

Durable By Design **Active For Life**

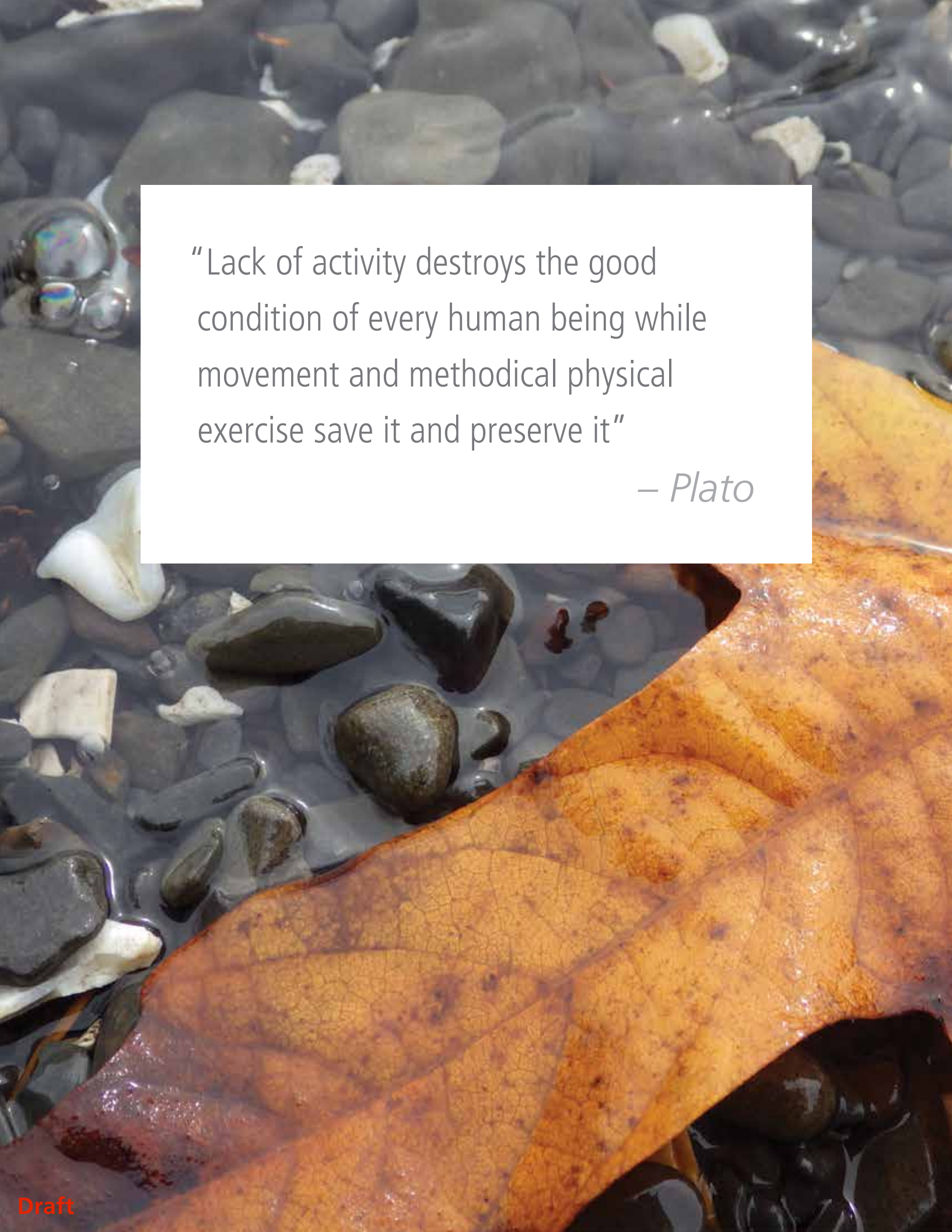


Sport For Life



Sport for Life

Draft



"Lack of activity destroys the good condition of every human being while movement and methodical physical exercise save it and preserve it"

– *Plato*



DURABLE BY DESIGN ACTIVE FOR LIFE

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Durable By Design

Physical literacy, increased activity and recreational sport – being “fit for life” - can be the gateway to a healthier Canada. The benefits of regular physical activity are well documented: sustained long-term health, increased social connectedness, improved general mental and physical well-being and better quality of life. Yet in spite of the clear evidence demonstrating numerous benefits associated with regular exercise, particularly for mature adults, only 15% of Canadian adults meet national physical activity recommendations (Colley et al., 2011) and rates of sport participation have declined in the past several decades among Canada’s growing population of older adults.



“for mature adults,
only 15% of Canadian
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physical activity
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Colley et al., 2011

This document presents a vision for reversing the trend towards obesity, inactivity, and sedentary behavior in Canada. It is about a future Canada characterized not by chronic disease and sedentary behavior, but instead by regular physical activity and chronic health on a mass scale. It is about reframing our attitudes towards activity and aging to foster individuals who are “durable by design.” It is about partners working together to provide fun, engaging, flexible yet practical approaches to physical activity that help individuals remain resilient to injury and illness. This is the vision of a physically literate Canada: one where every individual has the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activity for life.

The evolution of technology has enabled us to work, learn, shop and be entertained from home, the office, a café or in transit. The typical work environment is highly connected and at the same time very sedentary. On the one hand, advances in technology may undermine healthy lifestyle choices: screen time instead of active time, automobile use instead of active transportation. On the other hand, new technologies can be tremendous resources for monitoring health and fitness activities, enhancing social connectedness, and as tools for learning. It is necessary to reimagine the most basic human capacity, movement, to restore balance to our lives and sustain health in our communities.



IMAGINE: CHRONIC HEALTH AND ACTIVITY

The seven-stage Long-Term Athlete Development (LTAD) framework is not only for athletes: it is also a Long-Term Participant Development framework that describes developmental periods for individuals as they participate in sport and physical activity throughout their lifetime. In these pages, a model is presented for the final stage, Active for Life, and how it can be used to promote the inclusive design and delivery of programs and services for all Canadians from adolescence to mature adulthood.

Large segments of society — including public institutions — still tend to view physical activity and sport as the domain of children, teens, and professional athletes. Too many Canadians face significant barriers to engagement in regular exercise or do not fully appreciate the life-changing benefits in health, social connection, and general wellness that can be derived from continued participation in physical activity and recreational sport. What if this could be changed? What if more Canadians could be helped to engage in sustained participation throughout their lives?

Imagine a higher percentage of children and youth choosing to stay active through the school years.

Active children will achieve far more scholastically, be more responsible as community citizens, and will age better and ultimately cost our health care system less.

Imagine a higher percentage of adults and seniors pursuing a physical activity or recreational sport of their choice.

Thereby dramatically reducing rates of heart disease, diabetes, and cancer, speeding recovery from acute illness or injury and delaying the onset of dementia. The challenge is to create a comprehensive approach to physical activity from youth through adulthood that maximizes the contributions of sport, recreation, education, and health to the long, healthy active lives of all Canadians.

SHIFTING THE PARADIGM: DURABLE BY DESIGN

A shift in thinking is needed. To start, a deeper appreciation for the important role that sport and physical activity can play in promoting the health of the nation needs to be developed. Engaging in sport and physical activity that makes us more durable is essential to successful aging. Fortunately, the necessary skills and abilities can be learned at any age.

The dollars spent in support of community sport and physical activity represent a strategic investment in the health and well-being of Canadians. Having a more active population with relatively modest levels of physical fitness represents potential billions of dollars in savings to our health care system. Many of the health benefits from physical activity begin to accumulate with as little as two 30-minute bouts of exercise per week (Bolandzadeh et al 2015). It has also been shown that active people are happier and healthier people (Blumenthal, 2007) and they suffer less depression and mental illness, and they are more resilient and resistant to disease. They are in effect “durable by design”.

