

British Columbia Recreation and Parks Association



Literature Review of

ACTIVE AGING

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INTRODUCTION

“Successful aging is more than simply a matter of health or disability. Rather, it goes further to recognize outcomes for people. Successful aging comprises what people actually do and their satisfaction with life.”¹ The concept of successful aging comes from the literature on gerontology and can be used in various ways to describe the well-being of older persons. Successful Aging is “the ability to maintain three key behaviours or characteristics: low risk of disease and disease-related disability; high mental and physical function; and active engagement with life.”²

Active aging today is more than promoting physical activity or continued employment in seniors. In keeping with a population health approach, it has changed to incorporate elements that “make the most of life.” In British Columbia (BC), the Ministry of Health’s *Healthy Aging Through Healthy Living*³ document presented five key priority issues relevant to active aging. They are:

- Healthy Eating
- Injury Prevention
- Physical Activity
- Tobacco Cessation
- Social Connectedness

BC has one of the most rapidly aging populations in Canada. By 2031, 24% of British Columbia’s population will be over the age of 65.⁴ Several initiatives are underway to address the issue of promoting active aging by encouraging healthy lifestyle choices.

In October 2005, the Ministry of Health released the discussion paper *Healthy Aging through Healthy Living*. The paper provides evidence to support five key priority issues and sets the context for key stakeholders to address healthy aging for seniors in BC. Also in 2005, the Premier’s Council on Aging and Seniors’ Issues was convened with a mandate to examine two key issues:

- how to support seniors’ ability to continue as contributing members of society; and,
- how to support seniors’ independence and health.

In March 2006, the Ministry of Health hosted an Expert Forum on *Healthy Aging through Healthy Living* which provided an opportunity for key stakeholders to dialogue with the Ministry of Health on recommended actions, strategic directions and effective interventions.

This literature review was commissioned by the BC Recreation and Parks Association (BCRPA) to contribute to the information by focusing on strategies that assist seniors⁵ to stay active.

¹ Kochera, A. Straight, A. Guterbock, T. 2005. *Beyond 50.05: A Report to the Nation on Livable Communities*. AARP.

² Ibid.

³ BC Government – Ministry of Health. 2005. *Healthy Aging through Healthy Living: Towards a Comprehensive Policy and Planning Framework for Seniors in BC*.

⁴ Ibid.

⁵ As per the BC Government, a senior is anyone 65 years of age or older.

DESCRIPTION

This literature review looks at strategies for all of the five key priorities identified in the Ministry of Health's *Healthy Aging Through Healthy Living*⁶ document, and at livable communities in support of healthy aging.

An international research review was conducted to describe:

- Consideration for personal and environmental factors such as demographics, living conditions, health, mobility, social support, etc.;
- Strategies and the elements of success for those strategies in each of the priority areas;
- Resources, tools, and examples of best practice, where available.

METHODS

This search was conducted using medical databases (e.g. Medline, the Cochrane Libraries, etc.) and other specialized databases (e.g. ABI Inform). The Grey Literature was also searched as well as links to quality, evidence-based practice resources on the Internet in Public Health and Health Promotion (e.g. Centre for EBM at Oxford and Toronto). A search of general Internet sites was also undertaken using Google and FireFox.

Information was included if it:

- provided the best evidence for all or some of the critical elements being considered;
- focused on strategies rather than theory;
- could demonstrate best or promising practices;
- was in English;
- was accessible in print, and/or through an online library system, and/or through general Internet searches.

A SNAPSHOT OF SENIORS IN BRITISH COLUMBIA

The following information is taken from the *Profile of Seniors in British Columbia*.⁷ Selected highlights reveal that the senior population in BC is diverse, and that gender, age, income, health, social and living conditions are important determinants in the well being of seniors.

A "senior" in British Columbia is anyone age 65 and over. Most seniors are under the age of 80. Out of all the seniors (over half a million) in British Columbia, 56% are women and 44% are men. The higher percentage of women is likely due to the fact that women live longer than men.

Distribution and Demographics

The Vancouver Island and Interior Health Authorities have the highest proportion of seniors in their populations at 16% each. The Vancouver Coastal and Fraser Health Authorities are around the provincial average of 13.3%. The Northern Health Authority has a much lower proportion of seniors in its population with just 8% over age 65. There are no notable differences in the distribution of men and women in the various health authorities.

⁶ BC Government – Ministry of Health. 2005. *Healthy Aging through Healthy Living: Towards a Comprehensive Policy and Planning Framework for Seniors in BC*.

⁷ Graham, T. 2004. *A Profile of Seniors in BC*. Children's, Women's and Seniors' Health Population Health and Wellness Ministry of Health Services.

BC is an attractive place for seniors who are relocating. In total, immigrants made up 36% of the total senior population in 2001. 61% were born in Europe, 29% were born in Asia, and 5% were born in the United States. Visible minorities make up 12% of the senior population in BC, compared to the national average of 6.6%. The most prevalent visible minority is Chinese (6.8%), followed by South Asian (2.7%).

About 10% of British Columbia women are between the ages of 65 and 74. About 12% of men in British Columbia are 65 years or older. In 2002, life expectancy at age 65 was 21.4 years for women and 18.2 years for men. 4% of the total Aboriginal population in BC is Aboriginal elders (compared to 13% of the total in the non-Aboriginal population). Status Aboriginal seniors have a shorter life expectancy than non-status and non-Aboriginal seniors (75.4 years compared to 82.5 and 86.4 years for women; and 69.9 years compared to 77.9 and 83.2 years for men).

Income

On average, seniors have lower incomes than people in most other age groups. Income is a key determinant of health for all groups and is strongly linked to other important determinants such as housing and nutrition. The majority of seniors have an annual personal income of less than \$40,000. 42% of senior women and 24% of senior men have incomes of less than \$15,000. About one-third of seniors who receive Old Age Security also receive the Guaranteed Income Supplement and can be classified as having low incomes. Seniors spend more than half of their yearly income on basics such as shelter, food, and transportation.

Health Status

Most seniors in British Columbia say their health is either excellent, very good, or good. Only a small proportion of seniors say their health is either fair or poor. Younger seniors are much more likely to feel positive about their health than older seniors. Seniors who have a high income are much more likely to rate their health as excellent compared to seniors of low income (31.7% compared to 16.2%).

More than half of seniors have good vision, hearing, speech, mobility, and cognition. However, seniors are more likely to have moderate or severe health problems than other age groups, and older seniors have more of these problems than younger seniors. Seniors are much more likely to have chronic conditions than younger age groups. Falls present special considerations for seniors.

Deteriorating physical health can quickly lead to confusion, fear and chronic pain. When disabilities occur later in life, individuals who were involved in working, socializing and traveling may suddenly face lower incomes, reduced mobility and dependence on caregivers and assistive devices. These changes can have a dramatic effect on seniors' mental and emotional well-being, and physical health.

Physical Activity and Healthy Weights

As people age, they become less active. Younger age groups are more likely to be physically active than seniors age 65 and older, and younger seniors are more likely to be physically active than older seniors. Men are more likely to be more physically active than women. Approximately one-third of British Columbians age 65 and over participate in daily physical activity, a rate similar to the rest of the population. Seniors age 85 and over are less likely to participate in daily physical activity than other age groups. Only 10% of seniors age 85 and older are physically active.

Rates of obesity vary by age and the proportion of individuals who fall within the range of a healthy body weight declines with age. Adults age 51 to 70 have a higher proportion of obesity than any other adult age group. Seniors age 71 and over have the highest proportion of overweight people in comparison to all other adult age groupings.

Social Support

Seniors' self worth and empowerment are often connected to their social roles, including employment roles, and can affect their health. 5% of senior men and 2% of senior women in BC are in the paid work force, with a significant proportion working part-time. Senior women in the paid work force (21%) are more likely than senior men (19%) to be working part-time. Many employed seniors are self-employed.

Social support is an important factor in seniors' health. Adequate social support reduces the negative effects of highly stressful situations such as a serious illness. Social ties promote seniors' health and are related to lower mortality and enhanced physical and psychological well-being. The vast majority of seniors are involved in social networks and are not socially isolated. They have someone to confide in and ask for advice, someone who makes them feel loved and cared for and someone they can count on in a crisis. Family and friends tend to encourage seniors to adopt healthy lifestyle practices. Consequently, seniors with extensive friendship networks and companionship tend to have a better appetite, more protein intake, and more calories in their diet.

The next five sections of this literature review focus in detail on each of the five key priorities identified in the Ministry of Health's *Healthy Aging Through Healthy Living*⁸ document. Again, the literature will consider personal and environmental factors and barriers, examine strategies in each of the priority areas, list resources, tools, and examples of best practice.

HEALTHY EATING

Nutrition information, standards and recommendations differ throughout the world. This literature review contains nutritional information obtained only from credible, Canadian sources. Tools and strategies were obtained from other non-commercial international sources.

