

## **Parks, Recreation and Health: Background Document**

Where we live – the places and spaces that make up our neighbourhoods; along with the programs and services offered have an impact on our ability to achieve our full health potential. Health status is currently unevenly distributed in Winnipeg. Large health gaps exist between our highest and lowest income neighbourhoods. These gaps are larger than many other Canadian cities (WRHA, 2013).

Local parks and recreation agencies provide health and wellness opportunities for communities across the country. As we continue to face an epidemic of chronic disease in modern society, parks and recreation opportunities offer an affordable and accessible solution to this burden of illness (Active Living Research Centre, 2017).

A comprehensive parks and recreation strategy can positively influence the health of Winnipeggers through providing access to quality programs for physical activity, spaces for physical activity and social interaction, supporting healthy food systems, as well as expanding and supporting natural environments. This document provides the public health evidence on these topics.

### **I. Land-Use and Health**

#### ***Neighbourhood Design***

Good design of neighbourhoods can make physical activity attractive and convenient, support local food systems, contribute to social and environmental benefits, and improve physical and mental health (Ball, Carver, Jackson & Downing, 2015; Sallis et al., 2015).

- Spatial accessibility of recreational resources (as measured by availability of team sports and individual activities) is a positive predictor of physical activity levels. Adults living in an area with a higher density of resources are significantly more likely to report engaging in physical activity than adults in areas with lower density of resources (Moore et al., 2006).
- Evidence supports an association between park presence/proximity and physical health, mental health, social cohesion, and reduced carbon dioxide emissions and air pollutants (Sallis et al., 2015).

Beyond the location of facilities and spaces, neighbourhood design elements such as land-use mix, residential density, and transportation networks influence physical activity levels, including for recreation.

- Proximity to recreation facilities and spaces are among the most robust correlates for leisure physical activity. Land-use mix, residential density, and transportation networks are consistently related to physical activity levels (Bauman et al., 2012).

- Those disadvantaged by having low-income in Winnipeg face greater health burdens and have more transportation barriers. Convenient and affordable access to recreation facilities and spaces requires good connections to public transit (WRHA – Public Transportation and Health, 2017).
- [Open Streets](#) can be an effective way to engage under-represented groups who experience barriers in accessing local recreation and sports facilities or programs (A Common Vision, 2018).
- The provision of recreation facilities and outdoor spaces in under-resourced communities is important (Interprovincial Sport and Recreation Council, 2015).

### ***Natural Environments***

Natural environments sustain the essential elements that we need to live. For example, mature trees provide air pollution removal and storm water management services, as well as increased energy savings and property values for homeowners. Community planning which preserves and connects the surrounding natural environment can have significant impacts on our health and well-being. Land use decisions that incorporate the benefits of the existing natural environment foster more livable surroundings that encourage physical activity, promote mental health and support health equity (PHSA, 2018). As well, there is an increasing urgency to mitigate the negative impacts of extreme heat, with climate change impacts already being seen across Canada and beyond. In urban centers, the cooling effect of vegetation through parks, urban agriculture and water bodies can be significant.

- Access to natural outdoor spaces makes it more likely that people will be physically active. Research also suggests a strong relationship between exposure to nature and reduced levels of chronic disease, stress, depression and anxiety.
- Access to parks and green spaces increases social well-being by providing places for residents to make new connections and build relationships with friends and family.
- Careful community planning and landscape design can limit the production of, and exposure to, air pollution and extreme heat events.
- Research indicates that vegetation has the potential to clean a significant amount of air pollutants, which can decrease an individual's risk of lung cancer, as well as various cardiovascular and respiratory diseases.
- Expanding the use of vegetation and natural elements across the built environment mitigates the urban heat island effect. Extreme heat events are strongly linked to morbidity and mortality from cardiovascular, respiratory and cerebrovascular causes.

### **Examples of health-enhancing approaches:**

- Expand and enhance access to trails, parks and other green spaces for residents of all ages and abilities, with emphasis on under-served neighbourhoods.
- Implement Open Street programs where people traffic replace car traffic, and streets become places where people of all ages, abilities and background can come out and improve health through access to enhanced local recreational opportunities.

- Design compact neighbourhoods to increase proximity to recreation facilities. Ensure that increases in population densities correspond with increases in amenities.
- Preserve and connect green space and environmentally sensitive areas to protect biodiversity and corresponding measures of ecosystem functioning.
- Incorporate and expand natural elements across the city.
- Protect and expand trees and vegetation across the city, including recreation centers and other municipal sites (e.g., libraries), to help clean the air of pollutants and mitigate the urban heat island effect.
  - Maximize the benefits of trees and vegetation by planting species that are appropriate to the site and environment, taking into consideration the overall distribution of greenery and the local climate.
- Use the cooling effect of vegetation in parks, urban agriculture and bodies of water to counter extreme heat.
- Monitor the proportion of city population living within 300m of a green space as described by the World Health Organization.