In western culture, the traditional approach has often been to wait until illness occurs before we take action. Health becomes the product of heroic and costly intervention by a “system”

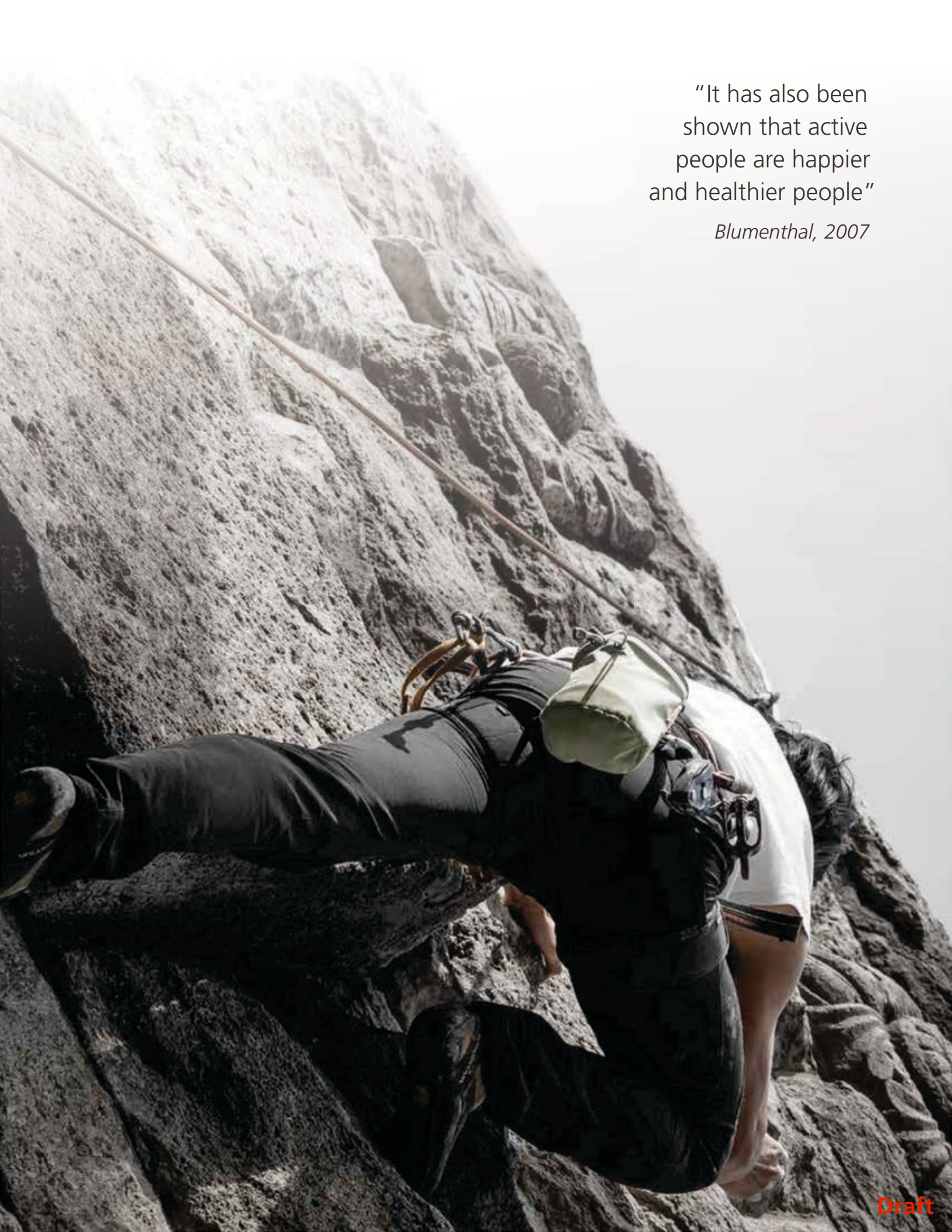
rather than the sustained outcome of a healthy lifestyle. While advances have been made in preventative medicine and health policy in recent years, more can be done to promote community sport and recreation as a primary contributor to public health and wellness.

Maintaining physical literacy can be a key to preventing or mitigating some of the challenges associated with aging. By helping every Canadian develop fundamental movement skills from a young age, our population can acquire and maintain the confidence to move throughout their lives. This will encourage higher rates of participation in physical activity and generate a broad range of health benefits for Canadians of all ages and abilities.

However, to achieve these outcomes, a substantial shift is needed in our collective thinking about the role of sport, recreation, and physical education in public health. Their important roles in building resilient individuals should be recognized, and coordinated, collective, community-based approaches used to optimize the contribution of each.

"It has also been
shown that active
people are happier
and healthier people"

Blumenthal, 2007





PERSONAL EXCELLENCE

As a starting point, the perception of sport needs to be redefined. The sport system needs to be seen as more than simply a mechanism for producing elite athletes for the Olympics, Paralympics or professional sport. When young participants do not follow a pathway toward high performance, they should have an equally engaging pathway for pursuing their own personal goals. There should also be access points and appropriate opportunities for older individuals who may not have had early experiences in physical activity or sport.

The benefits of sport participation should be offered to everyone, by providing the right level of challenge, the right kind of support, and the right places to play.

Each individual, throughout life, should be afforded the opportunity for developmentally appropriate sport filled with meaningful competition. This is as important for masters athletes as it is for children.

IN EVERY SETTING

Canada is a vast country with diverse peoples living in varied settings and circumstances. Access and opportunities are needed in a broad range of community settings so that people can easily explore, engage, and sustain participation in physical activity and recreational sport regardless of age, gender, race, language, or ethnicity.

Creating and supporting access and opportunity on this scale has significant implications for the health, recreation, sport, and education systems as well as workplaces. There are also implications for the built environment—the buildings where we live and work, the transportation infrastructure, and the parks and public spaces. Changes and adjustments are required.

As these are products of human design, change is possible. Whether it is the development of community health policy or the application of intelligent urban design, we have the power

In short, a flexible pathway to personal excellence should be available so individuals can design their own way of engaging with sport, their own definition of successful aging and their own means of becoming durable. Today more than ever we are inspired by the achievements of Masters athletes, as well as friends and neighbors who have met the challenges of a first marathon or 5km run, or just taking up a new kind of activity. Unfortunately, it is recognized that for too many Canadians, there is no easy, affordable way to enjoy the challenges and rewards of sport. The pathway must be welcoming to all individuals, and it should allow for a very broad range of abilities, interests, and personal goals. It can include those individuals who wish to continue pursuing competition as a personal goal within the community sport context, but it must also provide for the great many people who may simply value movement and physical activity in non-competitive settings.

to shape systems and structures according to our needs. If acted upon thoughtfully and intentionally, they can be modified at all levels to create and sustain a very physically active and healthy future for Canadians.

The need to rethink participation for adults is the basis of this review of the Active for Life stage and the contributions of sport, recreation, education, and health to physical activity in Canada.

It is a journey to discover how to help every Canadian to start and stay active: how to create durability by design.



The Physical Literacy Journey and Long-Term Athlete Development

Human beings are designed to move. When supporting physical activity and recreational sport for all Canadians, it is important to remember the simple fact that movement is not a cultural adaptation of an organized society, it is the essence of what makes us human.

PHYSICAL LITERACY

In acknowledging the importance of human movement, and in striving to foster movement and physical activity among Canadians, an understanding and appreciation of the concept of physical literacy is required. According to Canada's Physical Literacy Consensus Statement of June 2015:

"Physical literacy is the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life."

Whitehead, 2014

Physical literacy is something more than physical activity and more than physical fitness. It is a means of enhancing engagement in physical activity through better understanding of how to effectively move and interact with one's physical environment. Physical activity is movement, in vocational, recreational or competitive settings. Physical fitness is the improvement in physical and cognitive function that can result from physical activity. Physical literacy is the integration of sensory, cognitive, motor, and physical abilities to create the ability to perceptively read and appropriately act in the physical world. It leads to fitness: the development of strength, speed, flexibility, and aerobic endurance and other capacities. Being physically literate means being able to read the environment,

knowing how to move within it, and having the skill and fitness to do so in effective, efficient ways, whatever the challenge. Physical literacy is a foundation of successful aging.

The development of physical literacy is a lifelong process of growth and renewal, and as such it is a journey, not a destination. It begins simply enough with the development of basic motor competencies during infancy and early childhood. Ideally, these basic competencies evolve into more complex and diverse movement patterns. Ideally movement awareness and ability increases as individuals pass through childhood and adolescence into adulthood. These competencies are not developed spontaneously- they must be taught (Logan et al., 2012). Otherwise, individuals may experience a "proficiency gap" (Haubenstricker & Seefeldt, 1986) which inhibits their participation in more challenging activities.

Eventually, what began as simple walking, running, and throwing evolves into thousands of complex movement patterns—ranging from ballet and basketball to firefighting and mountain climbing. As individuals develop this incredible array of movement abilities, they also develop a commensurate awareness and understanding of their own body, together with the confidence and desire to continue exploring more movement. This foundation of competence, confidence, knowledge, and motivation serves to inspire a lifetime of sustained physical literacy that we call being Active for Life.



THE LONG-TERM ATHLETE DEVELOPMENT FRAMEWORK

Physical literacy is the foundation of the seven-stage Long-Term Athlete Development framework. Conceived as a cradle-to-grave pathway that serves all Canadians, Long-Term Athlete Development combines best practices in coaching with current knowledge in sport science to optimize the development of competitive athletes while maximizing participation of the larger population.

More than any other precept, Long-Term Athlete Development is based on the idea that both elite athlete development for the few and recreational participation for the many will be optimized by ensuring that participants of all ages are doing the right things at the right times under the right conditions throughout their development.