Eat well to age well is the nutrition motto of the National Advisory Council on Aging.⁹ The most recent data on obesity in BC, however, show that almost 69% of seniors age 65 to 74 years are either overweight or obese (2004 data). This trend seems to suggest that the proportion of seniors who are overweight and obese is on the increase.¹⁰

A healthy diet includes grain products, fruits and vegetables, lean meats, nuts and beans (meats and alternatives) and dairy products. Canada's Food Guide to Healthy Eating¹¹ recommends 5 - 12 servings of grain products, 5 - 10 servings of fruits and vegetables, 2 - 3 servings of meats and alternatives and 2 - 4 servings of dairy products every day. The *2004 BC Nutrition Survey* found that most adults, including seniors, did not eat enough from each food

⁸ BC Government – Ministry of Health. 2005. *Healthy Aging through Healthy Living: Towards a Comprehensive Policy and Planning Framework for Seniors in BC*.

⁹ Government of Canada, National Advisory Council on Aging. 2004. *Eat Well to Age Well. Expression*, (17)3.

¹⁰ BC Government. 2005. *Healthy Aging Through Healthy Living*. www.healthservices.gov.bc.ca/cpa/publications/index.html

¹¹ Canada's Food Guide to Healthy Eating. See: http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index_e.html

group. Slightly less than 50% of men aged 65 to 84 years and close to 60% of women aged 65 to 84 years did not eat the recommended five servings of vegetables and fruit per day.¹²

Vitamins and Minerals

The *2004 BC Nutrition Survey* also showed that most seniors do not eat enough grain products, milk products, or vegetables and fruits.¹³ People over 50 need extra calcium and vitamin D for bone health. Calcium may also help control weight and blood pressure, but most people don't get enough.

Most British Columbians (of any age)¹⁴ do not get enough Vitamin B6 (important for brain functioning and protein metabolism) or folate (which makes healthy blood cells and helps to keep your heart healthy). Vitamin B6 requirements increase after age 50.¹⁵

Vitamin B12 is important for healthy blood cells, and our ability to absorb it decreases as we age. Some seniors may benefit from taking a supplement or choose B12-fortified foods. "If you don't get enough B12 you may feel tired, get forgetful, have difficulty thinking and concentrating, and get tingling in your fingers and toes."¹⁶ "A daily multivitamin supplement may help you meet your needs for vitamins B6, B12, D and folic acid."¹⁷

Supplements provide some vitamins and minerals but they do not provide all the nutrients and essential components of foods such as protein, carbohydrates, fibre – and they may not be safe for everyone. "A balanced diet rich in whole grains, fruits and vegetables, with lean meats and lower fat dairy products is still the best way to get most nutrients."¹⁸

BARRIERS TO HEALTHY EATING

Eating well is important at any age. Proper nutrition helps maintain health and it provides the energy needed for daily activities. For some seniors, however, eating balanced, nutritious meals and getting enough of the essential nutrients can be a real challenge. This is true for a number of reasons:

- Family changes such as children growing up and moving away from home or the loss of a spouse can result in having to spend many mealtimes alone.
- Some people become much less active as they get older, especially after they retire. This can result in a poor appetite.
- The sense of taste and smell may decrease in some seniors. Foods are much less appealing when you can't smell or taste them.
- For some, wearing dentures interferes with the enjoyment of meals.
- Prescription medications or health problems can interfere with appetite and the absorption of certain nutrients from food.
- Difficulty getting around and a lack of energy can make it hard to prepare proper meals or go out for groceries.

¹² BC Ministry of Health Services. 2004. *British Columbia Nutrition Survey*. <http://www.moh.hnet.bc.ca/prevent/nutrition/pdf/fgreport.pdf>

¹³ ActNowBC. 2006. Government of British Columbia. Retrieved from <http://www.actnowbc.gov.bc.ca/EN/407/265?PHPSESSID=7260c55542fb62b515f9ec9db7ceec32>

¹⁴ BC Ministry of Health Services. 2004. *British Columbia Nutrition Survey*. <http://www.moh.hnet.bc.ca/prevent/nutrition/pdf/fgreport.pdf>

¹⁵ ActNowBC. 2006. Government of British Columbia. Retrieved from <http://www.actnowbc.gov.bc.ca/EN/407/265?PHPSESSID=7260c55542fb62b515f9ec9db7ceec32>

¹⁶ *ibid.*

¹⁷ National Advisory Council on Aging. 2004. *Eat Well to Age Well. Expression*, (17)3.

¹⁸ ActNowBC. 2006. Government of British Columbia. Retrieved from <http://www.actnowbc.gov.bc.ca/EN/407/265?PHPSESSID=7260c55542fb62b515f9ec9db7ceec32>

STRATEGIES TO IMPROVE HEALTHY EATING

The sites below offer the best of a wide range of information about seniors' nutrition and healthy eating.

General and Background Information about Nutrition

[Canada's Food Guide to Healthy Eating](#) (Health Canada)

[Heart and Stroke Foundation of Canada](#) – Tips for nutritious meals and heart health

"5 to 10 a day - Are you Getting Enough?" is a consumer-oriented campaign that provides health information as well as simple, actionable tips to increase vegetable and fruit consumption. The public can get further information, easy tips and recipes at www.5to10aday.com, or by calling the Canadian Cancer Society's Cancer Information Service at 1-888-939-3333.

Individual Level Strategies, Tools and Resources

From the BC Health Files on nutrition: "Our nutritional needs change as we age - but the link between a good diet and staying healthy remains." (BC Health Guide) The following information provides links to specific information about nutrition for seniors.

- [Dietary Fats and Your Health](#)
- [Folate and Your Health](#)
- [Fibre and Your Health](#)
- [Food Sources of Calcium and Vitamin D](#)
- [Healthy Snacking for Adults](#)

In collaboration with the Senior Friendly Program, Dietitians of Canada has developed a series of 12 tip sheets to assist seniors with planning, shopping and preparing healthy meals:

- [Planning Meals: Using Canada's Food Guide to Healthy Eating](#) (Dietitians of Canada)
- [Planning Meals: Variety and Balance](#) (Dietitians of Canada)
- [Planning Meals: Fibre Facts](#) (Dietitians of Canada)
- [Planning Meals: The Fat Challenge](#) (Dietitians of Canada)
- [Shopping for One or Two: Planning](#) (Dietitians of Canada)
- [Shopping for One or Two: On a Budget](#) (Dietitians of Canada)
- [Cooking for One or Two: Meal Preparation Made Easy](#) (Dietitians of Canada)
- [Cooking for One or Two: Easy Meals to Make](#) (Dietitians of Canada)
- [Cooking for One or Two: Creative Use of Leftovers](#) (Dietitians of Canada)
- [Cooking for One or Two: Ready-Made Meals](#) (Dietitians of Canada)
- [Cooking for One or Two: Emergency Food Shelf](#) (Dietitians of Canada)
- [Cooking for One or Two: Eating Alone](#) (Dietitians of Canada)

ActNowBC provides a cookbook to assist seniors with nutrition:

- Cookbook: The Senior Chef – Cooking for One or Two.
<http://www.healthservices.gov.bc.ca/prevent/pdf/senchef.pdf>

Community Level Strategies and Resources

Guidelines for helping to make grocery stores more senior friendly. [Senior Friendly Grocery Store Guidelines](#) (Dietitians of Canada)

Healthy Eating for Healthy Aging - A nutrition education kit for community leaders interested in helping seniors learn about healthy eating. The kit has been developed for community leaders who have the opportunity to incorporate healthy eating information into programs they are currently running or planning for seniors. The development of this resource was supported by the Ontario Ministry of Health and Long-Term Care through the Ontario Stroke Strategy. <http://www.nutritionrc.ca/resources/heha-book-ens.pdf>

INJURY PREVENTION

While most future seniors will be healthier and in better physical condition as a result of improved health care and education throughout their lifetime, it is an accepted fact that older people are more likely to suffer from disability than younger people. The increase primarily affects persons age 75 and over so that by age 85, about one half of Canadians experience at least one disability in relation to sight, hearing, cognition, mobility or manual dexterity.¹⁹ The fundamental conditions of aging, such as decreased visual acuity, hearing loss, mobility impairment and a decrease in balance, strength and flexibility, all lead to a greater chance that seniors' safety and security will be jeopardized.