## II. Parks & Playground Design

Parks and playgrounds provide space for recreation and support health through a variety of mechanisms including increased physical activity and social interaction; positive mental health and stress reduction; and a reduction in air and noise pollution.

### ***Community needs & preferences***

The mere presence of parks does not guarantee usage. Parks and playground design requires careful attention to the type and quality of park features and their connectivity to the neighbourhood. Evidence demonstrates that improving park and playground quality increases usage and physical activity (Smith et al., 2017). However, preferences and accessibility differ by demographics, including age, gender, and socioeconomic status. For example research has found:

- New pocket parks (less than 0.5 acre in size) were successful in increasing physical activity among low-income families who were able to walk to the parks (Cohen et al., 2014).
- Parks that support both structured (e.g., sports) and unstructured (e.g., play) activities increase usage by children and youth (McCormack, Rock, Toohey, & Hignell, 2010).
- Barbeques, seating, picnic tables, water fountains and bathrooms are important features regardless of age (McCormack, Rock, Toohey, & Hignell, 2010).
- There is a need for small, local green spaces very close to where people live and spend their day, as well as large green spaces, offering formal provisions such as playing fields and opportunities to experience contact with nature and relative solitude (World Health Organization, 2016).

### ***Preventing injuries***

Playground injuries are the leading cause of sport and recreation injury in children under 10 years of age (Schwebel & Brezaussek, 2014). Fractures due to falls are the most common injury. Playground and play structure design can help to reduce the risks of injuries (Canadian Paediatric Society, 2012).

- Playground falls can be reduced by decreasing heights, improving surfaces (i.e., depth, type), and choosing age-appropriate equipment (Canadian Paediatric Society, 2012).
- Natural play spaces instead of commercial play equipment can reduce risks associated with elevated surfaces and provide greater opportunities for exploration, learning, and physical challenge (Kuh, Ponte, & Chau, 2013; Coe, Flynn, Wolff, Scott, & Durham, 2014).
- If choosing commercial play equipment, play spaces and in particular, play structures, should be compliant with and maintained according to the [Canadian Standards Association](#) (CSA) children's playspaces and equipment standards which provides detailed information about materials, installation, strength of the equipment, surfacing, inspection, maintenance, performance requirements, access to the playground, play space layout and specifications for each type of equipment (Canadian Paediatric Society, 2012).

### ***Promoting unstructured play***

Access to active play in nature and outdoors, with its risks, is essential for healthy child development (Pan-Canadian Public Health Network, 2018). Unstructured play is a critical component of healthy development, including learning about objects and social relationships, and developing physical and problem-solving skills. Typical commercial play structures have very limited play value as they are prescriptive in how children use them. The design clearly indicates where children are meant to climb, crawl across, or slide down. Natural play spaces allow children to move freely, interface with nature and learn appropriate risk-taking.

- Playgrounds with natural elements, designed for engaging in play, and not for decoration, encourage children to play longer, and in more engaging ways than contemporary play structure equipment (Herrington & Brussoni, 2015; Larouche, 2015).
- Children prefer natural outdoor play environments and are more likely to engage in creative play in these settings.
- Natural playgrounds may provide more enjoyable physical activity experiences for children who are not typically active (Larouche, 2015).

### **Examples of health-enhancing approaches:**

- Consider neighbourhood demographics and community preferences when designing parks and playgrounds.
- Prioritize and invest in natural spaces over pre-fabricated playgrounds and encourage children to explore these environments.
- Ensure communal green spaces are designed for the needs of all ages, physical abilities and cultural groups, with features such as adaptive playground equipment, wheelchair-

accessible paths, public bathrooms, and places for individuals or groups to comfortably sit and interact.

### **III. Quality Recreation Programming**

All recreational programs are not created equal. Quality recreation opportunities must match the diversity of the neighbourhood; be safe and inclusive; developmentally appropriate; and well run.

#### ***Diversity and cultural appropriateness***

Recognizing the diversity of our population, including Indigenous peoples, recreation programs can focus on reducing inequities between population groups when it comes to opportunities to be physically active. This specifically requires being inclusive, equitable, affordable, culturally relevant and accessible for all groups including new Canadians, persons with disabilities, older adults, women and girls, and LGBTQ12-S (A Common Vision, 2018).

