

What the Research Says

About Physical Activity and the Early Years

There is an abundance of research describing the relationship between physical activity and health in adults, with an emerging focus on its effects during childhood and adolescence. This overview highlights some **key areas** related to physical activity and the early years.

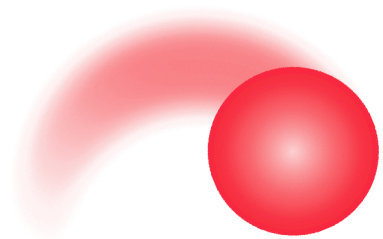
What the research says ...

... about the benefits of physical activity.

Regular physical activity provides many short and long-term health-related and social benefits.

Regular physical activity:

- Increases energy and improves stamina
- Encourages muscle growth and helps develop strong bones
- Helps maintain a healthy weight
- Makes the heart and lungs stronger
- Maintains a healthy blood pressure
- Increases flexibility
- Improves coordination
- Helps improve sleeping habits
- Helps improve eating habits
- Reduces anxiety and depression and improves one's ability to deal with stress
- Helps us feel good about ourselves
- Presents opportunities to practise self-discipline
- Helps increase concentration, memory, creativity, and problem-solving skills/abilities, and enhances learning
- Provides opportunities to develop motor/sports skills and life skills
- Provides opportunities to socialize and make friendships
- Decreases the likelihood of using tobacco, alcohol and drugs in the teen years and beyond
- Develops positive lifelong attitudes toward physical activity
- Encourages healthy family engagement



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What the Research Says

... about the relevance of physical activity for the young child.

- Movement is an important part of a child's physical, mental and emotional development and one of the important mediums through which young children form impressions about themselves and their surroundings.
- Activity satisfies a child's curiosity of movement.
- Positive feelings are experienced when early childhood educators, parents, and children are involved in physical activity including active play. Further, physical activity can help young children feel good about themselves.
- Games and activities encourage interaction among children.
- Enjoyable physical activity experiences promote a positive attitude about active lifestyles.
- Young children solve problems and gain success through challenges and explorations.
- Activities that enhance motor competence (more structured than free play opportunities) among very young children may have tremendous physical and emotional health benefits.
- There is a strong connection between motor competence and self-esteem among very young children.
- An active lifestyle during childhood and adolescence is likely to be carried over through adulthood that, in turn, would reduce risk for disease.
- Children who have not developed basic movement skills to a point where they are experiencing success are less likely to choose to be physically active. The best time for basic movement skill development is during the early years.
- During the first five to seven years of life, children attain basic movement skills initially through maturational changes: e.g. postural adjustments, sitting, crawling, walking, running.
- Some aspects of activity and fitness levels early on in childhood may carry over into adulthood, when sedentary habits have their impact.
- In toddlers, the transition from crawling to standing and walking is a natural and normal part of growing and experiencing movement. Preschoolers explore a broader range of movement as they learn to run, jump, climb, and throw. Informal and friendly play will do much to nurture their love of physical activity.
- Play and games provide an opportunity for children to learn the consequences of their behaviour.

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What the Research Says

... about how active Canadian children are.

Most of the statistics we have relate to children five and over, as it is difficult to assess the activity habits of children less than five years old. However, we do know:

- Children today are 40% less active than they were 30 years ago.
- In 1995, preschoolers aged one to four spent 22 hours each week engaged in physical activity, that included the full range of physically active play, both indoors and outdoors. They also engaged in an average of 12.5 hours of quiet play. Thus preschool children were engaged in play for approximately five hours each day, two-thirds of which was active play. They spent about the same amount of time engaged in physical activity indoors and outdoors.
- In 2000, over half of Canadian children and youth, aged five to 19 were not active enough for optimal growth and development.
- Forty percent of Canadian children already have developed at least one risk factor for heart disease – reduced fitness due to inactivity.
- Ontarians aged two and up spent almost 21 hours a week watching TV. Children between the ages of two and 11 specifically, watched an average of 14.5 hours a week. This does not include time spent playing video and computer games or using the Internet.
- The amount of time spent playing video games by Canadian children in 2000, was among the highest in the world.

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What the Research Says

... about the differences between boys and girls.

- In 2000, girls, at all ages, were less active than boys. There was a drop in physical activity in both genders from pre-adolescence to adolescence. Between the ages of five and twelve, 44% of girls were considered active, but in adolescence, only 30% were active. In boys aged five to twelve, 53% were active, compared to 40% in adolescence.
- Age related differences in activity choices are very likely related to developmental differences in children's motor abilities as well as social factors. The stereotyping of certain activities as more appropriately "male" and "female" plays a significant part in the disparities in both the participation rates and the activity choices of boys and girls.
- The belief that some physical activities are more suitable for girls and others for boys can negatively affect the development of certain motor abilities in children if, as a result, they are discouraged from participating in these activities.
- Gender roles in physical activity are generally learned through role modeling and reinforcement of certain behaviours by significant others.
- Stereotyping of behaviour begins at a very early age.

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What the Research Says

... about the “obesity epidemic”.