RISK FACTORS TO INJURY FOR SENIORS

There are many risk factors and conditions which can affect vulnerability in later life. These are summarized in the following table under biological, behavioural, social and environmental categories.²⁰

Biological	Behavioural	Environmental	Socioeconomic
Advanced age	Risk-taking or preventive behaviour (e.g. exercise)	Poor building design and/or maintenance	Income inadequacy
Female gender	Inappropriate medications and/or alcohol use	Unsafe stairs	Low educational levels
Chronic illness	Taking of any:	Slippery/Uneven surfaces	Inadequate housing
Stroke	Tranquilizers	Lack of:	Social environments, values and rules of society (i.e. ageism)
Osteoporosis	Sleeping pills	Washrooms	Poor social support networks
Arthritis	Antidepressants	Handrails	Inadequate caring relationships
Cognitive Impairment	Antihypertensives	Curb ramps	Social isolation
Chronic disabilities	Antidiabetic agents	Rest areas	Psychological factors:
Osteoporosis	Inappropriate footwear	Proper lighting	Fear of falling
Mobility changes	Choosing not to use a cane or other needed mobility aids	Grab bars	Fear of crime
Gait disorders	Inactivity	Obstacles:	
Poor balance		Scatter rugs	
Low muscle strength		Clutter	
Sensory changes		Poles	
Poor vision/hearing		Sidewalk furniture	
Wearing bi-focals		Hazardous mobility aids	
Diminished touch		Lack of appropriate transportation	

¹⁹ Public Health Agency of Canada. 1999. *Enhancing Safety and Security for Canadian Seniors: A Federal/Provincial/Territorial Reference Document*. Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/pubs/enhancing/pdf/enhancing_e.pdf and http://www.phac-aspc.gc.ca/seniors-aines/index_pages/publications_e.htm#injury

²⁰ Scott, V. 1999. PhD Dissertation, University of Victoria.

Not all people experience these risk factor changes and the extent of the change varies between people. It is important to note that these changes often occur in tandem and that the more changes an individual is experiencing, the greater the chances are that a threat to security may occur.

As shown in the table above, poverty is a risk condition in relation to safety and security. Living on a low income can mean not being able to purchase hearing aids, new glasses, suitable footwear or aids which would help reduce the chance of a fall or other injury. People with few resources in later life may be less able to afford needed alterations to their homes. The groups most affected by low incomes are women age 75 and over who live alone. Additionally, people on low incomes are often unable to afford to participate in educational offerings or fitness programs.

Of all the causes of seniors' injuries, falls are by far the biggest problem, accounting for over 87% of unintentional injuries resulting in hospitalization for those 71 years of age or over, and 75% of the deaths resulting from injury. For Canadians 65 years of age or older, direct and indirect cost to the health care system for fall-related injuries alone is estimated at \$2.8 billion annually.²¹

STRATEGIES TO ADDRESS INJURY PREVENTION

Community Level Strategies²²

Action at the local community level is important for prevention of injuries among seniors. Effective community strategies are those that arise from collaborative efforts involving seniors, community service providers, agencies and organizations representing seniors, businesses, and governments.

- Enhanced public awareness: A community that is well informed and observant serves both private and public interests. Public awareness campaigns can educate the community about factors that contribute to injuries for seniors. Seniors and their families, the general public, and personnel such as mail and paper carriers, garbage collectors or building managers are well-situated to notice signs of hazards in a community. They can detect if a person has been snowed-in, is too ill to pick up the mail or newspaper, or they may observe hazards in need of repair such as broken stairs or cracked walkways. Public awareness campaigns can also be targeted to the business community to inform them of potential hazards related to their services and products.
- Seniors injury prevention coalitions and networks: The structure and function of seniors' injury-prevention coalitions vary in each community depending on the nature of the issue to be tackled, the stakeholders who need to be involved, and the availability of community resources. These resources can take the form of information, financial assistance, staff support or places to hold meetings. It is important that all perspectives be represented as a change may address one group's issue while creating a new problem for another group. Municipal governments and local health authorities are well placed to coordinate community efforts to reduce injury and promote safety for seniors. Local governments can work with existing seniors' organizations to mutually define needs and resources.

²¹ Health Canada. Division of Aging and Seniors. 2002. *Prevention of Unintentional Injuries Among Seniors*. Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/pubs/workshop_healthyaging/pdf/injury_prevention_e.pdf

²² Public Health Agency of Canada. *Enhancing Safety and Security for Canadian Seniors*. Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/pubs/enhancing/chap3_e.htm

Community Level Resources and Best Practice Examples

Canadian Health Network: Preventing Falls - Active Independent Aging. Active Independent Aging provides materials to help leaders understand issues related to falls and physical activity among older adults. It suggests ways to get older adults involved in falls prevention and safe, active living. And, it looks at ways organizations can help make their immediate surroundings and community safer from falls and more inviting for active living. Program tools, handouts, etc. can be found at:

<http://www.falls-chutes.com/guide/english/intro/pdf/AIAGuideResources.pdf> and <http://www.falls-chutes.com/guide/english/resources/index.html>

Promising Pathways is a Falls Prevention Program for Older Canadians Living in the Community. This best practice resource, which includes tools, was developed by the Public Health Agency of Canada.

http://www.phac-aspc.gc.ca/seniors-aines/pubs/Falls_Prevention/Promising_Pathways/pdf/PromisingPathwaysE.pdf

The Queensland Government in Australia has developed a very extensive falls prevention program for older adults. These publications are very user friendly and full of good information. The initiative's strategic framework and other activities are helpful for other communities that are addressing falls in older adults. <http://www.health.qld.gov.au/fallsprevention/publications.asp>

Policy and Organizational Level Strategies²³

The Public Health Agency of Canada recommends the following strategies at the policy and organizational levels to address injury prevention for seniors:

- Assessing individuals at risk: The application of assessment tools can be initiated by anyone working with a senior who identifies a risk situation. The assessment tools should be available to physicians, home care nurses, ambulance attendants, physiotherapists, emergency room personnel, and other health care workers. Ideally, a multidisciplinary approach should be taken to assessment and intervention. Many tools related to falls assessment are available at the BC Injury Research and Prevention Unit.²⁴
- Education and training for organization staff: Education and training concerning the risk factors, assessment skills, and evaluation techniques of prevention strategies should be provided to all who work with seniors.
- Emergency preparedness and response: Emergency preparedness strategies are needed for fire evacuation, coordination of emergency services (fire, ambulance, and police), and training of first aid response teams. Seniors may be frail, deaf or suffer from dementia – all of which would complicate their ability to respond in emergency situations. Preventive devices must be correctly installed and maintained. This can be a problem for seniors who live alone or have limited incomes. Information of reducing risk of injury should be made available through a variety of forms including local television stations, newspapers, newsletters of seniors' organizations, pamphlets, fridge-magnets, or stickers to be kept by the telephone.

²³Public Health Agency of Canada. *Enhancing Safety and Security for Canadian Seniors*. Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/pubs/enhancing/chap3_e.htm

²⁴ BC Injury Research and Prevention Unit. See: <http://www.injuryresearch.bc.ca/categorypages.aspx?catid=1&subcatid=7#toolrepository>

Resources for Background Information on Injury Prevention

Health Canada. Division of Aging and Seniors. 2002. Prevention of Unintentional Injuries Among Seniors. http://www.phac-aspc.gc.ca/seniors-aines/pubs/workshop_healthyaging/pdf/injury_prevention_e.pdf

The Evolution of Seniors' Falls Prevention in British Columbia. 2006. http://www.health.gov.bc.ca/cpa/publications/falls_report.pdf

PHYSICAL ACTIVITY

Active living is essential for daily living and a cornerstone of health and quality of life. Adults who are less active lose 16% of their existing level of aerobic fitness every 10 years. Adults who exercise for 30 minutes or more on most days of the week can slow down or reverse an age associated functional decline.²⁵

Definition of Levels of Physical Activity²⁶

This definition appears throughout the literature and is used as a baseline for determining levels of physical activity.

- **Inactive or sedentary** is defined as using less than 1.5 kilo-calories per kilogram of body weight per day.
- **Moderately active** is defined as using 1.5 to three kilo-calories per kilogram of body weight per day. For example, walking at a brisk pace for about 30 minutes.
- **Active** is defined as using three or more kilocalories per kilogram of body weight per day. For example, walking at a brisk pace for one hour.

Adults, including seniors, should strive to be 'moderately active to active', most days of the week. Is this presently being met in BC? The short answer is 'no'. Almost half of seniors in BC ages 65+ are inactive or sedentary, especially those over age 75. Females are much more likely than males to be physically inactive (48.5% compared to 37.8%). Those living in the northern part of the province are less active than those in the south, although the Fraser Health Authority area (Surrey, Burnaby, etc.) is less active than most other parts of the province. Those who are most active (all ages) live in southern Vancouver Island.²⁷ Why are seniors inactive? The next section examines this question.

Factors Associated with Seniors' Physical Activity Behaviour

Numerous factors influence the success of physical activity interventions for seniors. "An understanding of these factors is critical to developing effective intervention strategies that will address the problem of physical inactivity, and improve the health status and quality of life of the older adult."²⁸

Chad, et al examined relationships between selected socio-demographic, health-related and environmental factors and levels of physical activity in seniors across three age groups in Saskatoon, SK, using the Physical Activity Scale for the Elderly (PASE).

²⁵ Active Coalition for Older Adults. Retrieved from www.alcoa.ca

²⁶ BC Government. 2004. *Profile of Seniors in BC*. Retrieved from http://www.hlth.gov.bc.ca/seniors/publications/profile_of_seniors.pdf

²⁷ Statistics Canada. 2005. Canadian Community Health Survey.

