

## Section 4

# Putting Children and Youth on a Positive Life Course

Canadians place great value on what sport can do for children. In addition to the physical health benefits, physical activity in children has been associated with cognitive development and brain health, academic achievement, self-esteem, and social and emotional functioning.<sup>70</sup> However, fewer than 1 in 5 Canadian children and youth meet all three recommendations within the Canadian 24-hour Movement Guidelines for Children and Youth.<sup>71</sup> This includes 15% of 5- to 17-year-olds and 10% of students in grades 6 to 10.<sup>72</sup>



Making sport **accessible and inclusive** for all children and youth should be a **Canadian priority**.



Between 2014 and 2016 more than three quarters of Canadian children (5–19 years) participated in organized physical activity and sport.<sup>73</sup> More and more, Canadian adults see the value of children participating in sport: nearly 90% of Canadians are somewhat or very confident that community-level sport instills character in Canadian youth by teaching them values and positive life lessons; this is an increase from 2013.<sup>74</sup>

Introducing children and youth to a wide range of age-appropriate organized sports promotes physical, social and cognitive development opportunities.<sup>75</sup> International research shows that, over and above family income and other societal barriers, sport can contribute to giving children from toddlers to teenagers a healthy start in life, promoting social and physical development, and supporting personal and academic growth.<sup>76, 77, 78, 79, 80</sup> However, both in-school and out-of-school participation in sport is disproportionately available to youth from higher-income families; a difference that isn't seen in many non-sport extracurricular activities.<sup>81</sup> Making sport accessible and inclusive for all children and youth should be a Canadian priority.

## Structured Play, Organized Sport and Early Childhood Development

Sport can begin making a contribution early in the lives of children. Play is one of the primary ways that young children explore and experience the world and develop their physical, cognitive, and social-emotional capacities. While competition should be avoided before age 5, sport can be used to effectively introduce fundamental skills like running, throwing and catching, and to provide opportunities for exploration, experimentation and fun.<sup>82</sup>

The primary determinants of whether children and youth will have a positive or negative experience are the adults involved — parents, coaches, officials and administrators — and the quality of coaching and mentoring.

While much work has been done examining the relationship between physical activity and health for children aged 5 and older, it wasn't until recently that recommendations based on research in this area were released for the early childhood period (age 0–5).<sup>83</sup> The first five years of life are critical for physical, social and cognitive development; patterns established during early childhood can have a life-long influence.<sup>84</sup> International studies from 36 countries have shown the importance of



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physical activity on improved motor development, cognitive development, psychosocial health, and cardiometabolic health in children under 4 years old.<sup>85</sup>

For example, research has shown that parents are encouraged to engage with their children from birth, including a minimum of 30 minutes a day of “tummy time” (play in a prone position) to encourage muscle development in the first few months of life. By their first birthday, children should be engaging in physical play a minimum of 180 minutes per day.<sup>86</sup>

While most infants are hitting their activity targets, by the time they are in preschool only 62% of children meet the recommended amount of physical activity per day.<sup>87, 88</sup> When it comes to structured play and activities, fewer than half of preschool-aged children participate in organized lessons and sport (46%, aged 3–4years).<sup>89, 90</sup> While the concepts required for competitive sport are too advanced for very young children,<sup>91</sup> new research shows that sport and organized physical activity can contribute to psychosocial and behavioural development in children under 5. A review of nine studies of preschool-aged children found positive associations between participation in sport and organized physical activity and the development of: social skills, including successfully building relationships, engaging with others, and following pro-social conventions; psychological outcomes related to increased positive behaviours and fewer emotional problems and conduct issues;

and enhanced cognitive-intellectual developmental outcomes related to mathematical and linguistic skills.<sup>92</sup> Taken together, these studies suggest that providing children under 5 with the opportunity to engage in organized sport and physical activity delivers substantial developmental benefits.

It is crucial that families and childcare facilities be given the supports they need to ensure that children are engaging in age-appropriate physical activity.<sup>93</sup> Involving parents or caregivers in the activities can help them learn new ways to stimulate the child and strengthen the bond between them. While all children would benefit from more opportunities to be physically active, children living in disadvantaged circumstances are more likely to lack appropriate stimulation and play opportunities that enable them to benefit from these developmental windows. Both structured and unstructured, self-directed play provides young children with opportunities for physical, social and cognitive development.<sup>94, 95, 96</sup>