#### ***Physical Literacy and Canadian Sport for Life (CS4L)***

Greater physical literacy results in more opportunities for physical activity (A Common Vision, 2018). Physical literacy is the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life (International Physical Literacy Association, 2015). Quality programs incorporate all domains of physical literacy. Providing multi-sport experiences provides participants with opportunities to develop a wider range of skills and competencies, enhancing opportunities well into future.

Individuals and communities benefit from lifelong participation in recreational experiences, from early childhood to old age. The Canadian Sport for Life (CS4L) - Long Term Athlete Development (LTAD) model provides a framework of seven stages to guide participation and skill development. Under the Canadian Sport for Life—Long-Term Athlete Development framework, recreation works together with sport to harmonize programs and create a more effective system for everyone.

#### ***Community-based food programs***

Community gardens are an important component of local food production. They are a source of healthy, fresh food, provide a space for recreation and physical activity, bring communities together, beautify neighbourhoods, increase neighbourhood safety, and enhance environmental diversity (Food Matters Manitoba, 2015). Community consultation shows that community gardens have been desired as a means of local food production and show the most promise for action in Winnipeg (Food Matters Manitoba, 2015). Sharing and preparing food is an essential component of a vibrant food system and community. Learning to cook nutritious meals and celebrating over a meal with friends and neighbours also has important health benefits and can have positive impacts on the physical, emotional, social, and economic well-

being of community members (Food Matters Manitoba, 2015). Community kitchens facilitate this sharing and learning.

**Examples of health-enhancing approaches:**

- Design civic facilities to support local food programs (e.g. by including kitchen space and ovens) and programming throughout the seven stages of the Long Term Athlete Development model (LTAD).
- Support community-based food programs (e.g., community kitchens) in recreation centers.
- Incorporate physical literacy skills not just to children at early stages of development, but also to adults and older adults who can benefit from access to physical literacy training through these recreation programs (A Common Vision, 2018).
- Coordinate programs with education and sport clubs for the greatest benefit of program participants.

**IV. Financial Access to Recreation Opportunities**

Equipment and activity costs, lack of affordable transportation options, and lack of time are the most common barriers to participating in recreation and physical activity in Canada. Parents of low-income households are three times more likely to cite cost as a barrier (Canadian Fitness and Lifestyle Research Institute, 2013). There is a wide range of social advantage and income across communities in Winnipeg, with 1 in 3 children in Manitoba living in poverty. Many children and families do not have equitable access to recreational experiences. Equitable access is good for children and families, and the community as a whole.

While many fee subsidies are available to Winnipeg residents, the system consists of several funders with distinct processes and eligibility requirements. The [Everyone Can Play](#) guide to subsidies facilitates access; however, the amount of information in the guide itself demonstrates the complexity of accessing fee subsidies. Community members in Winnipeg’s North End have reported difficulties with filling in forms and accessing the required proof of income (Ophey, 2017).

**Examples of health-enhancing approaches:**

- Explore a “fair entry” program for low-income residents to access reduced cost for public transit and recreation. A “fair entry” program reduces costs based on income and requires one application to access multiple programs.
- Collaborate with recreation subsidy funders (e.g., Canadian Tire Jump Start, Kid Sport, General Council of Winnipeg Community Centre, etc.) to create a coordinated subsidy approach that meets the needs of the community.

## V. Recreation Facilities

Recreation facilities can provide supportive environments for health, in particular by supporting healthy food systems.

### ***Healthy Food Environments***

Recreational facilities are the cornerstone of many communities and can have a strong impact on the health of people living in Winnipeg. Experts recommend that Manitoba should implement guidelines for food and beverage sales at recreation facilities (Vanderlee, Goorang, Karbasy, Schermel, & L'Abbe, 2017). Municipal government are well positioned to create positive change in this area; many of the foods and beverages sold in recreation facilities (e.g., potato chips, hot dogs, chocolate bars, pop, etc.) are high in fat, sugar and sodium. Selling these items is inconsistent with the promotion of healthy eating (WRHA, 2017), and their consumption has been strongly linked to negative health outcomes, including rising rates of obesity and chronic disease (PHAC, 2017).

### ***Urban Agriculture***

Recreation facility planning can provide opportunities for urban agriculture. Evidence shows that agricultural land use decisions affect the quality, accessibility, and variety of foods available (PHSA, 2018). Food choices are shaped by the affordability and accessibility of a local food system. Healthy food systems have the potential to contribute to positive mental health outcomes such as social well-being, increased confidence, empowerment, and community building (PHSA, 2018).