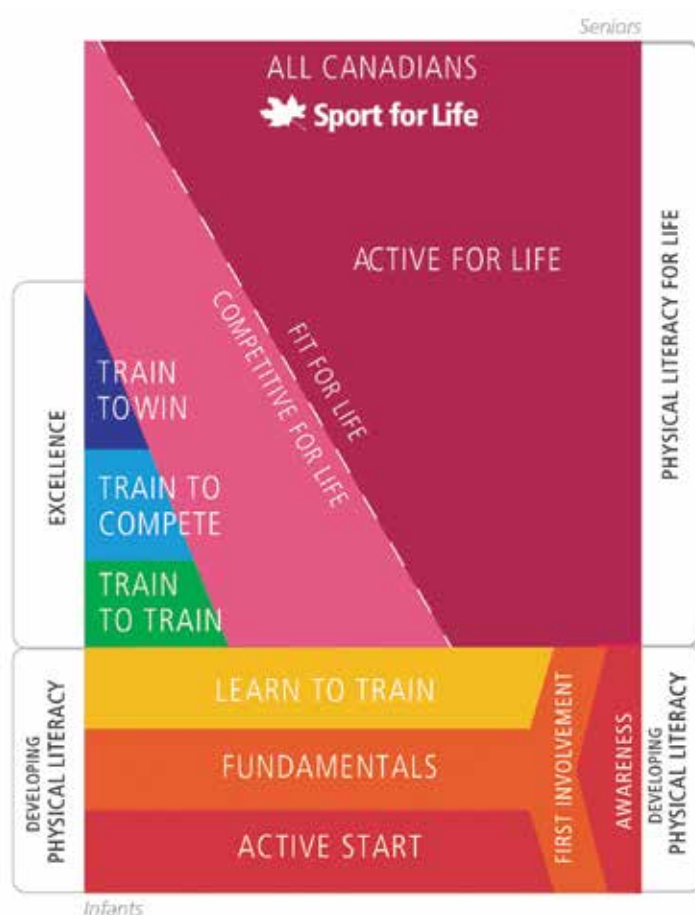


FIGURE 1
LONG-TERM ATHLETE DEVELOPMENT
Sport for Life, 2016

Physical literacy is one of the “right things”. Ideally, individuals develop basic physical literacy during childhood prior to adolescence, and then continue to develop and maintain it throughout their entire lifespan. The early start is important as research shows that children who develop early motor competencies are more physically active during childhood, (Lopes et al., 2001) and further research shows that active children and youth are more likely to stay active into adulthood (Telama et al., 2001). Moreover, physical literacy leads to high

performance- top athletes are likely to have participated in more sports earlier, and specialized later (Bridge & Toms, 2013).

The seven stages of Long-Term Athlete Development describe different phases of human physical, cognitive, emotional, and social development from early childhood to late adulthood. The age ranges listed for each stage below are generalized estimates. Movement between the stages should always be understood as a gradual transition, not an abrupt transformation.



THE SEVEN STAGES OF LONG-TERM ATHLETE DEVELOPMENT

1.Active Start

0-6 years old

2.Fundamentals

6-8 years old for females

6-9 years old for males

3.Learn to Train

8-11 years old for females

9-12 years old for males

4.Train to Train

11-15 years old for females

12-16 years old for males

5.Train to Compete

15-21+/- years old for females

16-23+/- years old for males

6.Train to Win

18+ years old for females

19+ years old for males

7.ACTIVE FOR LIFE

enter at any age following

Learn to Train; includes

Competitive for Life for mature athletes and Fit for Life for all.

As they pass through Active Start, Fundamentals, and Learn to Train, all children should develop basic physical literacy. They should also begin to discover which physical activities and sports interest them most and whether or not they possess a particular talent in any of them.

As they enter adolescence, each individual can decide whether they want to pursue a high performance pathway of training and competition or simply participate in recreational activity, which may or may not include sport competition at the community level.

Some youth will choose to pursue the high performance pathway through the Train to Train, Train to Compete, and Train to Win stages. These stages are intended to develop talent in those athletes who aspire to reach the Olympics, Paralympics or the professional ranks of sport. Other youth will immediately choose recreational physical activity and community sport, and they will enter directly into the Active for Life stage.

In the typical pattern of Long-Term Athlete Development, it is assumed that most of the population will enter Active for Life directly after the Learn to Train stage. Those who have chosen the high performance pathway will make the transition anytime during or after the Train to Train, Train to Compete, or Train to Win stages. Ultimately, everyone will arrive at Active for Life. For policy makers, recreation planners, and community sport associations, the goal at this stage is simple: continue to promote and support the participation of everyone for lifelong enjoyment and wellness.

TWO ADDITIONAL STAGES

Individuals who were not engaged in physical activity and sport at the early stages, or find themselves without the skills, understanding or support to become engaged later in life, need two more stages: Awareness and First Involvement.

The Awareness Stage cultivates understanding of the range of opportunities that exist for sport and physical activity, and how to get involved. To this end, sport and recreation organizations need to develop awareness and communication plans to make their offerings and resources known.

The First Involvement Stage ensures that individuals who are trying an activity for the first time have a positive first experience and stay engaged. Accordingly, organizations need to train coaches and develop programs to provide a suitable orientation for individuals, helping them feel confident and comfortable in their surroundings and welcome among their peers and activity leaders. In this stage, remedial physical literacy development is important to help individuals develop their movement skills, grow in confidence and develop and sustain the desire to continue their participation.

QUALITY LIVING AND FUNCTIONAL HEALTH

Why does the Active for Life stage of Long-Term Athlete Development deserve special attention from policy makers and programmers? Because Canadians are living longer, and our quality of life depends largely on staying physically active.

Advances in diet, public health and medicine throughout the 20th century have led to significant leaps in human longevity. Canadians now enjoy one of the highest life expectancies in the world—but it may be a mixed blessing for many citizens. Many older Canadians experience declines in their functional health that limit day to day activities and reduce general well-being.

Health professionals assess functional health according to eight key attributes: vision, hearing, speech, mobility, dexterity, feelings, cognition, and pain. Disease, injury, and the ageing process itself impact each of these. In each instance, regardless of the cause or combination of causes, a decline

in functional health results in some degree of moderate or severe individual disability.

After age 65, functional health begins to decline at a faster rate. As a larger proportion of Canadians are living into their 70s and 80s, this means that the average Canadian can presently expect to live approximately 10.5 years with some level of disability (Decady & Greenberg, 2014). At the same time, functional health can also decline at much younger adult ages through the complications associated with sedentary lifestyles, obesity, and injury.

Declines in functional health diminish individual quality of life while generating significant costs for our health care system. Indirectly, they also impact economic productivity. Taking all of these impacts into account, experts agree a major goal should be to find ways to maintain and prolong the healthy life years for Canadian citizens of all ages.

A person's functional health is measured using a scoring system based on self-reported performance on eight key health attributes: vision, hearing, speech, mobility, dexterity, feelings, cognition and pain.

Moderate disability

Occurs when a person is prevented from performing some activities due to limitations in their ability to function in at least one of these eight health attributes (vision, hearing, speech, mobility, dexterity, feelings, cognition and pain), and the limitation cannot be corrected.

Severe disability

Occurs when a person is prevented from performing many activities due to limitations in their ability to function in at least one of these eight health attributes (vision, hearing, speech, mobility, dexterity, feelings, cognition and pain), and the limitation cannot be corrected.

MANAGE, MAINTAIN, MAXIMIZE

Within the Long-Term Athlete Development framework, physical literacy is the common thread for keeping Canadians physically active from childhood to mature adulthood. Physical literacy begins to develop when children engage in physical activity at a young age, and it continues to develop throughout their lifetime as they participate in diverse sports and activities in multiple environments. Through the Active for Life stage, physical literacy keeps adults engaged in physical activity by maintaining their movement proficiency, confidence, and desire to be active.

Traditionally, the Canadian health system has focused on managing chronic disease and reacting to acute injury and illness rather than the promotion and maintenance of optimal health. The priority has been recovery: care that treats illness and injury rather than seeking to prevent them. A newer notion is resilience, the idea that through maintaining better general health, individuals can bounce back more quickly from adversity.

But the ultimate goal should be durability – the capacity to avoid ill health longer, and to recover more quickly, over the entire lifespan.

Physical literacy is the basis of durability by design. As Canadians stay engaged in physical activity, they stay stronger and healthier and thereby more resilient to falls, injuries, and disease. Indeed, healthy adults who possess proficient movement skills are less likely to suffer falls and injuries in the first place. Figure 2 shows the concept of durability by design: when two individuals who have developed different degrees of physical literacy suffer a setback, possibly an injury, in mid-life the more physically literate one is able to recover sooner (resilience) and maintain a high level of function longer (durability).