## Building Physical Capacity and Motor Skills

Early- to mid-childhood marks a point of substantial motor development. Between the ages of 2 and 6 years, children develop what are known as fundamental movement skills (FMS): skills like catching, throwing, jumping, sliding, running and kicking.<sup>97</sup> The development of these skills is associated with cognitive, social and physical development.<sup>98</sup> Motor skill development in early childhood has been shown to moderate the drop in physical activity we often see between the ages of 6 and 10.<sup>99</sup>

Unlike gross-motor development in infancy, FMS are not acquired naturally but are gained through motor experiences.<sup>100, 101</sup> A small Canadian study recently showed that involvement in a community-based organized sport program was particularly beneficial to FMS development in a cohort of children aged 3–6 years.<sup>102</sup> Involvement in organized sport has also been shown to be beneficial for motor performance in older children (6–12 years).<sup>103</sup> This work suggests that providing accessible opportunities for participation in community sport, starting with preschool- and kindergarten-aged children, can have long-term benefits for physical development.

Middle childhood also marks a key transition in sport involvement: children in this age group tend to either drop out of sport or begin to specialize in specific sports.<sup>104</sup> However, while context-specific motor skills begin to develop around age 7, sport specialization at this young age can be detrimental to physical development.<sup>105</sup> Sport sampling provides the opportunity to develop a wide range of essential FMS, thereby opening up a range of different sporting activities throughout their life.<sup>106</sup> It is important to continue to provide a range of sporting options to children in middle childhood so as to both increase retention of children this age in sport and to encourage broad participation across a number of activities.

## Keeping Children and Youth Active and Healthy

As with adults, the benefits of physical activity for the health of children and youth are substantial. In a systematic review of over 160 studies measuring physical activity and health in kids aged 5–17, physical activity was positively associated with physical, psychological and cognitive health measures.<sup>107</sup> This relationship was particularly strong for moderate-to-vigorous levels of physical activity, though low-intensity physical activity was favourably associated with cardiometabolic biomarkers (e.g., blood pressure, cholesterol, and insulin sensitivity).<sup>108</sup> Both young children and adolescents who participate in organized sport are more likely to hit the recommended moderate-to-vigorous activity levels targets for their ages.<sup>109, 110</sup>

Bone health is a particularly important health indicator in youth, as the bulk of bone mass accumulation develops before the age of 25.<sup>111</sup> Poor bone health in childhood and young adulthood contributes to osteoporosis in adulthood, a disease that impacts 1 in 10 Canadian adults.<sup>112</sup> Participation in physical activity in childhood is associated with better bone health in a number of measures.<sup>113</sup>

Canadian children continue to struggle with their body composition. In 2019 nearly 1 in 4 youth aged 12–17 self-reported as overweight or obese<sup>114</sup>, and over 30% of toddlers aged 2–5 years were considered at risk of being overweight or obese in 2015.<sup>115</sup> Childhood obesity has been linked to both physical and mental health concerns, as well as long-term adult health outcomes.<sup>116, 117, 118</sup> Physical inactivity is one cause of obesity in children<sup>119</sup>. Providing youth with community sport opportunities would increase engagement in moderate-to-vigorous levels of physical activity on a regular basis, thereby contributing to reduced levels of body fat in children and teens.<sup>120</sup>



Teens who participate in team sports specifically are **less likely** to engage in high-risk health behaviours like **substance abuse** and **risky sexual activities**.

Physical activity and sport participation also support mental health for children and youth. One in five Canadians aged 5 to 24 have a mental health disorder; this proportion has remained stable for more than a decade.<sup>121</sup> While rates of hospitalization for youth in this age group has decreased overall, hospitalization for mental health has increased over the past 10 years.<sup>122</sup> Participation in sport helps minimize depressive symptoms in children and youth and plays a role in managing feelings of anxiety.<sup>123</sup> Young people participating in sport demonstrate lower rates of contemplating suicide.<sup>124, 125</sup> Over time, long-term participation in physical activity is thought to help regulate neurotransmitter release, thereby improving emotional and mental health throughout their lifetime.<sup>126</sup> Regular physical activity has also been related to other measures of brain health in children and youth, including increased blood flow and increased neuroplasticity, promoting the development of new pathways in the brain and supporting learning and development.<sup>127</sup> While regular physical activity can occur outside of sport, engagement in sport offers the additional benefit of social connectedness which is so important to those experiencing mental health challenges.