²⁸ Chad, K. E. Reeder, B.A. Harrison, E.L. Ashworth, N.L. Sheppard, S.M. Schultz, S.L. Bruner, B.G. Fisher, K. L. Lawson, J. A. 2005. Profile of Physical Activity Levels in Community-Dwelling Older Adults. *Medicine & Science in Sports & Exercise*, 37(10):1774-1784.

Overall, significantly higher scores were seen in those individuals in the following categories: male, married or common-law, not living alone, not living in senior's housing, higher levels of education and higher incomes. Better physical health showed significant positive associations with physical activity scores. Individuals reporting at least four or more chronic health conditions had significantly lower physical activity scores than those reporting no chronic conditions. Higher scores were related to the presence of hills, biking and walking trails, street lights, various recreation facilities, and seeing others active.

BARRIERS TO PARTICIPATION

While there are identified factors, it is also important to understand the broader barriers that keep seniors from being physically active. The Public Health Agency of Canada - PHAC (2001) identified the following barriers that affect seniors' participation in physical activity and the types of activities they pursue:

- societal and group norms and beliefs that physical activity benefits decline with age;
- personal attitudes toward active living, and personal capacities such as social participation skills;
- awareness and knowledge concerning active living and its benefits;
- fear among seniors of harm, injury and death from participation in physical activity.

In the US, the Agency for Healthcare Research and Quality (AHRQ)²⁹ identified these barriers:

- some neighbourhoods and communities are poorly designed or unsafe, a particular obstacle for elderly persons who may feel especially vulnerable to crime or traffic;
- many have chronic medical conditions that require more care and planning in how they exercise;
- older adults may have trouble getting to facilities and programs, and those facilities may not provide adequate training and monitoring for older adults beginning a program;
- professionals may lack the time or expertise to address problems of physical inactivity among older adults - they often lack information about quality programs, about materials, and about how to make referrals to community resources;
- many older adults serve as caregivers for others, which can restrict their opportunities for regular physical activity. Often these caregiving responsibilities lead to poor health and depression for the caregiver.

No one type of activity will bring about all the benefits of physical activity, but despite the barriers described above, there are a number of proven and promising approaches that help promote physical activity among older persons.

STRATEGIES TO INCREASE PHYSICAL ACTIVITY

Policy and Community Level Strategies

The Public Health Agency of Canada (PHAC) pointed to the "Samuel Report"³⁰ which indicates that the most effective physical activity interventions are community-based and targeted at specific sub-populations (e.g. women, ethnic groups, etc.). Research supports most strongly multi-pronged, comprehensive approaches that incorporate education and awareness raising, community-based programs and home-based interventions.

²⁹ AHRQ. 2006. Retrieved from <http://www.ahrq.gov/ppip/activity.htm>

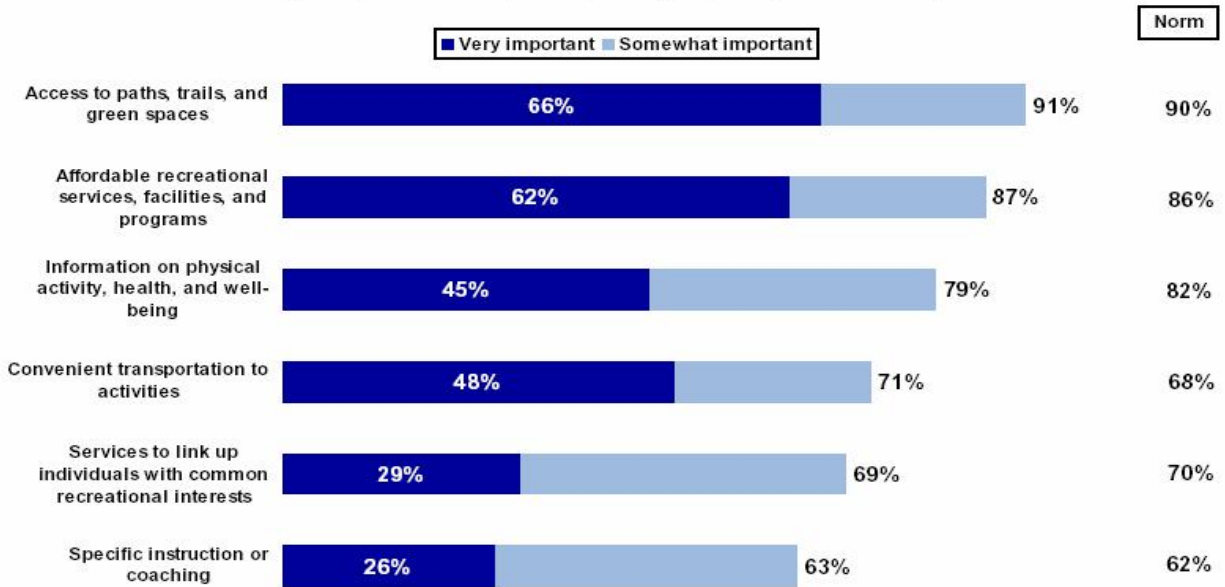
³⁰ Samuel, John & Associate. *The impact of selective determinants and the most effective interventions now available to achieve healthy aging*. Unpublished manuscript (2000).

The PHAC recommends:

- Improve access to places that people can be active, such as walking or bike trails, classes at gyms or senior centers, athletic fields, etc. A review of 12 studies that created or enhanced access to places for physical activity found, on average, a 25% increase in the number of persons exercising at least 3 days per week.
- Establish community-based programs, such as those that take place at community centers and senior centers, that can provide individually tailored programs for seniors to become more active. Such groups help members set individual goals; teach participants how to incorporate physical activity into daily routines; provide encouragement, reinforcement, and problem solving; and help sustain progress.
- Conduct community-wide campaigns that combine highly visible messages to the public, community events, support groups for active persons, and creation of walking trails.
- Establish community programs that help build individual and social support for physical activity.

In 2006, Ipsos Reid conducted a poll for the City of Vancouver³¹ in which survey respondents (all ages) identified the following solutions to increase their level of physical activity. Clearly, these perceptions parallel and support the PHAC’s recommendations.

Overall, how important would you say each of the following is in helping you become physically active? Would you say very important, somewhat important, not very important, or not at all important?



Base: Total Vancouver respondents (n=300)

Policy and Community Resources and Best Practice Examples

Policies and Resources from the Centre for Disease Control and Prevention (Resources for Older Adults) can be found at:

http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/older_adults.htm

³¹ Ipsos Reid. 2006. Recreation and Physical Fitness Study.

Centre for Healthy Aging: National Council on Aging. 2006. (US). The resources have been selectively chosen to be useful to those interested in developing and implementing healthy aging programs. <http://www.healthyagingprograms.org/content.asp?sectionid=102>

Publications, tools, resources supporting active aging and health as part of the National Blueprint in the US are available at <http://www.agingblueprint.org/pubs.cfm> .

Two programs, the “Active for Life” initiative - *Active Choices* and *Active Living Every Day* have shown that they can be successfully translated into community settings with diverse populations by trained staff and are very effective at increasing the levels of physical activity in seniors.

Active Choices³² emphasizes participating in individually selected activities that are facilitated with ongoing, brief telephone and mail follow-up delivered to the home. This six-month program teaches strategies that help individuals incorporate preferred physical activities into their daily lives, with a focus on individualizing the program for each person. Staff or volunteers are trained to provide regular, brief telephone-based guidance and support. While the essence of this program is characterized by ongoing telephone and mail-based guidance, introductory sessions are included to help participants get started and exercise safely. The program is particularly relevant for mid-life and older adults who prefer the flexibility of receiving ongoing personalized advice and support delivered via telephone, in the convenience of their homes.

Active Living Every Day³³ uses facilitated group-based problem solving methods to integrate physical activity into everyday living. Participants meet weekly in small groups for six months to develop the behavioural skills they need to build physical activity into their daily lives. Facilitated discussions, a self-help workbook, and interactive activities provide the basis of the weekly sessions. Additional information, activities and support for participants and facilitators are provided via an optional online component. The developers emphasize that small group format enables participants to receive support and encouragement from fellow participants, thereby building a support network that can last long after the program is over.

Individual Level Strategies

Walking groups and physical activity programs especially designed for seniors can help seniors become—and remain active. For example, senior swim clubs and water aerobic classes are excellent activities for people with arthritis.³⁴

Studies have found that seniors who own pets engage in more physical activity and have less disability than seniors who do not own pets. Dog owners were not only more likely to walk, but were also likely to walk farther and more often than those who did not have any pets.³⁵ Seniors who did walk their dogs were more likely to walk 150 minutes per week. At follow up, three years later, seniors who initially reported regularly walking their dogs were almost twice as likely as other seniors to continue to walk the recommended 150 minutes or more each week.³⁶

³² Active for Life Initiatives. Retrieved from http://www.activeforlife.info/about_the_program/program_information.html

³³ Wilcox, S. Dowda, M. Griffin, S.F. Rheaume, C. 2006. Activity Programs for Older Adults Into Community Settings. *American Journal of Public Health*, (96)7, p. 1201-1209. <http://www.activeforlife.info/default.aspx>

³⁴ Centre for Disease Control and Prevention. 2006. *Physical Activity for Everyone: Recommendations: Are there special recommendations for older adults?* Retrieved from http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/older_adults.htm

³⁵ Huggins, C. Reuters Health. Oct. 2006. NEW YORK (Reuters Health)

³⁶ Thorpe, J. 2006. Dog walking helps seniors meet exercise goals Johns Hopkins Bayview Care Center. *Journal of the American Geriatrics Society*. Retrieved from <http://healthsteps.healthcentersonline.com/newsstories/dogwalkinghelpseniorsmeetexercisegoals.cfm> .