- Between 1981 and 1996, there were dramatic increases in overweight and obesity in children ages seven to 13. The prevalence of boys who were overweight increased from 15% to 28.8% and among girls from 15% to 23.6%.
- The prevalence of obesity in boys nearly tripled from 5% to 13.5% and more than doubled in girls from 5% to 11.8%.
- There is reason to believe that these figures underestimate the actual numbers.
- Obese children are five to seven times more likely to become obese adults than non-obese children. Children who were obese at age six had a fifty percent chance of becoming obese adults. Obese adolescents had a 70% to 80% probability of adult obesity.
- Several factors, including diet and activity level, contribute to the development of obesity.
- The importance of physical activity is often underestimated. Some evidence even suggests that obese children do not consume significantly more calories than non-obese children.
- Children who watch television more than five hours a day have significantly greater energy intake than those who watch less than one hour per day.
- Sedentary lifestyles are a major contributing factor to the development of obesity in children and adolescents.
- A greater risk of obesity in children is associated with higher consumption of sugar-sweetened soft drinks which provide excessive calories and large amounts of rapidly absorbable sugars.
- Type II diabetes, once known as “adult-onset” diabetes is an increasingly serious problem among children and adolescents, particularly among First Nations youth. It is closely linked with both obesity and physical inactivity.
- Children who are overweight or obese are at higher risk of early adult diseases and mortality. Inactivity leads to doubling the risk of developing premature heart disease.
- The importance of addressing childhood obesity is paramount, since several studies have linked it with an increased risk of adult morbidity even when obesity has not persisted into adulthood.
- “Because of the increasing rates of obesity, unhealthy eating habits, and physical inactivity, we may see the first generation that will be less healthy and have a shorter life expectancy than their parents” (U.S. Surgeon General).

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What the Research Says

... about children with a disability.

- Over 15% of Canadians – 4.2 million people – live with a disability. Canadians with a disability are less likely than other Canadians to participate regularly in physical activities.
- Surveys confirm that the majority of persons with a disability want to be more physically active.
- A person with a disability might gain even more benefit from participating in physical activities than a non-disabled person:
 - Improved physical stamina and self-confidence bring greater independence
 - Controlled weight loss and increased strength help the person who uses a wheelchair or other mobility aid to transfer and get around with less effort, making the person more mobile
 - Physical activity improves circulation and reduces the possibility of blood pooling and swelling in the lower limbs. It can also increase strength and flexibility, making daily tasks easier to do
 - Improved posture makes the individual less susceptible to the aches and pains that can accompany long periods of sitting.
- An inclusive environment is one that provides the opportunity for children of all abilities and interests to participate in all activities. Inclusive environments recognize the inherent value of each child, the right to take risks and make mistakes, the need for independence and self-determination, and the right to choice.
- In an inclusive program:
 - activities are modified and individualized as necessary
 - expectations are realistic yet challenging
 - assistance is provided only to the degree required
 - dignity of risk and availability of choices are respected and fostered.
- There is ample evidence that an investment in supporting Canadians with a disability to become more active will result in an immense payoff – more than \$1 billion savings in health care costs alone.

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What the Research Says

... about how much physical activity the very young child needs.

Canada has released physical activity guidelines for all age groups except birth to five years. Given that no formally accepted Canadian recommendations exist at this time, the following guidelines have been adapted from the U.S. National Association for Sport and Physical Education (NASPE). For more information about *Active Start: A Statement of Physical Activity Guidelines for Children Birth to Five Years*, visit www.aahperd.org/naspe.

According to NASPE, infants should be encouraged to be physically active from the beginning of life. Adopting a physically active lifestyle early in life increases the likelihood that infants and young children will learn to move skillfully. Promoting and fostering enjoyment of movement and motor skill confidence and competence at an early age will help to ensure healthy development and later participation in physical activity. Babies and young children who spend several hours at a time in strollers, play pens and infant seats, may experience delays in development such as rolling over, crawling, walking and even cognitive development. Such restrictions may also begin the path to sedentary preferences and childhood obesity.

Guidelines for Infants (*defined by NASPE as birth to twelve months*)

Guideline 1: Infants should interact with parents and/or caregivers in daily physical activities that are dedicated to promoting the exploration of their environment.

Guideline 2: Infants should be placed in safe settings that facilitate physical activity and do not restrict movement for prolonged periods of time.

Guideline 3: Infants' physical activity should promote the development of movement skills.

Guideline 4: Infants should have an environment that meets or exceeds recommended safety standards for performing large muscle activities.

Guideline 5: Individuals responsible for the well-being of infants should be aware of the importance of physical activity and facilitate the child's movement skills.

Guidelines for Toddlers and Preschoolers (*defined by NASPE as 12 - 36 months and three to five years respectively*)

Guideline 1: Toddlers should accumulate at least 30 minutes daily of structured physical activity; preschoolers at least 60 minutes.

Guideline 2: Toddlers and preschoolers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping.

Guideline 3: Toddlers should develop movement skills that are building blocks for more complex movement tasks; preschoolers should develop competence in movement skills that are building blocks for more complex movement tasks.

Guideline 4: Toddlers and preschoolers should have indoor and outdoor areas that meet or exceed recommended safety standards for performing large muscles activities.

Guideline 5: Individuals responsible for the well-being of toddlers and preschoolers should be aware of the importance of physical activity and facilitate the child's movement skills.