In spite of these benefits, there has been little improvement in the physical fitness levels of children and youth over the past decade.<sup>128</sup> Participation in organized sport during childhood is associated with an increased likelihood of meeting physical activity recommendations, and more time engaging in moderate-to-vigorous physical activity, which has been shown to have the largest positive impacts on health.<sup>129</sup> This suggests that further interventions, such as expanding opportunities for kids to engage in sport, are necessary. Indigenous children, children from low-income homes, and households with lower educational attainment are at higher risk of childhood obesity,<sup>130</sup> and sport participation is lower

for children from these backgrounds.<sup>131</sup> As such, it is imperative that initiatives to make sport accessible to children are focused on children from these communities.

## Using Sport to Reduce Risky and Violent Behaviours

While physical activity is beneficial to all teens, those who participate in team sports specifically are less likely to engage in high-risk health behaviours like substance abuse and risky sexual activities.<sup>132, 133</sup> High-risk behaviours like cigarette smoking are lower for both boys and girls who play sports in high school compared to their peers.<sup>134</sup> Other substance use is also lower in teen athletes, including drugs like cocaine, heroin and hallucinogens.<sup>135, 136, 137</sup>

Alcohol is the number one substance used by youth aged 15–24, with nearly 60% of 15- to 19-year-olds reporting alcohol use in the past year.<sup>138</sup> The relationship between sport participation and alcohol consumption is more complex, with some studies reporting increased binge drinking but decreased alcohol consumption overall,<sup>139, 140</sup> and other studies reporting increased alcohol consumption for student-athletes.<sup>141</sup> Contact sports, in particular, appear to be associated with increased risk of alcohol and cannabis use. However, one key component appears to be coach involvement: participation in sport with a coach present has been associated with decreased substance use.<sup>142</sup> Importantly, participation in organized sport seems to reduce the risk of alcohol consumption that often comes with low parental monitoring and lone-parent families; this emphasizes the importance of making community sport programming accessible to adolescents who may be at increased risk of alcohol use due to their home environment.<sup>143</sup>

### Youth involved with community sport have described how their involvement promoted feelings of **connectedness and community**.

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Sport has also been used to prevent youth crime and gang involvement. Young people participating in sport demonstrate lower rates of anti-social behaviour, including carrying a weapon.<sup>144, 145</sup> Youth involved with community sport have described how their involvement promoted feelings of connectedness and community.<sup>146</sup> The similarities between athletic teams and potentially violent social groups like gangs include providing a sense of belonging, status and excitement.<sup>147</sup> Anti-social behaviour in youth and youth involvement in the criminal justice system is costly; investment in community-based sport for youths in the United Kingdom have shown benefits to the youth themselves and to costs to the government and taxpayers long-term.<sup>148</sup>

In Canada, Indigenous youth are at particular risk for gang involvement; 22% of all gang members in Canada identified as Indigenous as of 2010.<sup>149</sup> Some of the factors that put young people, and Indigenous youth in particular, at risk for gang involvement include low educational attainment, suicidality, involvement with alcohol and other substances, and social exclusion.<sup>150</sup> Many of these factors are known to be improved when youth participate in sport. However, in order to develop a successful community sport program, the program should be guided by community needs.<sup>151</sup> Urban Indigenous youth in Canada have voiced their need for community support to enhance sport participation. Given the many unique aspects of Indigenous identity in Canada, including movement between urban and reserve settings, it is crucial to include Indigenous community members in the development of community-based programming for Indigenous youth. This will help avoid the Euro-centric perspective

that is common in sport literature, and build a successful and sustainable community-sport option.<sup>152</sup> Using sport to provide positive role models and healthy social engagement, support mental wellness, and promote community and a sense of belonging could be highly impactful in curbing gang involvement for Indigenous youth in Canada.

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## Fostering Positive Youth Development

Sport has the capacity to provide positive experiences for children and youth. Measures of psychological well-being including self-esteem, fatalism, loneliness and social support consistently demonstrate the positive impacts of sport participation for youths.<sup>153</sup> Children and teens who participate in sport and physical activities have higher rates of self-esteem, self-concept and self-worth.<sup>154</sup> This is true both for typically developing individuals and for those with brain-based disabilities.<sup>155</sup>

Adolescents involved in sport rated higher levels of self-knowledge, emotional regulation and healthy self-image than their peers.<sup>156</sup> For shy children, sport participation provides a uniquely protective role, such that shy children participating in sport show increased social skills, and those who participate in sport over time show lower rates of anxiety relative to shy non-participants.<sup>157</sup>

Participation in team sport, in particular, is associated with higher social acceptance, body satisfaction and life satisfaction, and negatively associated with depression and social isolation later in life.<sup>158, 159</sup> Importantly, the positive effects of sport participation

increased with the number of sports in which youth participate<sup>160</sup>; this supports the idea of making many different sport opportunities available to children and youth rather than encouraging early specialization.

