

# Free Play Outdoors an Essential Part of Youth Development

A growing number of commentators are lamenting the fact that today's children and youth have less contact with nature and fewer opportunities for free play outdoors, and are concerned about the many consequences of this situation<sup>1-4</sup>. Young people today spend most of their free time indoors engaged in structured activities under adult supervision, to the point that experts are considering it a public health issue<sup>5-7</sup>.

## TABLE OF CONTENTS

2	<i>Young people not getting enough physical activity</i>
2	<i>Less time spent outdoors</i>
3	<i>Being outdoors encourages physical activity</i>
4	<i>Attitudes regarding outdoor play</i>
5	<i>Not enough nature in young people's lives</i>
5	<i>Additional benefits of free play outdoors</i>
6	<i>Conclusions</i>



**This research summary reviews recent studies showing how contact with nature and free play outdoors help young people stay physically active and acquire healthy lifestyle habits. Outdoor activities do not necessarily require a trip to a natural setting; they can take place in backyards, playgrounds or parks near the home.**

## YOUNG PEOPLE NOT GETTING ENOUGH PHYSICAL ACTIVITY

In 2011, the organization *Active Healthy Kids Canada* gave young Canadians an “F” for their physical activity levels — for a fifth consecutive year<sup>8</sup>. The organization assigned the same grade for leisure pursuits and active games among children aged 12 and under.

In the *Canadian Health Measures Survey*, conducted between 2007 and 2009, data obtained using accelerometers showed that only 7% of Canadian children and youth aged 6 to 19 years met the Canadian Physical Activity Guidelines of 60 minutes of moderate-to-vigorous physical activity (MVPA) per day at least 6 days a week, and that fewer than 2% accumulated the recommended 90 minutes of MVPA a day, associated with added health benefits<sup>9</sup>.

In Quebec, data from the *Canadian Community Health Survey 2009–2010* revealed that 41% of adolescents aged 12 to 17 and 59% of children aged 6 to 11 were physically active during their leisure time; conversely, 33% and 21% respectively had minimal or no physical activity<sup>10</sup>. These figures do not, however, provide an accurate indication of the proportion of active Quebec youth who did meet the recommended daily guidelines.

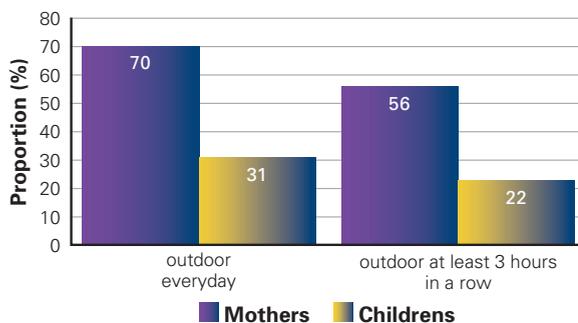


FIGURE 1. Frequency of outdoor play: Comparative data between American mothers and their children<sup>18</sup>.

## LESS TIME SPENT OUTDOORS

Throughout the world, young people are tending to choose indoor sedentary pursuits over outdoor free play, as a result of both new electronic media and increased parental constraints<sup>11-14</sup>.



According to US data, in just six years (from 1997 to 2003), the rate of participation in outdoor activities declined by 31% among children aged 6 to 12, and the duration of these activities decreased as well<sup>15</sup>.

In 2006, a study carried out in Sydney, Australia showed that 37% of children aged 10 to 12 years played outdoors for less than 30 minutes a day, while 43% spent more than two hours in front of a television or computer screen, or playing video games<sup>16</sup>. In the United States, visits to national parks declined by about 25% between 1988 and 2003<sup>17</sup>. In a 2004 national US survey of 830 mothers with children aged 3 to 12 years, 70% reported playing outdoors every day when they were young, but only 31% said their children spent an equal amount of time playing outdoors today<sup>18</sup>.

In 2009, the organization *Natural England*, which aims to promote the natural environment, conducted a survey of 1,150 adults and 502 children aged 7 to 11 years. The results showed major differences in the places used for play by both generations: three-quarters of the adults said they had access to a natural setting near their home when they were children, and over half went there at least once or twice a week. In comparison, 64% of the children said they had access to such a place, but less than a quarter went there once or twice a week<sup>19</sup>. While 62% of the children reported playing at home indoors more often than anywhere else, 42% of the adults said they used to play mainly outdoors, in local streets.

In Quebec, as in other countries, youth participation in movements such as the 4-H clubs, which provide a special contact with nature, has decreased dramatically in recent decades<sup>20</sup>.