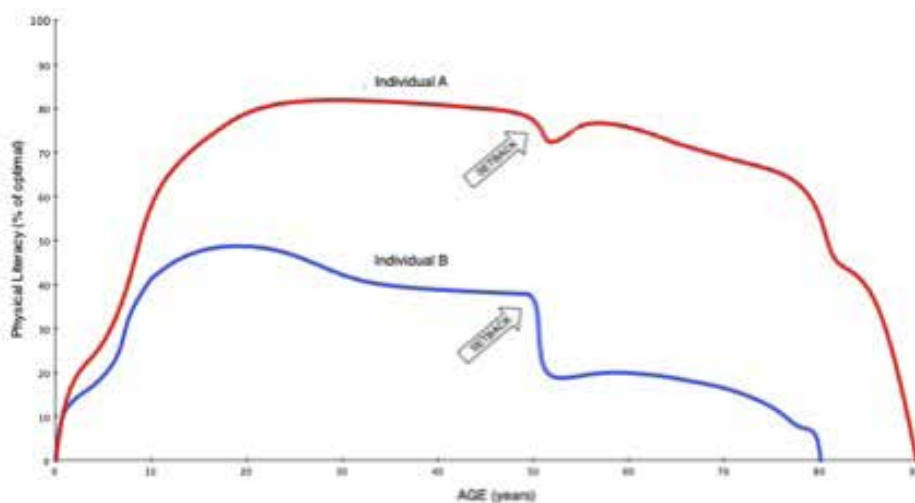


FIGURE 2
DURABILITY BY DESIGN
credit Paul Jurbala

The concept of physical literacy also supports contemporary thinking by health professionals towards fostering and maintaining the functional health of older adults. Traditional “slip and fall prevention” has been replaced by a more comprehensive approach to prevention and health that is based instead on maintaining mobility through a focus on building and sustaining balance, strength, flexibility and aerobic conditioning.

Throughout the sport, recreation, education, and health systems, the goal should therefore be to maintain and maximize physical literacy throughout every individual’s lifetime. Through the collective vision and cooperation of all primary stakeholders, this can be accomplished. It will truly take a community, every community, to work together to achieve this goal.

A start is to promote and develop physical literacy, not simply activity, early in the life course, and to help adults and seniors develop and maintain their physical literacy by providing ample, accessible, enjoyable, and meaningful opportunities for physical activity. If needed, remedial physical literacy programs should be provided to serve individuals who may have missed developing basic physical literacy during childhood and adolescence.

This is how to shape a comprehensive and systematic approach to building durability by design.

3

The Eight Factors of Active for Life

There are eight essential factors for healthy adulthood and successful aging: they describe the basic elements of the Active for Life stage and are the key components of being durable by design. The eight factors are interdependent and each is critical to adult wellness.



Appropriate
Physical Activity



Cognitive
Function



Psychological
Well-being



Social
Connection



Embracing
Life Transitions



Managing
Chronic Conditions



Mindful
Nutrition



Durability
by Design



1

APPROPRIATE PHYSICAL ACTIVITY

Many changes take place within our bodies throughout the life cycle. Understanding these normal age-related changes and how exercise makes us more resilient to deterioration is an important component of successful aging. This does not mean that knowledge alone will motivate people to exercise.

But awareness of basic changes in adulthood can help individuals to cope with, address, or prevent health problems through exercise.

Early adult years are marked by periods of rapid muscle growth, improvements in agility, flexibility, strength and speed. It is important to lay the foundation of a strong skeletal system by ensuring adequate nutrition and muscle development during this time. By their thirties, most people will have reached their peak level of physical fitness. Effort begins to switch from growth to maintenance. Professional athletes often retire around this age, while amateurs may find that injuries, work, and family commitments increasingly take up their time. New parents frequently suffer a decline in physical activity (Rhodes et al., 2013).

During one's forties and fifties muscle strength and endurance begin to insidiously erode, while recovery from minor injuries takes longer and major injuries may permanently limit movement. During this time, the early stages of osteoporosis will develop among many people, particularly women. Osteoporosis is a change in the quality and quantity of bone, leading to weak and brittle bones. While osteoporosis can lead to serious complications such as fractures, weight-bearing exercises and a diet rich in vegetables and providing adequate calcium is an important way to prevent the disease. This is also an important time to consider transitioning from high to low impact sports.

Participating in a variety of activities can help the body increase its resilience to injury and stress, and in preventing chronic health conditions. Endurance sports, such as hiking, running, swimming and cycling help to manage weight and cardiovascular fitness.

During the fifth and sixth decades of life, when thoughts may turn towards retirement, physical activity can be a means of optimizing function. For some, activity is a goal unto itself; if for instance the individual wants to compete in a sporting event such as a triathlon or marathon. For others, physical activity is a means to an end. For instance, maintaining regular physical activity during the week can help prevent injuries at the ice rink on the weekend. While for others, engaging in exercise classes or group events can be an important component in developing and maintaining social networks.

In one's seventies, and for some their eighties, nineties and beyond, regular physical activity is vital in managing physical, cognitive, and emotional well-being.

Sensory deprivation combined with painful joints and muscle atrophy can lead to falls or limitation in physical activity due to a fear of falling. It is important to combat age-related physical declines through targeted exercises, including balance and strength training. Individuals whom maintain a moderate to high daily level of activity are less likely to be taking multiple medications, seriously injure themselves from an accident, or develop dementia.

Studying the effects of sedentary behaviour on human physiology is like watching a movie in fast forward; the biologic age appears to advance faster than expected from the chronologic age. This area of research over the past decade has led insights into the impact movement, or inactivity, has on humans. Increased sitting time is associated with increased abdominal girth, cardiovascular disease, dementia, and all-cause mortality. Regular activity on the other hand is associated with increased cardiovascular fitness, lower risk of heart disease, stroke, dementia, diabetes, and osteoporosis. Resistance training has been shown to increase brain activity and lift one's mood.

2

COGNITIVE
FUNCTION

Maintaining optimal cognitive function throughout the life cycle is dependent on a number of lifestyle factors, including regular physical activity, appropriate daily sleep, diet, social interaction, and intellectual engagement. Human and non-human studies have shown that exercise enhances many aspects of cognition and brain performance.

“There is good evidence that participating in aerobic activities improves the size of the hippocampus,”

Brinke, 2015

an important part of the brain involved in managing memories and emotions. Exercise plays a particularly strong role in enhancing executive functions of the brain. Executive functions include activities such as planning, scheduling, and working memory, which are important for performing the so-called instrumental activities of daily living (shopping, housekeeping, managing personal finances, cooking and driving). Without these basic skills, it is very difficult to live independently in the community.

Similar to the effect sedentary behaviour has on the muscles, organs and bones, a lack of cognitive stimulation deprives the

brain of the exercise it needs to maintain optimal function. Performing mental exercises, such as playing sudoku or learning a new hobby, strengthens neuronal connections within the brain, providing participants with a cognitive reserve. Building a cognitive reserve helps to mitigate losses due to injury, illness, and time. Recognizing the connection between regular exercise and mental engagement is an important component of maintaining durability throughout adulthood.

Surveys often show that dementia is the disease most feared by persons over the age of 50. Dementia is an umbrella term for a variety of pathological processes that result in progressive cognitive dysfunction. Alzheimer’s Disease is the most common form of dementia. Patients that begin to notice early changes in their memory, thinking, judgment, and language with no impact on their daily function may be diagnosed with mild cognitive impairment (MCI), an important risk factor for dementia. At present, there are no medications available to prevent the progression of MCI into dementia. However, research shows that lifestyle modifications, including regular exercise help delay the onset and limit the progression of the disease (Nagamatsu et al., 2012; Gilsoul, Simon, & Collette, 2015; Bherer et al., 2013; Larson et al., 2006). Maintaining physical function has also been recognized as an important means of coping with cognitive decline.



3

PSYCHOLOGICAL
WELL-BEING

Psychological well-being is a key component of healthy ageing. Psychological well-being is dependent on a host of factors such as genetics, life experiences, social supports, personality traits, economic conditions, and dealing with the burden of disease or illness. However, there is also strong evidence showing that physical activity produces significant positive effects on basic psychological components such as confidence, self-esteem, social connectedness, and fundamental happiness. Studies have shown that regular exercise improves confidence and self-esteem and reduces depression among all ages of participants. For example, participating in exercise either at home or in a supervised group setting for 30 minutes three times a week for at least 16 weeks improves mood equivalent to a low-dose anti-depressant in patients with depression (Blumenthal et al., 2007).

There are many examples of the benefits of exercise for promoting psychological well-being throughout the lifespan. Among adolescent youth, regular participation in sport and extracurricular activity has been correlated with reduced rates of juvenile delinquency and dropout from school. Exercise can also improve quality of life in later adulthood (Brovold et al., 2014; Acree et al., 2006).

When compared to physically inactive older adults, those engaged in exercise were more than twice as likely to be rated as ageing successfully.

Baker, et al., 2009

Research suggests that improvements in mood may be attributed to the positive effect of exercise on mature adults' beliefs about feeling in control of their daily activities (Cairano et al., 2010) and self-esteem (Elavsky et al., 2005). Some of the benefits of exercise for well-being are associated with cognitive function. For example, a randomized study of Parkinson disease patients at the University of Iowa (Uc et al., 2014) found that walking three times a week for 45 minutes for six months improved patients' mood and Parkinson's symptoms more than medications alone. The benefits of exercise for well-being benefits are also linked to social connectedness (Fox, Stathi, McKenna, & Davis, 2007) because participation in sport increases social interactions, which can have positive impacts on psychological well-being (Eime et al., 2013).