Parents whose kids participate in sport credit this participation for teaching their children a variety of life skills, including teamwork, dealing with adversity, perseverance and sportsmanship.<sup>161</sup> Being more physically active can help develop skills like communication, motivation and resilience, which are broadly applicable to other aspects of life.<sup>162, 163</sup>

In a study examining low-income parents' and their children's perceptions of the benefits associated with participation in youth sport, a wide range of benefits were reported. These included increased confidence and exploration by the child, emotional control, teamwork, social skills and making new friends.<sup>164</sup> However, parents reported crucial barriers to their children's continued participation, including financial and time barriers.<sup>165</sup> It's important that these barriers are addressed to ensure that children from all backgrounds are able to benefit from sport participation.

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## Providing Adult Role Models

The adults present in a child's life have a significant impact on the child's outlook, and this holds true for sport as well. Parents reported that positive relationships with coaches supported the personal and social development of their kids, and adolescents who had positive experiences with their coaches reported enhanced perceived social acceptance and reduced body dissatisfaction.<sup>166</sup>

Sport offers young people a means to gain and enhance a range of life skills that can improve their chances of finding employment, raise their level of income, and make them more optimistic and willing to volunteer in the community.

Children from low-income backgrounds who participated in sport reported having positive relationships with a coach, learning discipline, keeping busy, and having more academic success and enhanced body image.<sup>167</sup> The impact of a positive coaching relationship can have a significant impact for youth from low-income families, where financial pressures and the stress of poverty can lead to a reduction in parental monitoring and impact the parent-child relationship.<sup>168</sup>

Given the important role coaches play in the lives of children and youth, they need to be aware of the messages they communicate. Children can learn misinformed gender stereotypes through sport participation if coaches and parents show more passive interest in girls in sport, providing less support for girls and even using gendered language like "throwing like a girl."<sup>169</sup> This stereotyping can contribute to a dropoff in the participation of women and girls. It is critical that the adults running sport programming for children and youth are embodying the values we want to pass on to the next generation.

## Enhancing Academic Achievement

There is substantial evidence to support a link between participation in sport and academic achievement, educational attainment, and greater academic expectations and aspirations. High school sport participants are more likely than their non-participant peers to report plans to graduate from a four-year college and attend professional or graduate school, and self-report earning more A/A- grades.<sup>170</sup> As with other health indicators, teens who played multiple sports performed better academically.<sup>171</sup>

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While many teens participate in sport within the school setting, the relationship between sport participation and academic achievement are seen for out-of-school sports as well<sup>172</sup>.

Participation in regular physical activity is positively related to child and youth academic achievement, including higher grades in subjects like math, reading, science and social studies.<sup>173</sup> Children and youth are better able to pay attention, focus and concentrate; a single bout of physical activity for children with attention deficit disorders and autism spectrum disorder leads to improved attention and focus.<sup>174</sup> Memory and recall are also positively associated with physical activity in children and youth.<sup>175</sup> These skills are related to overall academic performance and decreased school-related stress in children and youth.<sup>176</sup>

Studies that look specifically at low-income and minority children have found largely positive associations between physical activity and academic-related outcomes.<sup>177, 178</sup> One study of low-income elementary school students in the United States found that measures of gross motor skills are positively associated with on-task behaviour in the classroom.<sup>179</sup> However, this group of students are less likely than their more affluent peers to participate in sport given financial constraints.<sup>180</sup> The positive impact of both outside-school sport and in-school sport on adolescent educational attainment is particularly strong for girls; one study from the United States found that a 10% increase in girls' participation in sport led to a 1% increase in university applications.<sup>181</sup> Making community sport programming accessible could have a big impact on members of these communities.

## Understanding the Particular Benefits of Sport for Girls

In early and middle childhood, the same percentage of Canadian boys and girls report participating in sport weekly.<sup>182</sup> However this changes in later childhood and, while both boys and girls participate less as they age, the rate of girls participating in sport falls much faster.<sup>183</sup> By the time Canadian teens are 16–18 years old, only 38% of girls participate in sport weekly, compared to 56% of boys.<sup>184</sup> In fact, across adolescence 1 in 3 girls drops out of sport compared with 1 in 10 boys.<sup>185</sup>

Adolescent girls who participate in sport are less likely than non-athletic peers to participate in sexual activity and/or report a pregnancy.