### BEING OUTDOORS ENCOURAGES PHYSICAL ACTIVITY

It is well known that time spent outdoors has a positive correlation with physical activity among young people: the more time children or teenagers spend outdoors, the more physically active they are<sup>21-23</sup>. Physical activity associated with time spent outdoors has significant potential in the fight against obesity among young people<sup>24</sup>.

A study carried out between 2001 and 2004 among 360 children aged 10 to 12 years attending 19 elementary schools in Melbourne, Australia showed that those who had spent more time outdoors in 2001 were more physically active and had lower rates of overweight three years later compared to those who had spent less time outdoors<sup>25</sup>. Measurements obtained using accelerometers indicated that each additional hour spent outdoors during the cooler months was associated with 26.5 additional minutes of moderate-to-vigorous physical activity per week among the girls, and 21 minutes among the boys.

In Great Britain, measurements taken with motion sensors from a sample of 195 young people aged 10 to 13 years showed that free play outdoors led to more energy expenditure than a structured activity. When they were outdoors, the children were on average twice as physically active as at home. Playing outdoors also gave them the opportunity to walk or ride their bikes to the activity location<sup>26</sup>.

A similar observation has been made among preschool children. A review of 24 studies on the topic concluded that preschoolers who spend more time outdoors are more active than others<sup>27</sup>.

Combining GPS and accelerometer data, a vast study conducted between 2006 and 2008 among 1,010 eleven-year-olds in England showed that their physical activity levels were 2.5 times higher outdoors than indoors (1,346 movements per minute outdoors, compared to 509 indoors)<sup>28</sup>.

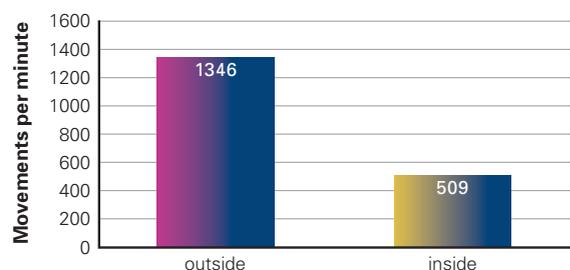


FIGURE 2. Accelerometer measurements of physical activity among 1,010 English eleven-year-olds, according to activity location<sup>28</sup>.

suite ↓

## BEING OUTDOORS ENCOURAGES PHYSICAL ACTIVITY (SUITE)

According to Burdette and Whitaker<sup>29</sup>, outdoor settings provide an enriched environment for young people. It is outdoors that young children are most likely to develop their motor skills, notably through free play. In addition, children have an opportunity to make decisions and solve problems when engaged in free play in outdoor settings, which are more variable and less structured than indoor spaces. Outdoor environments also impose fewer constraints on children's movement, affording them more possibilities for gross motor exploration.

Dhingra et al.<sup>30</sup> have shown that when children have access to a large playing area, they tend to engage in physical activity that involves running.

Accelerometer measurements taken from 747 children aged 10 to 11 years in Great Britain between 2008 and 2009 showed that the frequency of active, unstructured play after school (5 days or more per week) was associated with higher levels of moderate-to-vigorous physical activity<sup>31</sup>. Another study based on accelerometer data obtained from 1,327 young people aged 9 to 15 years in Norway, Portugal and Estonia, obtained similar results in the youngest group: playing outside after school was associated with higher percentages of time devoted to moderate-to-vigorous physical activity. Among the 15-year-olds, participation in sports activities was associated with more moderate-to-vigorous physical activity<sup>32</sup>.

Finally, an Australian study found that the time spent outdoors among children aged 10 to 12 years was related to their personal autonomy (i.e., being allowed to go out on their own). Those who were allowed to walk on their own in the immediate neighbourhood were more likely to spend 30 more minutes outside after school than those who were not allowed to do so<sup>16</sup>.



## ATTITUDES REGARDING OUTDOOR PLAY

Although they recognize the benefits of outdoor play, parents are increasingly reluctant to let their children play outside without adult supervision, mainly because of safety concerns (fear of strangers, road accidents and injuries)<sup>18,24</sup>. Parental supervision has increased over time. According to the experts, contemporary society has become risk-averse. There are also fewer natural spaces close to residential areas, thus limiting children's direct contact with nature<sup>4</sup>.

A 2008 British survey of 1,000 young people aged 7 to 16 years and 1,000 adults showed that 51% of children aged 7 to 12 were not allowed to climb trees without adult supervision and 42% were not allowed to play in neighbourhood parks without an adult present, because it was considered too dangerous. The same study reported that 77% of youth aged 7 to 16 years were keen to have more opportunities to play adventurous games and take risks<sup>33</sup>.

In another British study, conducted in 2009, less than 10% of parents said they would allow their children to play in natural settings without supervision<sup>19</sup>.