- Protecting and providing urban land for agriculture can increase the capacity of local food systems. Supporting the capacity of our local food infrastructure contributes to a food supply that is resilient to outside stressors.
- Local farmers' markets, in particular, lend themselves to locations within cities to encourage people to eat more fruits and vegetables. Local growing and sale of culturally appropriate foods contributes to healthy diets among our immigrant populations.

### **Examples of health-enhancing approaches:**

- Develop and implement clear policies to provide and promote healthy food choices for sale (e.g., through vending, canteens, food at events, etc.) in recreation centres and other relevant public municipal sites and events (e.g., parks, libraries)
  - Eliminate the sale of sugary drinks, as defined by evidence based nutrient profiling criteria, at these venues
  - Ensure these policies also increase access to culturally appropriate food for Indigenous and immigrant populations
- Enable local farmers' markets to build permanent or temporary market infrastructure on municipal land (e.g., recreation centers, parks) through zoning allowances and/or bylaws.

- Provide space and capacity supports for residents to grow food when appropriate on municipal parks and recreation lands.
- Support community gardens by incorporating garden space into landscape design and parks planning, including water sources, tool storage sheds and accessible gardens (e.g., raised beds).

## **VI. Community Engagement**

To truly meet community needs, decision makers need to listen and involve residents in all neighbourhoods, especially people from groups whose perspectives have historically not been included in government decision making. Priority populations may include people who live in areas of concentrated or generational poverty, Indigenous peoples, communities of colour, people who don't speak English as their first language, seniors, youth, and young adults (Change Lab Solutions, 2018).

### **Examples of health-enhancing approaches:**

- Build in ongoing opportunities for public consultation and engagement related to healthy environments and community programming



## References

- Active Living Research Centre. (2017). Parks and Recreation – A True Health Solution. Retrieved from: <https://www.activelivingresearch.org/blog/2017/07/infographic-parks-and-recreation-true-health-solution>
- Ball, K. Carver, A. Jackson, M. & Downing, K.. 2015. Evidence Review: Addressing the social determinants of inequities in physical activity and related health outcomes. Victorian Health Promotion Foundation, Australia.
- Bauman, A., Reis, R., Sallis, J., Wells, J., Loos, R., Martin, B. 2012. Correlates of physical activity: why are some people physically active and others not? *The Lancet*. Volume 380(9838): 258-271.
- Canadian Fitness and Lifestyle Research Institute. (2013). Barriers to children's participation in physical activity. Retrieved from: <http://www.cflri.ca/sites/default/files/node/1334/files/CFLRI%20PAM%202010-2011%20Bulletin%2014%20EN.pdf>
- Canadian Paediatric Society. (2012). Canadian Paediatric Society's Position Statement – Preventing playground injuries. Retrieved from: <https://www.cps.ca/en/documents/position/playground-injuries>
- Change Lab Solutions. (2018). Complete Parks Overview: Creating an Equitable Parks System. Retrieved from: [http://changelabsolutions.org/sites/default/files/Complete-Parks-Overview\\_FINAL\\_201806.pdf](http://changelabsolutions.org/sites/default/files/Complete-Parks-Overview_FINAL_201806.pdf)
- Coe, D. P., Flynn, J. I., Wolff, D. L., Scott, S. N., & Durham, S. (2014). Children's Physical Activity Levels and Utilization of a Traditional Versus Natural Playground. *Children, Youth and Environments*. 24(3);, 1-15.
- Cohen, D., Marsh, T., Williamson, S., Han, B., Derose, K., Golinelli, D., & McKenzie, T. (2014). The potential for pocket parks to increase physical activity. *American journal of health promotion : AJHP*, 28 3 Suppl, S19-26.
- Food Matters Manitoba (2015). The future of food in Winnipeg. Retrieved from: <http://www.foodmattersmanitoba.ca/wp-content/uploads/2015/09/The-Future-of-Food-in-Winnipeg-Report.pdf>
- Herrington, S., Brussoni, M. (2015). Beyond Physical Activity: The Importance of Play and Nature-Based Play Spaces for Children's Health and Development. *Current Obesity Reports*. 4.
- Interprovincial Sport and Recreation Council (2015). A Framework for Recreation in Canada 2015: Pathways to Wellbeing. Retrieved from: [https://static1.squarespace.com/static/57a2167acd0f68183878e305/t/5926efacebbd1a74b7b584d8/1495723950196/Framework+For+Recreation+In+Canada\\_2016+w+citation.pdf](https://static1.squarespace.com/static/57a2167acd0f68183878e305/t/5926efacebbd1a74b7b584d8/1495723950196/Framework+For+Recreation+In+Canada_2016+w+citation.pdf)
- International Physical Literacy Association (2015). Canada's Physical Literacy Consensus Statement. Retrieved from: <http://physicalliteracy.ca/physical-literacy/consensus-statement/>
- Kuh, L. P., Ponte, I., & Chau, C. (2013). The Impact of a Natural Playscape Installation on Young Children's Play Behaviors. *Children, Youth and Environments*. 23(2): 49-77.
- Larouche, R. (2015). Position Statement on Active Outdoor Play. *International Journal of Environmental Research and Public Health*. 12: 6475-6505.
- McCormack, G., Rock, M., Toohey, A., Hignell, D. (2010). Characteristics of urban parks associated with park use and physical activity: a review of qualitative research. *Health Place*. 16(4):712-26.
- Moore, L., Diez Roux, A., Evenson, K., McGinn, A., Brines, S., Jacobs, D. (2006). Availability of Recreational Resources in Minority and Low Socioeconomic Areas. *American Journal of Epidemiology*.