Health professionals caring for middle-aged and seniors need to encourage them to be physically active. Social and productive activities requiring less physical exertion can complement physical activities and provide alternative interventions for frail older persons.³⁷

Individual Level Resources and Best Practice Examples

Active Anywhere Anytime: Older Adult Resource Kit. The Active Anytime Anywhere program is designed to enhance active living programs for seniors with low incomes. This kit provides everything for effective sessions to promote active living for seniors. Included are tip sheets on a variety of issues such as chronic diseases, healthy eating, back care, mental health and safety all in relation to being physical active. There are facilitator notes to stimulate discussions on the tip sheet issues, presentation materials, and suggested additional resources. For more information or to order this resource, contact the Aids to Daily Living/Community Rehabilitation Program of the Capital Health Authority (Alberta) at 780-413-7900. Cost: \$75 (CDN).

<http://www.centre4activeliving.ca/keyword.cgi?k=healthy%20eating>

101 Active Living Ideas for Older Adults. This poster has 101 ways for older adults to adopt an active lifestyle. The posters are free, but orders are limited to 100 folded posters and/or five flat posters per organization.

<http://www.centre4activeliving.ca/publications/101%20order%20form%20April%2006.pdf>

Stages of Change approach to increase physical activity: "Most people move through a series of five stages of readiness as they change behaviours. What helps someone in one stage may not work for someone in another stage. These stages represent a spiral path to adopting regular physical activity into your life." This resource is from the Centre for Disease Control and Prevention. Physical Activity for Everyone: Making Physical Activity Part of Your Life: Tips for Being More Active.

<http://www.cdc.gov/nccdphp/dnpa/physical/starting/index.htm>

Active living: Tips for supporting older adults at each stage of change. This is another resource for the Stages of Change approach. This tool describes each stage related to active living. It suggests what people at that stage might say. And, it includes key messages and suggestions to support people at each stage. The idea is that tailoring messages to a person's stage is effective in helping that person move from one stage to the next.

<http://www.falls-chutes.com/guide/english/resources/programtools/programtool4.html>

Canada's Physical Activity Guide to Healthy Active Living for Older Adults promotes physical activity in an aging society. The Guide from the Public Health Agency of Canada serves as a roadmap for older adults - explaining why physical activity is important, offering tips and easy ways to increase their physical activity, and stating how much is needed to maintain good health and improved quality of living later in life.

<http://www.phac-aspc.gc.ca/pau-uap/paguide/older/index.html>

National Indian and Inuit Community Health Representatives Organization. 2005.

<http://www.niichro.com/2004/pdf/catalogue.pdf> This manual from NIICHR0 informs Community Health Representatives and other front-line workers about promoting active living among older adults. The resource includes a:

- 30-minute video that demonstrates 15 safe exercises with some great Aboriginal music;
- 30-minute music cassette a 24-page exercise booklet demonstrating the 15 safe exercises;
- stretching poster.

³⁷ World Health Organization. 2000. *Active aging: From evidence to action*. Geneva: World Health Organization.

TOBACCO CESSATION

Tobacco use is the number one preventable cause of death and disease in Canada.³⁸ Tobacco use is very costly to the health care system, with most of the cost attributed to hospital care. Tobacco use is estimated to cost between \$3 and \$3.5 billion a year to the Canadian health care system, with most of the costs associated with hospital care.³⁹

Seniors in BC have the lowest smoking rate compared to all other age groups. In BC, 10% of senior men and 8% of senior women smoke daily compared to 21% of for men age 35 to 44 and 14% for women age 35 to 44 (BC Stats, 2005). Nevertheless, evidence shows that older smokers are more likely to be “hard-core” smokers, which are defined as heavy smokers with weak quitting histories who expect to never quit smoking. In general, older smokers have more pessimistic attitudes toward being ready to quit smoking and are less likely to recognize the health risks associated with smoking.⁴⁰

“The people [in BC] that are the smokers now are the people that are low income, people with chronic mental or physical disabilities, the aboriginal population, and the marginalized. The disempowered in our society are the people who continue to smoke, and who are now bearing the burden of the diseases related to that. ...We have to think about what we can do to create environments that can help them and support them in making the right choices. We need to not only have general messaging and general attention to the whole population, but we need to particularly look at vulnerable groups, like the aboriginal population and low-income groups, so we don't make that mistake of making the inequities in our society even worse than they have been.”⁴¹

The following information provides additional information to understand issues related to tobacco cessation and smokers in general.⁴²

Literacy Skills

Canadians with low literacy skills may not be able to understand and interpret health information. At least 45% of adult Canadians have low literacy skills and, therefore, do not have adequate reading abilities to manage most everyday reading requirements. Poor literacy skills tend to be associated with lower education, lower socio-economic status, living in rural areas and being elderly.

The programming implications of a high prevalence of low literacy skills among Canadian adults are particularly relevant to smoking cessation interventions. Almost all of the same groups within the general population that tend to have low literacy skills also tend to have the highest rates of smoking. As well, people with low literacy skills are less likely to have detailed knowledge of the health effects of smoking or the benefits of quitting.

Text-filled manuals for participants and activities with written instructions are typically core components of smoking cessation group programs and self-help guides. An inability to manage everyday reading requirements translates into an inability to access these programs and resources. In addition to this practical limitation, individuals with poor literacy skills can experience emotional and social barriers to seeking assistance for quitting smoking. In a society where reading skills are presumed, people with low literacy may have low self-esteem and lack

³⁸ BC Government. 2006. Healthy Aging through Healthy Living Towards a comprehensive policy and planning framework for Seniors in BC

³⁹ *ibid.*

⁴⁰ *ibid.*

⁴¹ Millar, J. 2006. Minutes: Select Standing Committee on Health. Report of Proceedings.

⁴² Health Canada. 2002: Inventory of Canadian Tobacco Cessation Programs and Resources. Retrieved from http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/ictcpr-rrpct/skills-niveau_e.html

self-confidence. They may be more likely to try to hide their difficulty with reading and less likely to seek help in improving their health.

To improve access to smoking cessation interventions for people with low literacy skills, program developers in the health promotion field need to collaborate with literacy groups and utilize literacy guidelines that are available from these groups.

Aboriginal Communities

For many Aboriginal communities, tobacco is a sacred plant that has an important role in traditional ceremonies and gift giving. At the same time, the prevalence of non-traditional smoking of tobacco is very high among Aboriginal peoples in Canada. Health Canada found that 62% of Aboriginal adults aged 15 and older smoke cigarettes daily. Smoking is a major Aboriginal health issue that needs to be addressed in a manner that reflects community values and meets community needs. There has been a general lack of public education within Aboriginal communities about the effects of smoking, second-hand smoke and also smokeless tobacco.

Aboriginal role models and symbols are important to make smoking cessation messages personally and culturally relevant. For many Aboriginal communities, being culturally sensitive also includes respecting tobacco's sacred role and clearly distinguishing between smoking and ceremonial tobacco use. The *NASAWIN* (Natives and Smoking and Why It Is Negative)⁴³ smoking education program and BC's *Honour Your Health Challenge* are two excellent examples of culturally appropriate smoking interventions for Aboriginal people. *Honour Your Health Challenge* is an "innovative six-week program that challenges Aboriginal people to quit or reduce tobacco misuse in the car or at home. Aboriginal people are trained to provide support in culturally appropriate activities related to tobacco misuse."⁴⁴

Ethno-cultural Groups

The following factors should also be considered when designing or adapting programs to meet the needs of other ethno-cultural groups:⁴⁵

- additional programming needs specific to gender, language, education and socio-economic status;
- extensive use of visual materials and ethnic media, and videos that are suited to a wide range of literacy skills and are available in a variety of languages;
- program staff's cultural awareness and ability to communicate with members of the community;
- target group participation in all phases of program development; and
- opportunities to provide information or programs through English as a Second Language (ESL) and Language Instruction for Newcomers (LINC) classes as well as other existing channels.