4

SOCIAL
CONNECTION

Social connectedness is an important aspect of successful aging. Belonging to social networks, such as teams, clubs, religious or cultural groups is an important means to building and maintaining social connectedness.

For example, being involved in a community fitness class provides two equally important benefits: physical activity and social interaction.

Likewise, ties between existing social and cultural interests can help foster regular engagement in exercise. As individuals age they may need additional support and encouragement to pursue physical activity. Canadians hold a range of positive, negative, and indifferent orientations toward sport and

engagement in physical activity. Some of these orientations can be attributed to generational differences, culture, religion, or birthplace. Other differences may relate to the sports and activities people did in their youth, or whether they engaged in physical activity at all. Among some groups, there may exist a stigma against being active in adulthood, as it is perceived to be inappropriate behaviour for “mature” adults.

Other mature adults may have family obligations such as caring for grandchildren that pose barriers to making time to exercise. While depression, isolation, low self-efficacy, and lack of personal motivation have been identified as key barriers to participating in physical exercise, social and family supports can also prove to be helpful to successful engagement in regular exercise in adulthood.



5

EMBRACING
LIFE TRANSITIONS

Major life transitions can serve as an opportunity to reflect on changes in lifestyle, including changes in exercise routines. Though research suggests that there are many barriers to engaging in physical activity in older adulthood, it also demonstrates that regular exercise is essential to maintaining health and well-being later in life (King, Rejeski, & Buchner, 1998). The types of physical activities individuals participate in changes throughout life, and so do the opportunities to engage in exercise change at different stages throughout the life course.

“While recreational or competitive sports and organized exercise programs are the main sources of physical activity for youth, in middle and later life stages the main sources of physical activity tend to come from activities of daily living such as housework, caring responsibilities and gardening.”

Scanlon-Mogel & Roberto, 2004; Witcher et al., 2007

It is important to recognize that at later stages in life people engage in exercise for a wide range of reasons and have differing degrees of experience with physical activity and sport. Some individuals have played multiple sports throughout their lives but are faced with injuries, illness or even simple lifestyle changes that pose obstacles to maintaining their prior levels of activity. Others may shift away from certain high impact sports. There are others still who come to a turning point in their lives where they want to be physically active and engaged in regular exercise in adulthood, even if they have never played sports earlier in life. This can result from a negative experience or simply the realization that they don't want to be stiff, overweight or frail in older adulthood.

Many of the transitions that typically occur in later adulthood, such as making the transition from working to partial or full retirement, becoming a grandparent, or even recovering from an injury, illness, or a medical procedure can serve as motivators to maintain or develop a regular exercise routine. For example, the transition to retirement can serve as an opportunity to restructure one's time and allow for reengagement in sport or the development of a new physical activity.

Likewise facing a major injury or dealing with a sudden health condition can serve as a wakeup call or turning point that can be framed as an opportunity to reassess our exercise routine in adulthood.

The sports and activities we do in one stage of life may not be appropriate in the next stage without modification. It is important to regularly reassess which sports, exercise programs or recreational activities are suitable given the physical changes encountered at each stage of life. Given that change is an inevitable part of aging, people need to be confident about engaging in a wide range of exercises, have the support and opportunity to do so, and to embrace the idea of using later life transitions as motivation to be active. Exercise is a key component of rehabilitation, prevention, and successful aging, and it is important to find a reason to participate at each stage in life.



6

MANAGING
CHRONIC CONDITIONS

Chronic conditions can be a major barrier to engagement in physical activity. Unfortunately, they tend to multiply as individuals age and this contributes to further declines in physical activity. Conditions such as chronic obstructive pulmonary disease, diabetes mellitus, cardiovascular disease, and osteoporosis can severely impact every aspect of an individual's life, including their levels of physical activity and daily function. Managing each of these chronic conditions begins with important lifestyle modifications, including appropriate physical activity. Through targeted exercise and activity, adults with chronic conditions can potentially improve their sleep, lower their BMI, improve their blood sugar control, and deal better with stress and anxiety (Vanhees et al., 2012; Chong, Tsunaka, & Chan, 2011; Hamer, Taylor, & Steptoe, 2006).

"In the larger context, regular physical activity can also substantially reduce the risk of dying from heart disease, stroke, diabetes, and colon cancer."

Warburton, Nicol, & Bredin, 2006

Small increases in daily activity combined with weight management, can help patients wean themselves off many medications.

In order to promote durability throughout adulthood, exercise programs should be designed to help individuals with chronic conditions develop and maintain physical literacy and movement proficiency. To live well with chronic conditions, it is important to engage in regular exercise. Pain can be a major barrier for many individuals with chronic conditions and though medications may be essential for treatment and for pain control, they can also interfere with balance and sometimes make regular exercise more challenging. However, regular exercise among individuals with chronic health conditions has proven to be an effective way to reduce the number medications an individual takes, to enhance energy, and improve quality of life. Aerobic exercise has been shown to be beneficial for individuals with cancer-related fatigue during and post-cancer therapies (Cramp & Byron-Daniel, 2012).

Individuals chronic conditions should avoid environmental factors that can make symptoms worse. For example, extreme weather, high humidity, smog, and uneven pavement can be particular challenges.

Indoor activities such as swimming, using a stationary bicycle, or track can be good options for individuals with chronic conditions.

Being able to recognize the normal and the abnormal warning signs for each chronic condition is also important. For example, chest pain, intense headaches, heart palpitations, or severe shortness of breath are abnormal reactions and should be addressed immediately with medical attention.



Exercise is a critical component of building durability in adulthood; however, you can't out run a bad diet! Physical and cognitive functions are both impacted by nutrition. On one hand, Canadians need nutritious food to support active lifestyles. On the other hand, research shows that individuals also need good nutrition in order to acquire the most benefits from physical activity.

One of the greatest public health challenges facing the nation is obesity. Worldwide, the number of obese children and adults has more than doubled over the past generation. Many chronic health conditions, such as high blood pressure, heart disease and diabetes are directly linked to obesity rates. Canada is presently battling an obesity epidemic at all age groups.

If current diabetes incidence and mortality trends continue, it is estimated that 3.8 million Canadians could be living with diabetes by 2018/19 (Public Health Agency of Canada, 2011).

This figure represents a huge challenge for Canadian health services, and the Canadian government has stated that major efforts must be made in disease prevention to avoid this rise.

Fortunately, obesity can be managed through changes in diet and physical activity. It is important to eat plenty of dark green and coloured vegetables, high fibre foods such as apples, beans

and lentils, and to eat foods providing monounsaturated fats such as avocados, olive oil, and nuts. The Mediterranean diet has been repeatedly shown to reduce the risk of many chronic conditions including cardiovascular disease and dementia (Estruch 2013).

Older adults face additional nutritional problems related to the aging process. New international guidelines on protein consumption for older adults are recommending increasing the recommended daily allowance from 0.8-1 grams of protein per kilogram of body weight up to 1-1.2 grams daily (Wall 2014).

To spur muscle growth in the elderly, adults over the age of 65 likely need to consume at least 20 grams of protein with each meal. Protein absorption and muscle synthesis can be enhanced by resistance training.

A syndrome of particular concern to Canadian adults is sarcopenia. Sarcopenia is characterized by the loss of lean muscle mass, strength, and performance. It is thought to result from sedentary behavior, a diet lacking adequate calories including sufficient protein, and multiple chronic diseases. Sarcopenia is associated with an increased risk of falls, disability, and mortality. Simple changes in diet and exercises that increase muscle strength and endurance can stop or even reverse the effects of sarcopenia.



8

DURABILITY
BY DESIGN

In developing a comprehensive and systematic approach to providing Canadians of all ages with ample opportunities for physical activity across the lifespan, it needs to be recognized that each participant has unique needs, goals, and interests surrounding sport and activity. Every individual also has a unique health status and a different level of physical literacy at each point in their personal journey. Not every 50-year-old is the same, and the average 30-year-old is not the same as the average 60-year-old. The human body is dynamic; by design everyone can be more durable and endure the challenges that aging involves.

Engaging in regular exercise is one of the best things we can do to ensure that we age successfully. Accordingly, community sport and recreation programs and opportunities should be adapted to the changing needs of participants across their lifespan.

People of all ages, but adults in particular should engage in resistance training, aerobic exercise, balance and flexibility training to ensure their bodies remain durable. These forms of exercise are associated with favourable outcomes for adults including those with relatively limited functional mobility and

movement proficiency. In addition to providing opportunities targeted at an aging population, it is important that individuals with greater movement proficiency and physical literacy have opportunities to engage in a wide range of additional sports and activity options. It is also important that opportunities for adults to exercise are fun and diverse. It has been a while since older adults just wanted to play bingo; increasingly adults are interested in learning new sports and forms of movement.

