive activities were highly regarded and that activities be fun and varied, and that outdoor activities would be made more appealing if made to be challenging.<sup>3</sup> Youth, also preferred engaging in activities with friends (and to a lesser extent with family).<sup>3</sup> In addition to preferences for outdoor activities Flett et al. also identified various barriers cited by youth and parents which could prevent participation in physical activity outdoors, these include; safety concerns (e.g., dangerous animals, allergies etc...), bad weather, insects and lack of comfort.<sup>3</sup> Ways of overcoming barriers were an important consideration.<sup>3</sup>

### More info...

1. Janssen I., LeBlanc A. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioural Nutrition and Physical Activity*. Vol. 7:40.
2. Mc Curdy et al. (2010). Using Nature and Outdoor Activity to Improve Children's Health. *Curr Probl Pediatr Adolesc Health Care*. Vol. 40:102-117
3. Flett et al. (2010). Connecting Children and Family with Nature-Based Physical Activity. *American Journal of Health Education*

## What have we learned?

- The outdoor environment represents an opportunity for increasing physical activity among children and youth.
- Parks, trails, recreation facilities and schools provide settings that can facilitate physical activity among youth and children.
- Exposure to the natural environment may have numerous health benefits for children, particularly, improved mental health.
- Youth enjoy a wide range of outdoor land and water-based activities, and prefer to participate with friends.
- Barriers to participating in physical activity outdoors are important.