Ophey, S. (2017). Winnipeg Community Sport Policy - North End Sport Forum Report.

Pan-Canadian Public Health Network (2018). Active Outdoor Play Statement from the Council of Chief Medical Officers of Health. Retrieved from: <http://www.phn-rsp.ca/aop-position-jae/index-eng.php>

Provincial Health Services Authority [PHSA] (2018). Healthy Built Environment Linkages Toolkit: making the links between design, planning and health, Version 2.0. Retrieved from: [http://www.bccdc.ca/pop-public-health/Documents/HBE\\_linkages\\_toolkit\\_2018.pdf](http://www.bccdc.ca/pop-public-health/Documents/HBE_linkages_toolkit_2018.pdf)

Public Health Agency of Canada [PHAC] (2018). A Common Vision for increasing physical activity and reducing sedentary living in Canada: Let's Get Moving. Retrieved from: [http://changelabsolutions.org/sites/default/files/Complete-Parks-Overview\\_FINAL\\_201806.pdf](http://changelabsolutions.org/sites/default/files/Complete-Parks-Overview_FINAL_201806.pdf)

Public Health Agency of Canada [PHAC] (2017). Obesity in Canadian Adults: It's About More Than Just Weight. Retrieved from: <https://infobase.phac-aspc.gc.ca/datalab/adult-obesity-blog-en.html>

Ophey, S. (2017). North End Sport Forum Report. Winnipeg Community Sport Policy.

Sallis, F., Spoon, C., Cavill, N., Engelberg, J., Gebels, K., Parker, M., Thornton, C., Lou, D., Wilson, A, Cutter, C, Ding, D. (2015). Co-benefits of designing communities for active living: an exploration of literature. *International Journal of Behavioral Nutrition and Physical Activity*. 12:30

Schwebel, D. C., & Brezausk, C. M. (2014). Child Development and Pediatric Sport and Recreational Injuries by Age. *Journal of Athletic Training*. 49(6): 780–785.

Smith, M., Hosking, J., Woodward, A., Witten, K., MacMillan, A., Field, A., et al. (2017). Systematic literature review on built environment effects on physical activity and active transport - an update and new findings on health equity. *International Journal of Behavioral Nutrition and Physical Activity*, 14.

Vanderlee L, Goorang S, Karbasy K, Schermel A, L'Abbe M. (2017). Creating healthier food environments in Canada: Current policies and priority actions - Manitoba report. Retrieved from: [http://labbelab.utoronto.ca/wp-content/uploads/2017/12/FoodEPI\\_MB\\_Report\\_WEB-FINAL.pdf](http://labbelab.utoronto.ca/wp-content/uploads/2017/12/FoodEPI_MB_Report_WEB-FINAL.pdf)

World Health Organization [WHO] (2016). Urban green spaces and health: A review of evidence. Retrieved from: <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/publications/2016/urban-green-spaces-and-health-a-review-of-evidence-2016>

Winnipeg Regional Health Authority. [WRHA] (2013). Health For All: Building Winnipeg's Health Equity Action Plan. Retrieved from: <http://www.wrha.mb.ca/about/healthequity/news.php>

Winnipeg Regional Health Authority [WRHA] (2017). Public Transportation and Health. Retrieved from: <http://www.wrha.mb.ca/extranet/publichealth/files/PublicTransportationandHealth.pdf>

Winnipeg Regional Health Authority [WRHA] (2017). Winnipeg Regional Health Authority's position statement on healthy eating. Retrieved from: <http://www.wrha.mb.ca/about/healthyeating/files/HEEGPositionStatement.pdf>