To become a society that is active for life, individuals need support across these interrelated factors. The changes can be made at home, in the workplace, and in our communities. Employers benefit from durable workers: therefore they need to support the physical and mental health of those workers through attention to the activity, nutrition, and health care of their employees. Health practitioners need new paradigms for prevention and treatment to support individuals through life transitions. Planners need to put a priority on enabling physical activity in the design of built environments. Most important, everyone needs to make a commitment to developing and sustaining physical literacy and healthy activity as the foundation of long, fulfilling lives.





Changing the System

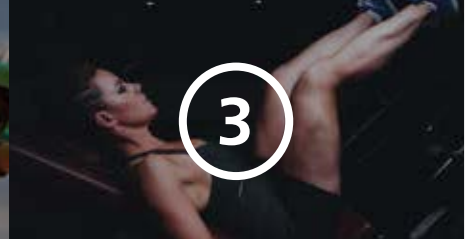
Because physical literacy is an essential part of health and well-being, ways to develop and sustain physical literacy for all Canadians throughout their lifespans must be found. Physical literacy is not “taught” in a single isolated setting such as a sport club or school physical education program, rather, physical literacy is developed over time through the mutual effort of many groups, working in multiple environments across the community. The following are some of the key organizations and environments that play important roles in developing and sustaining physical literacy:



Sport



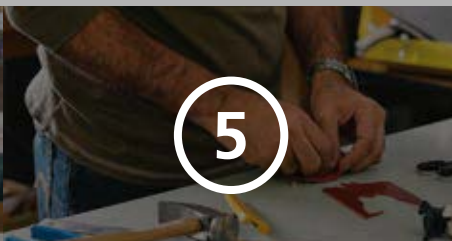
Recreation



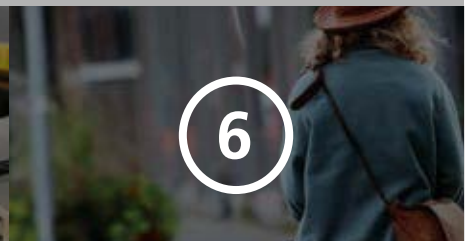
Health



Adult Care



Our Workplaces



Our Built Environments

Changing the system means, above all, bringing together leaders from these areas to support the physical literacy of all Canadians by working cooperatively to help everyone be active for life.



Physical literacy is essential to developing basic athleticism and performance capacity in any sport. However, in promoting physical literacy as a performance factor for successful athletes, our sport system has traditionally looked no further than the short-term goal of producing “winners” who can compete in the high-performance arena.

By the very nature of high performance, the system ends up serving the needs of a few and alienates or neglects many.

At the end of a typically short competitive lifespan, high-performance athletes are often discharged from the system as young or middle-aged adults with little thought for maintaining their fitness and well-being.

The Canadian sport system can do much more to develop and sustain physical literacy among children, youth, and adults. At the earliest ages, sport groups can embrace a multi-sport approach: by encouraging participation in a number of complimentary sports individuals can develop broader movement competencies and avoid promoting premature specialization in one sport. As participants move through

adolescence and into adulthood, sport groups can also help to identify individuals who may need remedial attention in developing physical literacy. During adulthood and senior adult years, sport organizations can promote a wider range of competitive opportunities for participants of all skill levels and abilities that address their needs and interests in relation to competition for achievement versus simple participation for health, social connection, and enjoyment.

Some participants may have a long history in a given activity or sport, and now choose to continue playing purely for fun and lifelong wellness. Others may have a long history in competition, and want to continue competing for trophies at the community level. Others may be newcomers to the sport who become interested in late adolescence or adulthood. Sport should provide access and opportunities for all of these participants.

There should be continued opportunities for amateur competition, and there should be opportunities for newcomers to learn, play, and participate regardless of their skill level, ability or previous experience.



2

RECREATION

Like sport, recreation has a large role to play in promoting physical literacy through the lifespan. Especially during adulthood and senior adulthood, the recreation system is perhaps best positioned to provide access for the greatest number of participants within the community setting. In most communities, recreation centres are better positioned than sport clubs to provide access to a greater number of individuals and interests. What recreation may lack in depth in any one sport or physical activity is compensated by larger breadth of offerings.

Depending on the individual, the recreation system may represent athletic development, personal entertainment, or social activity. All of these outcomes are important and valuable to a community. However, in the context of the Active for Life stage, the greatest value of the recreation system may be the support provided to public health through physical activity and sustained physical literacy for participants of all ages.

As mentioned above, the sport system is traditionally concerned with producing performers and “winners” for the competitive arena. However, competition is not everyone’s principal objective or interest in physical activity. Recreation can provide an important service to communities by providing a broad range of expanded opportunities in physical activity that appeal to a greater number of interests and complement the opportunities offered by sport groups.

The transition to retirement, for example, may provide an opportunity for many individuals to develop new physical activities or reengage with previous interest in sport and activity.



3

HEALTH

The public health system clearly benefits from a physically literate populace. Physically literate individuals are inclined to be more physically active, hence they are generally more resilient to injury and illness due to greater physical fitness. They are also less likely to suffer physical injuries in the first place, since they enjoy adequate movement competency in areas such as balance and coordination.

However, the health sector also makes important contributions to physical literacy. Through preventive and responsive health care practices, including health education in areas such as nutrition and lifestyle, health agencies and practitioners help individuals to maintain the baseline mental, emotional, and physical wellness that is necessary to support physical literacy and physical activity. Whether it is allopathic medicine,

physiotherapy, counseling, public health, chiropractic, or various alternative healing modalities, all quarters of the health sector have an important role to play in supporting physical literacy and physical activity.

These contributions become especially important during and following life transitions and life events in adulthood and mature adulthood.

Whether it is recovery from injury or illness, or the birth of a grandchild, or retirement from work, or the ongoing management of chronic health conditions, health agencies and practitioners play a significant role in helping adults in their “return to movement”.

4

ADULT CARE

The number of older adults is increasing worldwide, and this trend also holds true for Canada. Consequently, in the interests of both preserving individual quality of life and containing health care costs, the prevention of physical disability among mature Canadian adults should be increasingly prioritized in public health.

Physical exercise is among the best known methods of preventing disability, so the maintenance of physical literacy is essential to this effort.

Agencies and support personnel who provide care services for mature adults are well positioned to play large roles in supporting physical literacy in the later years. By helping the individuals in their care to maintain their physical literacy

and pursue appropriate physical activity, they can help these individuals to manage existing chronic health conditions and prevent the onset of others. This in turn can reduce costs for elder care and society as a whole.

In this process, agencies and staff who work to care for senior Canadians should understand how exercise can modify and improve many chronic medical conditions that are prevalent in late life, such as arthritis, heart disease, diabetes, stroke, pulmonary disease, and osteoporosis. They should also understand pre-exercise screening and basic evaluation procedures for older adults who wish to pursue activity, or be familiar with support services and resources that are available for this purpose.



In recent decades, the Canadian workplace has steadily moved away from physical labour towards sedentary work. The human body is designed to move, yet Canadians find themselves increasingly less active in their work. When taken in combination with the trend toward less active lifestyles in general, this pattern presents serious health implications, and consequently equally serious implications for the productivity of our workplaces and the competitiveness of our businesses and industry.

Research shows that sedentary behaviour significantly increases risks for heart disease, diabetes, and colon cancer.

Research also shows that it slows brain function because of reduced blood and oxygen flow, as well as reduced activation of brain- and mood-enhancing chemicals. Through prolonged sitting, individuals also suffer greater amounts of neck strain, sore back and shoulders, reduced flexibility, and even spinal disk damage. All of this negatively impacts worker productivity and absenteeism. Physically active workers are less stressed and experience less absenteeism due to illness, and they enjoy less depression and better overall mood states.

In light of these facts, Canadian businesses and organizations are wise to support employee physical activity both inside and outside of the workplace.

Basic support may take the form of workplace education programs to inform employees about the importance of regular physical activity and bulletins to advise staff of types of support available from the employer. Larger support may include substantial health and wellness programs within the workplace, including elements such as a lunchtime walking club, workplace gym, yoga classes, and company recreational sports teams. If appropriate activity spaces are not available at the workplace, businesses and organizations can offer other supports such as flexible work hours to take advantage of physical activity opportunities outside of work, or partnerships with local sport clubs and gyms that incentivize employee participation and reduce costs to employees.

Every workplace solution will be unique to the size and setting of the organization. Accordingly, workplace wellness programs should be designed after an initial assessment of employee needs and an evaluation of the resources and opportunities available within the organization and in the surrounding community.



6

OUR BUILT ENVIRONMENT

The built environment is composed of the buildings, parks, roads, and other infrastructure that are encountered on a daily basis. Depending on its design, the built environment can either encourage physical activity or discourage it. Consequently, the built environment has a very large impact on physical activity and the maintenance of physical literacy.

For example, studies have shown that people who live in communities with high residential density, pleasing aesthetics, well-connected street and road networks, and mixed land use (e.g., stores in walking distance of homes) are more active than people who reside in communities designed for automobile dependence.