In the 2004 national US survey cited above, American mothers of children aged 3 to 12 years stated that the main factors preventing their children from playing outdoors more often were:

- time spent watching TV and playing video games (85%);
- concerns about crime and safety (82%);
- a lack of time to accompany children outdoors (77%);
- the absence of adult supervision (61%)<sup>18</sup>.

## NOT ENOUGH NATURE IN YOUNG PEOPLE'S LIVES

Children and youth are spending less and less time outdoors and their direct experience of nature has diminished, leading some to talk about a “nature deficit”, linked with the rise in obesity, attention disorders and depression<sup>2,3,34,35</sup>. This reality is also described in terms of a “disconnect from nature”.

In a 2010 survey conducted by the Canadian Parks and Recreation Association, municipal employees and other park and recreation stakeholders revealed their concerns about the fact that young people do not spend enough time outdoors<sup>1</sup>. According to the survey participants, time spent outdoors is the best way to increase contact with nature and its associated benefits.

In Quebec, a survey carried out in 2010 for the Fondation Monique Fitz-Back among 1,297 Quebec youth between the ages of 10 and 17 years from 25 schools in 10 administrative regions revealed that many young people have little access to outdoor settings and that the educational milieu is currently not addressing this shortcoming. Close to one-third (31%) of the young respondents noted a lack of access to places where they could practice outdoor activities or experience nature, and 39% said their school did not provide access to outdoor activities or activities in a natural setting<sup>36</sup>. Furthermore, 37% noted that they rarely or never visited such places.

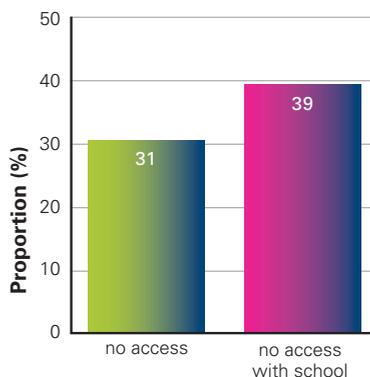


FIGURE 3. Access to outdoor settings in 2010: The opinions of 1,297 young Quebecers<sup>36</sup>.



## ADDITIONAL BENEFITS OF FREE PLAY OUTDOORS

### Improved physical, cognitive and social skills

In addition to providing the benefits associated with physical activity, free play outdoors promotes the cognitive, emotional and social development of young people<sup>29,37,38</sup>. At the cognitive level, it improves creativity, problem-solving, attention and self-discipline. At the emotional level, it reduces stress and aggressiveness and leads to an increased sense of well-being. Free play outdoors also helps to develop children’s social skills (cooperation, interaction, building a social network). Time spent outdoors also improves motor development, and subsequently, strength, balance and coordination<sup>39</sup>.

### Prevention of nearsightedness

A wide-scale Australian study including a detailed eye examination found an inverse relation between overall time spent outdoors and the prevalence of myopia in a sample of 2,367 twelve-year-olds<sup>40</sup>. The children with the lowest levels of outdoor activity and the highest levels of near-work activity (e.g., reading) were two to three times more likely to develop myopia than their peers. Conversely, those with the highest levels of outdoor activity were less likely to develop myopia. Participation in sports activities could not explain this protective effect.

### Fewer symptoms of attention deficit disorder

A number of studies show that children find it easier to concentrate after engaging in an outdoor physical activity, whether it is walking or free play in a natural setting<sup>41,42</sup>. Contact with nature reduces the symptoms of attention deficit disorder in children as young as five years old, who have been able to cut their medications by half, simply by spending more time outdoors<sup>43</sup>.

# Conclusions

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- Data from Quebec and Canada indicate that only a fraction of youth meet the recommended daily physical activity guidelines.
- In most countries, the amount of time young people spend on free play outdoors has dropped considerably in recent decades, in favour of indoor sedentary pursuits, as a result of new electronic media and increased parental constraints. Young people do not play outside as much as their parents did at their age.
- Time spent outdoors is a good predictor of physical activity among young people. Measurements taken using accelerometers show that children who spend more time outdoors engaged in free play are more physically active than those who participate in structured activities.
- Today's parents supervise their children more closely out of fear of strangers, accidents and injuries. Compared to previous generations, children today are not allowed to play outdoors as often without adult supervision.
- Children spend less time outdoors and have less contact with nature, thus missing out on associated benefits and knowledge. Some describe this situation as a "nature deficit."
- There are numerous benefits associated with free play in nature. In addition to increasing children's level of physical activity, free play outdoors improves their cognitive, emotional and social skills, while also promoting their motor development.

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