⁴³ NASAWIN (Natives and Smoking and Why It Is Negative) is a smoking education program developed by the Union of Ontario Indians for First Nations people. Retrieved from <http://outside.cdc.gov:8085/BASIS/ccdchid/web/ps/DDW?W%3DVERIFICATION++%3D+0011%26M%3D29%26K%3D2065%26R%3DY%26U%3D1>

⁴⁴ Aboriginal Tobacco Strategy. Honour Your Health Challenge. Retrieved from http://www.tobaccofacts.org/tob_control/strategy.html

⁴⁵ Health Canada. 2002. Inventory of Canadian Tobacco Cessation Programs and Resources. Retrieved from http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/ictcpr-rrpct/skills-niveau_e.html

STRATEGIES FOR SMOKING CESSATION – WHAT IS EFFECTIVE? WHAT IS THE BEST EVIDENCE?

There are many strategies that have been developed related to tobacco cessation, and it is an area that has had extensive research. It is often difficult to know what is most recent and best evidence in terms of effectiveness. Numerous interventions exist such as self-help and counselling interventions, incentive and contest interventions, pharmacological interventions, acupuncture and hypnotherapy interventions, and exercise and community-based interventions. The following information is condensed from the Cochrane Library's Database of Systematic Reviews.⁴⁶ It provides both the most recent, and the best, evidence. Full details of the references and more detail about the strategies and interventions can be found in Appendix A.

Effective interventions:

- There is good evidence that brief interventions from health professionals can increase rates of smoking cessation. Simple advice from healthcare professionals, including physicians, pharmacists and nurses, has an effect on cessation rates. The challenge is to incorporate smoking behaviour monitoring and smoking cessation interventions as part of standard practice, so that all patients are given an opportunity to be asked about their tobacco use and to be given advice and/or counselling to quit.
- Smoking cessation counselling delivered by a smoking cessation specialist is effective to assist smokers to quit. Brief counselling was just as effective as intensive counselling.
- Proactive telephone counselling helps smokers interested in quitting. Telephone quitlines provide an important route of access to support for smokers, and call-back counselling enhances their usefulness.
- Standard self-help materials may increase quit rates compared to no intervention, but the effect is likely to be small. There is additional benefit when used alongside other interventions such as advice from a healthcare professional, or nicotine replacement therapy. Materials that are tailored for individual smokers are effective, and are more effective than untailored materials.
- Group therapy is better than self help for helping people stop smoking.
- Quit and win contests at local and regional level appear to deliver quit rates (i.e. quitting) above baseline community rates, although the *population impact* of the contests seems to be relatively low (i.e. low reach). Additionally, incentives and competitions do not appear to enhance *long-term* cessation rates (i.e. staying quit), and early success tends to dissipate when the rewards are no longer offered.
- All of the commercially available forms of nicotine replacement therapy (NRT) are effective as part of a strategy to promote smoking cessation. They increase the odds of quitting approximately 1.5 to 2 fold regardless of setting.

Ineffective interventions:

- Interventions designed to enhance partner support for smokers in cessation programs failed to detect an increase in quit rates.
- The effects of hypnotherapy on smoking cessation claimed by uncontrolled studies (i.e. 6-month quit rates) were not confirmed by analysis of randomized controlled trials.
- The failure of the largest and best conducted community-wide programmes to detect an effect on prevalence of smoking is disappointing. A community approach will remain an

⁴⁶ The Cochrane Collaboration is an international not-for-profit organization, providing up-to-date evidence-based information about the effects of health care. They are the leaders in this area.

important part of health promotion activities, but designers of future programmes will need to take account of this limited effect in determining the scale of projects and the resources devoted to them.

- Clonidine (a pharmacological intervention) is effective in promoting smoking cessation, but prominent side-effects prohibit the usefulness of clonidine for this purpose.

Not enough, or questionable, evidence:

- There is insufficient evidence to support the use of any specific intervention for helping smokers who have successfully quit for a short time to avoid relapse. Until more evidence becomes available it may be more efficient to focus resources on supporting the initial cessation attempt rather than on additional relapse prevention efforts.
- There is no evidence available from long term trials that lobeline or nicobrevin (both pharmacological interventions) can aid smoking cessation. This does not mean that it is not effective, just that there is no evidence at this time.
- The antidepressants bupropion and nortriptyline aid long term smoking cessation but selective serotonin reuptake inhibitors (e.g. fluoxetine) do not. The fact that only some forms of antidepressants aid cessation and that they do so regardless of depressive symptoms strongly suggests that their mode of action is independent of their antidepressant effect.
- There is no consistent evidence that acupuncture, acupressure, laser therapy or electrostimulation are effective for smoking cessation.
- The research has been very weak regarding the effectiveness of exercise-based interventions alone or combined with a smoking cessation programme. Trials are needed with larger sample sizes, sufficiently intense exercise interventions, equal contact control conditions and measures of exercise adherence in order to evaluate effectiveness.

On the horizon, the notion of stage-based interventions for smoking cessation is presently being tested, along with smoking bans for reducing smoking prevalence and tobacco consumption, and mass media interventions for smoking cessation in adults.

Tobacco Cessation Resources and Best Practice Examples

Quitnow.ca (www.quitnow.ca) is internet based, free to all residents of BC, personalized, available 24/7 and offers peer support, chat rooms, email reminders, expert advice, tools and tips. Quitnow is also available by phone at 1-877-455-2233. Quitnow by phone is an effective, free, confidential telephone service.

Health Canada. 2002. Inventory of Canadian Tobacco Cessation Programs and Resources. http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/ictcpr-rrpccrt/skills-niveau_e.html

Link to Self-Help, Counselling and Group programs: http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/quit-cesser/info/pt/on_e.html

Easy Does It! Is a health communication training package, including a Training manual, Face to Face video and CD-ROM for working with low-literacy seniors. The complete training package is available in English and French for \$79.95 (plus shipping and tax) and can be ordered from the Plain Language Service, Canadian Public Health Association, 400-1565 Carling Avenue, Ottawa, ON K1R 8R1, Tel: (613) 725-3769, Fax: (613) 725-9826, E-mail: hrc@cpha.ca

SOCIAL CONNECTEDNESS

“Social connectedness” as it relates to aging is fairly new and to date, has not been as well researched as other areas of active aging (i.e. physical activity, injury prevention, tobacco cessation).

Social connectedness has been conceptualized and described in the literature as social capital⁴⁷, social networks, and social engagement. Some⁴⁸ have found that the words ‘social capital’ are too complex and have substituted ‘community engagement’.

Regardless of the terminology, common to each term is the focus on both the structure and quality of social ties, on *networks of family and social relations which are characterized by norms of trust and reciprocity*.⁴⁹ They refer generally to involvement in communities including volunteerism, philanthropy, political, civic, and religious involvement and informal social interactions such as time spent with friends and neighbours. Researchers found that aging participants receiving higher levels of emotional support over a 7.5-year period had better cognitive functioning.⁵⁰

BARRIERS TO SOCIAL CONNECTEDNESS

Family networks are important sources of financial, practical and emotional support, but it cannot be assumed all older persons have family networks available to them. Social networks decrease with age – highest at 55 and lowest at 85.⁵¹ Where family ties are non-existent or tenuous, friendship and neighbourhood links may form a critical part of a person’s informal support network.

Where people feel least able to reciprocate in exchanges of support, they are least likely to draw on help when they need it. Those least able to engage in family exchanges of support include divorced fathers, the childless, those whose families live too far away, recent migrants, those with chronic health problems, and people on low incomes. Several factors were found that differentiate the levels of supports available to aging population, in addition to the nature and physical proximity of family and social networks. These factors include.⁵²

- Socioeconomic status of older persons – those who were least well resourced had least support available to them.
- Ethnicity and culture – cultural norms govern the obligations and types of relationships that exist between generations and vary across cultures such that some populations exchange lower than average supports and others have higher than average.
- Family structure and change – when people who have experienced divorce or separation for example, exchanges of support can be minimal, most notably for men.

Special Considerations for Special Populations

Elderly women who live alone are considered at greater risk for loneliness, depression, and decreased mobility. Of non-depressed older people, women were more likely to have anxiety symptoms than men. Chronic conditions of urinary incontinence, hearing impairment,

⁴⁷ Stone, W. 2003. Inquiry into long-term strategies to address the ageing of the Australian population over the next 40 years. Australian Institute of Family Studies. Retrieved from <http://www.aifs.gov.au/institute/research/>

⁴⁸ Benevolent Society. 2006. Retrieved from http://www.bensoc.org.au/research/sc_communityengagement.html

⁴⁹ *ibid.*

⁵⁰ Seeman, T.E. Lusignolo, T.M. Albert, M. Berkman, L. 2001. Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur studies of successful aging. *Health Psychology*, 20 (4), 243 – 255.

⁵¹ *ibid.*

⁵² Wilson, R.S. Krueger, K.R. Arnold, S.E. Barnes, L.L. Mendes de Leon, C.F. Bienias, J.L. Bennett, D.A. 2006. Childhood adversity and psychosocial adjustment in old age. *American Journal of Geriatric Psychiatry*, 14(4):307-15.

hypertension and poor sleep were associated with a higher prevalence of anxiety symptoms. Persons with poorer psychosocial functioning and a need for more emotional support, also had higher rates of anxiety symptoms.⁵³

Approximately 80% of seniors live in urban areas where there is more access to services, but less security and more safety concerns. Rural seniors tend to be more isolated from family and from each other, and there are more transportation concerns. Health Canada recommends supporting community development initiatives in rural and urban areas to reduce seniors' isolation, and enhance their feelings of safety and security. Opportunities should be provided in the community (both urban and rural) to train seniors as leaders, giving them the skills and resources to assume and maintain leadership roles, and support seniors' centres to promote older adult learning and community leadership.