Perhaps not surprisingly, proximity to recreational facilities is also associated with higher levels of physical activity.

In light of this, recommendations for improving the design of the built environment often include creating safe walking and bicycling routes, improving access to public parks and recreation facilities, and improving the overall aesthetics of public spaces.

In the effort to promote physical literacy and physical activity, there is the opportunity to make physical activity a natural product of our built environment. By re-thinking our approaches to architecture, urban design, transportation, parks, and public spaces, more people can achieve higher levels of activity on a daily basis.



5

Next Steps

How can we help the greatest number of people develop physical literacy and maintain it throughout their lives?

People do not develop physical literacy simply by taking swimming lessons or attending the gym. Physical literacy is a lifelong process of acquiring movement skills of increasing complexity and diversity in a wide variety of environments, along with the knowledge, physical awareness, and confidence in their ability to move. It is the process of facing new movement challenges and developing the confidence and motivation that come from overcoming those challenges.

In their physical literacy journey, people travel unique pathways shaped by their family upbringing, school, work, physical environment, and a host of other factors. By its very nature, the physical literacy journey carries each individual through multiple environments that span home and community. Consequently, to successfully develop and sustain physical literacy the entire community needs to be engaged in the process.

IT TAKES A COMMUNITY

To promote, develop, and sustain physical literacy, we need to start by establishing common aims between key partners in education, sport, recreation, and health. Through their mutual support and consultation, partners will be able to deliver programs that consistently deliver on the larger aims of creating a physically literate and physically active populace.

Community partners can develop and sustain physical literacy following a “spiral staircase” model (Figure 3). In this model, each series of steps not only represents progress in the physical literacy of individuals, but also a steady broadening and integration of supportive relationships between individual programs, facilities, organizations, and community partners who contribute to the process of developing physical literacy.



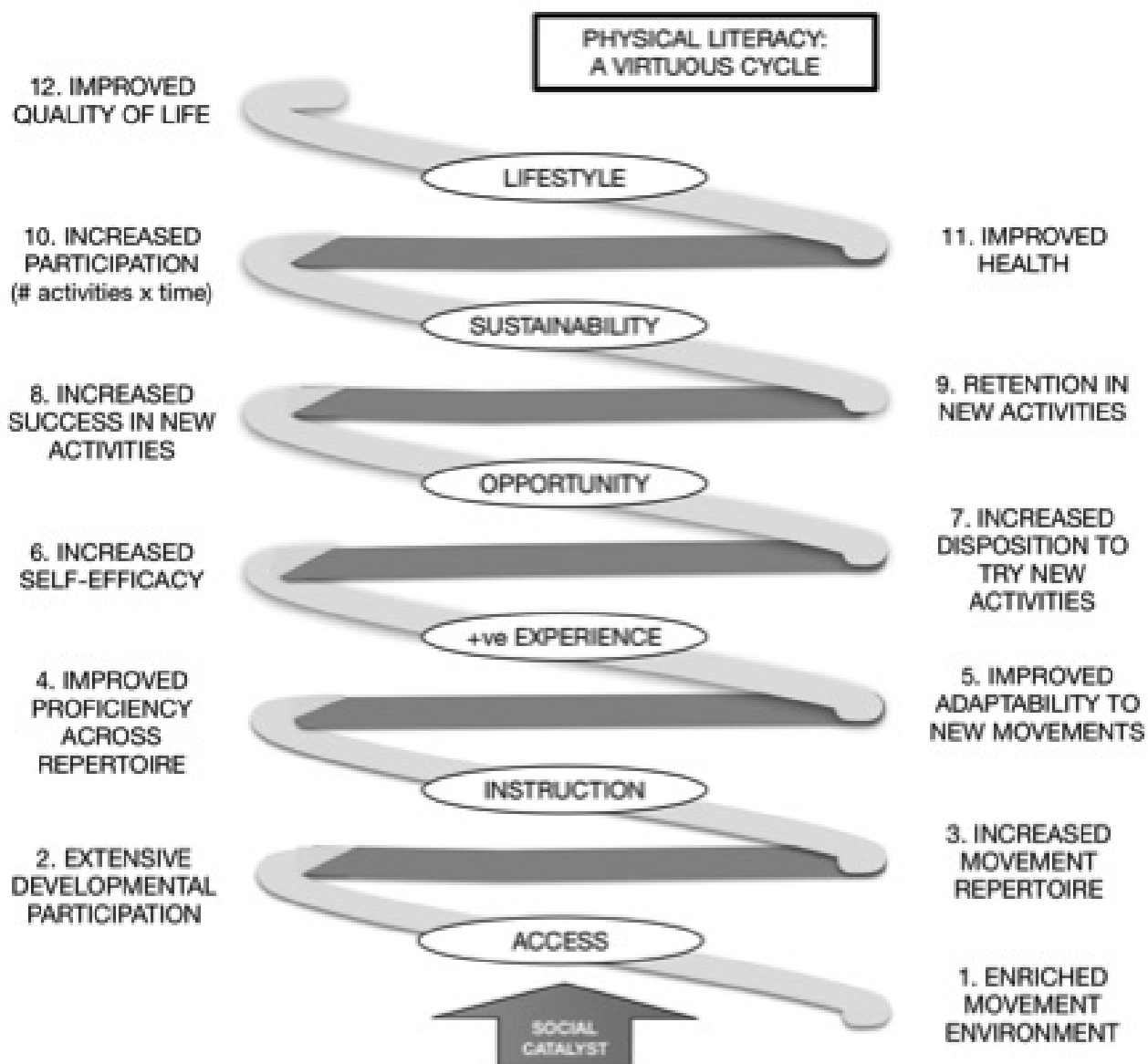


FIGURE 3
THE SPIRAL STAIRCASE OF PHYSICAL LITERACY
Credit: Paul Jurbala

In this model, the first five steps in community development of physical literacy exist at the program level. Whether they are delivered through schools, sport clubs, or recreation programs, to support the development of physical literacy programs must:

1. Provide enriched movement environments.
2. Promote extensive developmental participation.
3. Increase movement repertoire of individuals.
4. Increase each individual's movement proficiency across their repertoire.
5. Improve each individual's adaptability to new movements.

To make this happen, communities need to offer programs with appropriate content and consistent, quality delivery. Quality means facilitating the exploration and development of movement capabilities in a supportive environment that meets the unique needs of individuals, whatever their age or current level of ability. Program leaders must be educated about physical literacy and trained to offer the kinds of activities and instruction that support its development.

In addition to offering quality programs, communities should consider who is not participating and explore how community partners can work together to create opportunities for everyone to take part. Accessible spaces and affordable costs make facilities and programs welcome to all ages, cultures and abilities. Environments that support physical activity in both structured and unstructured, built and natural environments can help make activity the 'easy choice' throughout the community.

When these objectives are realized, the physical literacy development spiral continues to rise as individuals achieve the following outcomes:

6. Increased self-efficacy.
7. Increased disposition to try new activities.
8. Increased success in new activities.

As their physical literacy improves, individuals are more willing and able to try new activities in new settings. Partners in recreation, organized sport, health and education should coordinate and promote opportunities for widespread community access to diverse activities. Where possible, opportunities should be integrated across different community facilities and providers to create both the greatest utilization of infrastructure and the greatest consistency in programming.

If physical activity opportunities and programs are thoughtfully designed, coordinated and delivered through long term collaborative partnerships, the result will be community-wide physical literacy and its corresponding benefits:

9. Greater engagement and retention of participants in new activities.
10. Increased participation from the community as a whole.
11. Improved health for more individuals.
12. Improved quality of life for more individuals.

As this level is approached, shifts in policy and funding to sustain community physical literacy and wellness become essential. To reach these long-term outcomes, community partners will need to address issues of sustainable programming and expanded access and opportunity. This will require ongoing promotion, education, and investment by community partners. It will also require opening doors to many individuals underserved by our current systems by providing targeted initiatives to address lack of awareness, and creating welcoming first experiences for a broader range of participants who may currently feel excluded by sport and recreation programs. Think beyond programming and ask how to create an environment that supports movement for all, by considering things such as design and use of built environments, open spaces, and transportation, the perceptions of diverse community members, and how to create and maintain public and private community partnerships and stakeholder engagement.

Meeting these goals implies changes in thinking about how sport, recreation and physical activity is delivered. That means shifting paradigms for individuals, organizations, and society as a whole.

ACTIVE FOR LIFE: SHIFTING THE PARADIGMS

To realize the goals for physical literacy, health and wellness outlined here, six paradigms must shift:

1 From Physical Activity to Physical Literacy

The first step is to educate sport, education, recreation, physical activity leaders and health care providers about physical literacy. The holistic concept of physical literacy as the competence, confidence and motivation to move in every setting is both broader and more powerful than the idea of “exercise” or “fitness”. Physical literacy is the gateway to physical activity and improved quality of life.

An adult who both appreciates and is committed to developing their physical literacy is an adult who is committed to wellness.