While increased physical activity levels in teens are associated with decreased risky behaviours, the addition of team sport independent of activity levels is particularly valuable for adolescent girls, such that girls who participate in a physically demanding team sport are more protected from risky health behaviours than those who are part of a team but don't engage physically or those who are physically active independently.<sup>186</sup> For example, girls who participate in sport are less likely to become pregnant at an early age.<sup>187</sup>

Women and girls in Canada experience a higher rate of mood and anxiety disorders than men and boys do<sup>188</sup> and, as such, the protective effects of sport participation is particularly valuable to this group. Girls' participation in sport also enhances body image and self-esteem and is associated with higher overall quality of life compared with non-athletes.<sup>189</sup>

More and more research is finding a relationship between girls' participation in sport and their success as leaders. Participating in sport can help subvert negative gender stereotyping over talent and potential in science, technology, engineering and math fields.<sup>190</sup> When interviewed, 94% of executive-level women leaders and 74% of executive women reported feeling that their participation in sport accelerated their careers.<sup>191</sup> A study in the United States found that a 10% increase in girls' participation in sport led to a 1% increase in university applications and a 1–2 percentage point increase in participation in the labour workforce.<sup>192</sup>

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Moreover, providing girls with more opportunities to participate in sport leads to greater participation by women in fields previously dominated by men, particularly high-skill occupations.<sup>193</sup> Participation in team sport can help girls develop skills like teamwork, confidence, leadership skills, communication, motivation and resilience — all of which are transferable to other industries.<sup>194</sup>

In spite of all of these benefits, why do we see decreased sport participation for girls and young women? The same financial and cultural barriers that impact sport participation in boys and young men are at play with girls and young women; for example, a study from the United States showed that the dropout rate for girls of colour in urban and rural centres is twice that of suburban white girls.<sup>195</sup> Beyond these structural deterrents, additional studies in the United States have found that almost one third of girls report that sometimes boys make fun of them or make them feel uncomfortable when they play sports.<sup>196</sup> As early as preschool, negative gender stereotyping can be reinforced by parents and coaches, such as paying less attention to players who are girls or using phrases like “throw like a girl.”<sup>197</sup> In fact, over three quarters of women leaders report that lack of exposure to women coaches as role models limits girls’ sport participation.<sup>198</sup>

The social landscape of sport needs to encourage participation by young women and girls. To enable changes that will support the participation of young women in sport, Canadian Women & Sport released guidelines including:<sup>199</sup>

1. Involving women and girls in the design, delivery and evaluation of sport programs;
2. Applying a gender lens to decisions such that the impact of policy and programming decisions are considered specifically as they apply to women and girls; and
3. Providing training to sport leaders to address the unique needs and experiences of women and girls.

Children and youth with brain-based disabilities, such as ADHD or autism spectrum disorder, **should be encouraged to participate in physical activity and sport**, as it is associated with better sleep, improved concentration and executive function, and feelings of happiness and mental wellness.

## Impacts of Sport on Children with Disabilities

Regular physical activity and participation in organized sport has additional benefits for children and youth with both physical and brain-based disabilities. However, children and youth with disabilities are often less active than their peers.<sup>200</sup> Fewer than 1% of Canadian children and youth aged 4–17 years with disabilities met all three recommendations within the Canadian 24-Hour Movement Guidelines for Children and Youth.<sup>201</sup>

Participation in sport promotes inclusion and social well-being for children with disabilities,<sup>202</sup> including enhancing interaction and communication skills and improving social integration.<sup>203</sup> Children and youth with brain-based disabilities, such as ADHD or autism spectrum disorder, should be encouraged to participate in physical activity and sport, as it is associated with better sleep, improved concentration and executive function, and feelings of happiness and mental wellness.<sup>204</sup> A longitudinal study in Ireland found that participation in organized sport by age 5 was associated with a reduction in behavioural difficulties for boys with diagnosed developmental delays in infancy.<sup>205</sup>

Sport and physical activity can have positive impacts for children with physical disabilities. For example, including sport participation as part of therapeutic treatment programs for children with motor disabilities can improve motor function by helping to increase endurance and strength, as well as providing self-esteem and promoting inclusion and overall well-being.<sup>206, 207</sup> In recent studies of youth with disabilities and chronic medical conditions, those who participated in organized sport at least two times per week had higher scores on all health-related fitness measures, with no higher risk of injury or illness than non-participant peers.<sup>208, 209</sup> Out-of-school inclusive activity programming, which brings together typically developing children and those with disabilities, has benefits beyond increasing physical activity participation; these programs have been shown to have positive effects on development, social skills and psychosocial health.<sup>210</sup>