STRATEGIES TO IMPROVE SOCIAL CONNECTEDNESS

Built Environments

The senior center is an excellent environment where new supportive friendships can easily be formed. These friendships and other center activities have positive mental and physical outcomes.⁵⁴ Seniors' centres have increased their emphasis on activities of an educational nature, particularly in urban centres. To attract their members to these activities—many of whom do not have a positive attitude toward “education”—the centres called them “mental fitness” programs. Seniors' centres are ideal public sites for adult education and deserve greater public recognition and financial support.⁵⁵ Improvement in social network expansion leads to less loneliness and anxiety. In one study, it was discovered that women who lived alone participated in centre activities more frequently and, as a result, also created a social network that extended outside of the centre environment.⁵⁶

A study in Israel examined supportive community programs which aim to improve the quality of life of the elderly.⁵⁷ These programs pooled existing partner resources to provide a ‘benefits package’ that included basic medical services, an emergency call switchboard, a neighbourhood facilitator from the group, and social activities. “The major contributions of the program reported by the members was increasing their personal security, easing the burden on their children, and enabling them to remain at home. The supportive community program enriches the variety of services available, thus providing the elderly with the choice of staying within their familiar surroundings of their homes and neighbourhoods. This model appears to be both a cost-effective way to facilitate aging in place and a way to meet many of the essential needs, thereby maintaining their quality of life.” More information about these types are found in the Livable Communities section.

Natural Environments

The natural environment provides opportunities for independence, participation, self-fulfillment and dignity for people of all ages. Access to natural environmental resources by all age groups

⁵³ Mehta, K.M. Simonsick, E.M. Penninx, B.W.J. Schulz, R. Rubin, S.M. Satterfield, S. Yaffe, K. 2003. Prevalence and correlates of anxiety symptoms in well-functioning older adults: findings from the health aging and body composition study. *Journal of the American Geriatrics Society*, 51(4): 499-504.

⁵⁴ Aday, R.H. Kehoe, G.C. Farney, L.A. 2006. Impact of senior center friendships on aging women who live alone. *Journal of Women & Aging*, 18(1): 57-73.

⁵⁵ Health Canada. 1999. *Challenges of An Aging Society*.

⁵⁶ Dykstra, P.A. van Tilburg, T.G. Gierveld, J.D. 2005. Changes in older adult loneliness: results from a seven-year longitudinal study. *Research on Aging*, 27(6): 725-47.

⁵⁷ Berg-Warman, A. Brodsky, J. 2006. The supportive community: a new concept for enhancing the quality of life of elderly living in the community. *Journal of Aging & Social Policy*, 18(2):69-83.

is part of effective community planning and design. Many cities have gone to great lengths to enhance social connectedness for seniors by increasing access to the natural environment for activities such as cycling, walking, and social interaction and for aesthetic enjoyment. The BC Government's goals in the latest Strategic Plan is to continue to provide "opportunities for people to become more active in their communities by supporting recreational trail development and expanding cycling infrastructure partnerships."⁵⁸

Social Network and Community Environments

Volunteering is a big part of many seniors' lives. The literature is clear that older adults who engage in social activities are more likely to remain mentally and physically stimulated, thereby maintaining better overall health and quality of life. The 2003 study *Effects of Volunteering on the Well-Being of Older Adults*⁵⁹ found that based on the self-rated factors of health, functional dependency and depression, volunteering positively affects late life well-being. Volunteers reported their activities helped them:

- Improve their interpersonal skills (e.g. understanding people better);
- Motivate themselves and others to deal with difficult situations;
- Improve their communication skills.

There are strategies for seniors from ethno-cultural groups to mitigate loneliness or depression and uprootedness from the culture of origin, poor understanding of the dominant culture, and lack of meaningful contact with persons outside the family.⁶⁰

- Ensure immigrant seniors' access to second language education and acculturation to life in Canada and evaluate successful outreach mechanisms.
- Increase the number of service providers and volunteers who come from ethnic/racial minority communities and are trained in the culturally appropriate provision of care for seniors from a variety of backgrounds.
- Increase opportunities for social participation for immigrant seniors outside the immediate family, both within their cultural community and within the mainstream community.
- Adapt services and information to incorporate the specific needs of seniors from ethnocultural groups to ensure accessibility. Services need to be culturally sensitive, which includes the utilization of languages other than English and French and pictograms for seniors with low literacy levels.
- Reinforce efforts to improve the health of the Aboriginal population by working closely with Aboriginal communities.

*A Blueprint for Action for Active Living and Older Adults*⁶¹ (Canada) offers the following strategies to increase seniors' social connectedness:

- Encourage and provide peer leadership training opportunities.
- Encourage and provide leadership training to new and existing leaders about the participation and motivation needs of older adults.
- Ensure financial implications of participation needs are addressed.

⁵⁸ BC Government 2006 Strategic Plan. Retrieved from <http://www.bcbudget.gov.bc.ca/2006/stplan/#Goal2>

⁵⁹Morrow-Howell, N. 2003. Effects of Volunteering on the Well-Being of Older Adults. *Journal of Gerontology: Social Sciences*, (58B) 3.

⁶⁰ Health Canada. 1999. Challenges of An Aging Society.

⁶¹ Active Coalition for Older Adults. 1999. A Blueprint for Action for Active Living and Older Adults. See: <http://www.alcoa.ca/e/whatsnew/blueprint.pdf>

- Ensure appropriate support systems are in place to address such concerns as transportation, snow removal, accessibility, and peer support.

LIVABLE COMMUNITIES IN SUPPORT OF KEY PRIORITIES

The notion of *livable communities* has been around for some time (at least 10 years), primarily at the grassroots level. It has a lot of momentum and is much more developed in the United States, but some communities in Canada have embraced the idea and are moving towards creating more livable communities, including them in the Strategic Plans (e.g. City of Ottawa⁶²). Local (i.e. BC) and Federal Governments, however, do not yet have the notion of livable communities in their radar, especially with regards to aging.

In general, livable communities are places where people of all ages can live comfortably. They:⁶³

- Provide affordable, appropriate, accessible housing;
- Adjust the physical environment for inclusiveness and accessibility;
- Ensure access to key health and supportive services;
- Ensure accessible, affordable, reliable, safe transportation;
- Provide work, volunteer, and education opportunities;
- Encourage participation in civic, cultural, social, and recreational activities.

A livable community facilitates personal independence and the engagement of residents in civic and social life.⁶⁴ The following resources provide more general information about Livable Communities.

Best Practice Examples, Strategies and Tools

Many resources are available free of charge from the award-winning Local Government Commission in Sacramento, CA. Their site also provides links to guidelines, sample community plans and model projects. These resources can be found at <http://www.lgc.org/freepub/index.html>

Grade Your Community - Grade your Community is an online assessment tool about making communities more livable:

- [Livable Communities Online Assessment](#)

LIVABLE COMMUNITIES AND AGING

What about livable communities in relation to aging? Will our communities be ready for us as we age? Regardless of whether we live in a city, a suburb, a small town, or out in the country, the question of livable communities is important for everyone, and it is particularly relevant for those people age 50 and older who are planning for (or have already entered) retirement, or who are facing challenges to independence and quality of life that often accompany aging.

⁶² City of Ottawa – “Ottawa 2020.” Official City Plan. http://www.ottawa.ca/city_services/planningzoning/2020/op/vol_1/2_1_en.shtml

⁶³ US Department of Health and Human Services. Winners of Livable Community for All Ages Competition Announced. Retrieved from http://www.aoa.gov/press/pr/2005/05_Sep/09_20_05.asp

⁶⁴ Kochera, A. Straight, A. Guterbock, T. 2005. Beyond 50.05 A Report to the Nation on Livable Communities: Creating Environments for Successful Aging Research Report. AARP Public Policy Institute and University of Virginia. http://www.aarp.org/research/housing-mobility/indliving/beyond_50_communities.html

Fundamental to the concept of aging and livable communities is the idea that transportation, housing, health and social services, etc., support the goals of helping older people remain healthy and be part of the community. Features that support this goal include:⁶⁵

- public transportation that is easily accessed by people with mobility or other impairments;
- pedestrian-friendly environments that encourage walking;
- neighbourhood-based health and recreational programs that incorporate intergenerational interaction and support;
- mixed residential and retail business land use; and
- social, educational, health and cultural programs aimed at promoting social engagement and healthy lifestyles among elders.