2 From Sport for a Few to Sport for All

The pursuit of excellence is at the heart of sport, but excellence is not just for an elite few.

Everyone can be excellent, in the sense of striving to be a little better than they were, to develop new active interests, and to encourage those around them to be the best they can be as well. The sport system has not evolved to support sport for all, and as a result sport participation is declining, due to factors such as cost, limited access, and failure to understand and meet the needs of all Canadians.

3 From Passive to Active Engagement

Sport and recreation programs are open to those who wish to, and can afford to, participate. This is a passive system- “if you are interested, we will accept you”. Moving towards a model of active engagement everyone, including sport and recreation leaders, educators, health professionals and individuals makes it their business to continually recruit others to be physically literate.

In the Long-Term Athlete Development framework, two special stages called “Awareness” and “First Involvement” were added to reflect that athletes with a disability needed to be made aware of and welcomed to sport, which the able-bodied can take for granted.

Other marginalized groups needed the same attention and welcoming environment.

In truth it is the vast majority of Canadians- new Canadians, those from different cultures, those with lower socioeconomic status, those with various disabilities, older adults- who do not participate and who need Awareness and a welcoming First Involvement.

4 From Tried and True to Something New

The goal of an emphasis on physical literacy is to give everyone the tools they need to remain active for a lifetime, particularly the confidence to try new activities. The brain remains changeable for a lifetime (neuroplasticity) and can learn new movements at any age. In fact, a growing body of research is showing that the act of learning later in life, whether new movements, learning to play a musical instrument, or a new language, is beneficial and protective. Learning keeps the brain young.

By creating a culture of lifetime movement learning, lifetime physical literacy, the body and brain are protected the foundation for lifetime wellness created.



5 From Silos to Synergies

No single organization or level of government can create the culture shift society needs to support activity for life. More partners must work together and share responsibility for creating a physically literate Canada. However, while every organization has a role governments need to lead the way. Many of the existing institutional obstacles result from funding policies. The Ministry of Sport creates policies for sport, the Ministry of Education for schools, the Ministry of Health for hospitals, but of course there is only one taxpayer.

Rethinking funding to support multi-partner collaboration is an essential first step in breaking down silo thinking.

In communities, Sport for Life has created a framework for community engagement called Long-Term Community Development. This model applies “thinking globally, acting locally” to the domain of physical activity, recreation and sport. The process is aimed at creating enhanced community inclusivity, resilience, and sustainability regardless of the community setting: rural or urban, small or large. There has been success in initiating multi-sectoral community partnerships across Canada, but it is time to broaden the discussion to include health professions including those working with older adult populations.

6 From Universal Illness Care to Universal Wellness Care

Canadians are justifiably proud of our health care system, particularly the principal of universality that ensures all Canadians have access to care. However, as explained above, the system has operated to respond to injury and illness, rather than to be pro-active in leading toward wellness. While a growing number of health professionals are aware of the benefits of physical activity, and many see the need for exercise and healthy nutrition in maintaining a healthy lifestyle, few are given the knowledge and tools to reverse unhealthy lifestyles.

A paradigm shift toward universal wellness care would turn the medical system into a leading ally in partnership for a healthier Canada. Progressive physicians are beginning to prescribe exercise: imagine if through partnership, they could fill the prescription by referring individuals directly into activity programs led by activity professionals specifically trained to work with all populations. Imagine if health insurers all offered the same kind of “healthy living discounts” automobile insurers are beginning to offer safe drivers. Imagine if instead of making an appointment to see a doctor or nurse practitioner when we are ill, physical literacy professionals made check-ups with us to counsel on healthy lifestyles and help us find appropriate activity programs.

Imagine if cardiac bypass surgery was seen not as a success of the medical system but as a failure of society for allowing the patient to need one in the first place.

Imagine if the same attention and funding currently devoted to cancer or dementia research and care was directed to research, training and programming for physical activity, reducing the incidence of some cancers and dementia.



IT BEGINS WITH ENGAGEMENT

These may seem like lofty goals that will take decades to achieve. However, by working together our goals can be reached sooner. To promote, develop, and maintain physical literacy in Canadian communities, it is essential to engage sport, education, recreation, health and the relevant policy makers and legislators as committed partners from the outset.

To create effective and comprehensive opportunities for physical literacy, communities can start by building a leadership team made of physical literacy champions from sport, recreation, education, and health. Whenever possible, the leadership team should also include members of local government and other key community partners. In getting started, the following steps are recommended:

1. Identify potential physical literacy champions in sport, recreation, education, health, local government, and other key community partners.
2. Provide a short briefing to these potential champions.

3. Identify physical literacy initiatives in other communities and consult with their leaders.
4. Invite leaders from other community initiatives to speak in your community and provide suggestions for how to advance physical literacy locally.
5. Host a physical literacy workshop in your community for parents, stakeholders and/or potential community partner organizations.
6. Support the creation of a physical literacy council to advance physical literacy in your community.

Successful community physical literacy initiatives ensure that all relevant stakeholders and partners have a seat at the table. The key first step is dialogue, convening partners in each community to discuss what we must do to create a Canada in which everyone is durable by design.

A PHYSICALLY LITERATE FUTURE

This document addresses a pressing public health issue in Canada. With the trend towards obesity, inactivity, and sedentary behavior among Canadians of all ages, the health of the nation is in peril. This document has presented a vision for creating a future Canada characterized by physical literacy and health, but it will require decisive action from all stakeholders to succeed.

Physical literacy is both protective and enabling. Through the promotion and development of physical literacy, a future Canada can be imagined that is characterized not by chronic disease and sedentary behavior, but instead by physical activity and vital health on a mass scale. In this ideal future, Canadians develop physical

literacy from an early age, and they maintain it throughout their lives. Through physical literacy and by staying active at all ages, resilience to injury, illness and a better quality of life can be enjoyed across the many transitions each lifetime brings.

Physical literacy is a key to the future wellness and prosperity of Canada. Developing it is a job for everyone who cares about the health and wellness of our country, and it a task for a new generation of professionals, policy makers, and organizations who serve the interests of sport, recreation, education, and health. Working together, we can help every Canadian become durable by design.





Learn More

In Canada, many organizations and agencies work directly in developing and delivering community sport, recreation, and physical activity programming to youth, adult, and older adult participants. Dozens of more organizations and groups are involved in providing health and educational services that directly or indirectly support active lifestyles. Some of the major organizations are listed below. We encourage you to learn more by visiting these groups and agencies online:

**ACTIVE LIVING COALITION FOR
OLDER ADULTS**
www.alcoa.ca

The Active Living Coalition for Older Adults (ALCOA) strives to promote a society where all older Canadians are leading active lifestyles that contribute to their overall well-being.

**CANADIAN CENTRE FOR OCCUPATIONAL
HEALTH AND SAFETY**
www.ccohs.ca

**CANADIAN PARKS AND
RECREATION ASSOCIATION**
www.cpra.ca

CANADIAN PUBLIC HEALTH ASSOCIATION
www.cpha.ca

Founded in 1910, the Canadian Public Health Association (CPHA) is the independent voice for public health in Canada with links to the international community. As the only Canadian non-governmental organization focused exclusively on public health, CPHA is uniquely positioned to advise decision-makers about public health system reform and to guide initiatives to help safeguard the personal and community health of Canadians and people around the world.

CANADIAN SPORT FOR LIFE
www.canadiansportforlife.ca

**CANADIAN THERAPEUTIC
RECREATION ASSOCIATION**
www.canadian-tr.org

The Canadian Therapeutic Recreation Association (CTRA) is a national association of practitioners in the field of therapeutic recreation. Key advocacy work of the CTRA includes promoting public awareness and understanding of therapeutic recreation, and developing and promoting the adoption and implementation of professional standards for the delivery of therapeutic recreation services.

CARP
www.carp.ca

CARP (formerly the Canadian Association of Retired Persons), is a national, non-partisan, non-profit organization promoting social change that wishes to bring financial security, equitable access to health care and freedom from discrimination. CARP envisions a society in which everyone can live active, independent, purposeful lives as they age.

**OCCUPATIONAL MEDICINE SPECIALISTS
OF CANADA**
www.omsoc.org

The mission of the Occupational Medicine Specialists of Canada is to promote and enhance the specialty practice of occupational medicine in Canada, a specialty recognized by the Royal College of Physicians and Surgeons of Canada, to promote and support continuing professional development for specialists through the accreditation of continuing medical education activities, and to act as the Canadian voice for that specialty.

PARTICIPACTION
www.participaction.com



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ACKNOWLEDGMENTS

CONTRIBUTORS:

Andrea Carey
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Clayton Jay Melnike
Michelle Pannor Silver PhD
Parambir Singh Keila, MD

EDITOR: Paul Jurbala

LEAD WRITER: Jim Grove

PHOTO CREDITS:

Aboriginal Sport Recreation & Physical Activity Partners Council
Kevin Bogetti-Smith
Garret Elwood

ISBN: 978-1-927921-22-7

PUBLICATION DATE: January 2016





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