Best Practice Examples and Resources for Livable Communities and Aging

A Tool for Action: Livable Communities Evaluation Guide - This guide helps residents identify areas where they can direct their energies toward making their community more livable for themselves and for others. The guide encourages people to take a new look at the community or neighbourhood in which they live. Although written from the perspective of persons age 50 and older, the topics are applicable to residents of all ages and abilities. [Livable Communities: An Evaluation Guide](#) (US)

Aging in Place Initiative - Livable Communities - Best Practice Case Studies and Links (various topics) http://aipi.n4a.org/best_practices.htm (US)

Book: Interested in knowing more about aging in place and livable communities? Partners for Livable Communities has a new book *Aging In Place: Making Communities More Livable for Older Adults*. Check out the bookstore at: <http://www.store.yahoo.com/plcstore/agingplbo.html>

Competition: In 2005, seven communities in the US were awarded a “Livable Communities for All Ages” from the US Secretary for Aging. The award was given based on a competition “to identify and showcase [communities] that exemplify a livable community.” For more ideas, and more information about the competition see the Aging in Place Newsletter at: http://www.livable.com/aging/aginginplace10_05.pdf

The next section of the literature review deals with the major issues around livable communities and aging. While it is not a comprehensive and exhaustive portrayal of all the relevant issues, it is an overview of the key issues. The key issues are: housing and health services, transportation, social and recreational opportunities, livable communities – from design to community, and finally, leadership and local involvement. Best practice examples, case studies and tools are included after each section whenever available.

HOUSING AND HEALTH SERVICES – THE NEIGHBOURHOOD: A PLACE TO STAY

Many surveys over a number of years have demonstrated that older adults want to remain in their homes for as long as possible, and there are many reasons for encouraging older persons to remain in their own homes. The strongest argument is that providing the necessary home and community supports and services that enable older adults to age in place have shown to be the most cost-effective model for aging. Nursing homes are not only an expensive way of delivering

⁶⁵ Ithaca College Gerontology Institute (New York). 2006. Retrieved from <http://www.ithaca.edu/agingconference/>

services, but tend to propel people into a system that may not require such intense care, and can lead to problems of social isolation.⁶⁶

Ideally, seniors should be able to find housing that best suits their particular situation, and is affordable. But too often, many seniors go straight from their house to a nursing home or assisted living care facility with few options in-between. Often these options are very expensive. While many turn to increasing assisted living facilities to solve the problem, they fail to incorporate a blend of livability that will benefit all seniors groups and strengthen communities overall on a broad level. Creating more livable communities for seniors would allow them to live at home longer, significantly increasing the diversity and vitality of a neighbourhood, allow them to have more independence⁶⁷, and save money for seniors and the government.

Best Practice Example

In 1995, a group of architects in the Netherlands who had built large-scale care institutions in the past developed an alternative scenario for neighbourhoods where nursing and residential homes for the elderly were replaced by community-based arrangements for housing and care, and other community activities. The starting point was a pilot community of 10,000 people. Based on the average need of special housing, services, and care, they made a spatial translation of the kind and the amount of housing, services, and care necessary in both urban and rural settings.⁶⁸ This is their model for a livable community for aging:



The plan to create these communities was put into action, and has been so successful in turning a vision for livable communities for the aging into present-day reality that sixty communities throughout the Netherlands have adopted it. This model requires a collaborative effort, involving cooperation between the local government; housing corporations; welfare and health care organizations; and the local residents themselves. They report that the concept remains incredibly popular, primarily because it is a community model that serves the interests of all citizens. "It is a demand-oriented approach, transforming the neighbourhood into a place to live for all."⁶⁹

TRANSPORTATION AND AGING

⁶⁶ McNulty, R.H. 2005. Partners for Livable Communities. Retrieved from <http://www.livable.com/aging/issue.htm>

⁶⁷ *ibid.*

⁶⁸ Harkes, D. 2005. Time To Stay In The Neighbourhood. The Global Report on Aging. Retrieved from http://www.aarp.org/research/international/gra/gra_special_05/time_to_stay.html

⁶⁹ *ibid.*

Although many seniors still have a license, there will be a time when they are unable to drive themselves and must change their lifestyle accordingly. As the baby boomers age, communities will have to come to terms with land use patterns that assume that seniors can drive themselves anywhere at any time just as younger people do.

Communities must advocate walking and make mass transit more appealing to the demographic of older adults when driving is not an option. Issues of fear for personal safety, inconvenience and difficulties in negotiating the system are factors that deter the elderly from using public transportation.⁷⁰

Communities must take into consideration transportation programs that support a variety of people's needs as they age. Even in urban areas where public transit is more accessible and less expensive, private vehicles are still preferred by the majority of older people. By continuing to focus on driving, we are deliberately creating places with the built-in necessity for driving, and thereby eliminating options.⁷¹ The next section provides resources and examples of strategies and tools to move improve transportation and move it towards more livable, and more walkable, communities.

Best Practice Examples, Strategies and Tools

Healthy Transportation Network - The network works with local communities to:

- foster safer bicycle and pedestrian behaviours,
- foster more walking and bicycling for routine transportation, and
- create community and urban environments that are walkable and bicycle-friendly.

The Healthy Transportation Network provides information and connections that are useful while working to improve the health of the community. See: <http://www.healthytransportation.net/>

Florida Department of Transportation – Twelve Steps for an Effective [Pedestrian and Bicycle] Program. This is a guide to practical strategies to make communities more pedestrian friendly. See: http://www.dot.state.fl.us/safety/ped_bike/brochures/pdf/12STEPS.PDF

WalkSacramento is a non-profit organization dedicated to achieving safe, walkable communities - for personal health and recreation, for livable neighbourhoods, for traffic safety, and for clean air. Their excellent transportation-related resources and strategies can be found at <http://www.walksacramento.org/livable.html> .

SOCIAL AND RECREATIONAL OPPORTUNITIES

Recreation activities may be formal or informal, active or passive, including volunteerism, travel, sport, education, cultural events and spending time with family. The terms recreation and leisure are often used interchangeably, however, leisure more often relates to the concept of time and recreation relates to how leisure time is spent.⁷² I think there are 2 components to this – there's the actual activity for its own sake...[and] the fact that whenever you go to an activity you're doing it with others and you're getting that communication, that sense of belonging which is in many ways more powerful than the activity...

There is ample evidence to show that social and recreational opportunities for seniors can have a profound effect on their physical, mental, and emotional state. Community centers and gyms

⁷⁰ McNulty, R.H. 2005. Partners for Livable Communities. Retrieved from <http://www.livable.com/aging/issue.htm>

⁷¹ *ibid.*

⁷² Participant Feedback From the Active Aging Strategy, Saanich, BC. Retrieved from <http://www.gov.saanich.bc.ca/resident/community/services/aastrategy.pdf>

that have catered to an older population have had great success. Group classes like meditation, yoga, water aerobics, weight lifting, biking, and even dancing allow seniors to get their heart rate up, make friends and commit to a healthy lifestyle. But the options should not be limited only to the built environment in a livable community.

Two Different Approaches

The *Vital Aging Network* provides a *virtual* community portal housed at the University of Minnesota and maintained by their Department of Continuing Education. Links are provided (all the options are supported with safe, credible website links) to travel, outdoor activities, sports, clubs and hobby associations, and educational resources. Their philosophy is that “the current crop of active older adults have far more opportunities available for recreation, travel, and sports -- and far more information about what's available, thanks to the Internet. There are opportunities for every pocketbook and interest, for every age group, for intergenerational groups, and for people with special needs or disabilities.”⁷³

Here is a sampling of the opportunities they highlight (“refired” not “retired”) in a positive, proactive way:

“Discover the best places to ski, take a mountain bike tour, hike into the scenic beauty of the mountains, or find your favorite lake and fish away a dream-filled day. Are you stumped for ideas on what activities are available? Try some of these activities: biking, birding, camping, caving, climbing, driving, fishing, hiking/backpacking, horseback riding, hunting, paddling, skiing/snow sports, snorkeling/scuba diving, or wildlife viewing.

Now, more than ever, there are year-round opportunities for older adults to stay actively engaged in sports, such as baseball, bowling, skiing, golf, tennis, martial arts, swimming, and more. And, many of these sporting events can be enjoyed in the company of other older adults with similar interests. So what are you waiting for?

Many older adults are finding out that traveling can be fun and very rewarding. Many travel companies begin offering discounts to those over 50. These discounts, ranging from eating in restaurants to lodging, are very convenient and save money for older adults who are traveling.”

As this model demonstrates, an extensive infrastructure is not necessarily required to provide recreational opportunities for seniors. The creative approach to social recreational opportunities featured above opens the door for others to follow and adapt.

Having said that, however, infrastructure and facilities remain a critical link to social and recreational opportunities for seniors (indeed, for all ages). The *Active Aging Strategy* in Saanich, BC recognizes this critical element, and the other aspects related to successful aging. They report, in relation to recreational opportunities, that seniors prefer environments where they feel physically and psychologically secure. Safety, as in feeling safe in an environment, was ranked as one of the highest priorities as well as one of the biggest barriers to participation in our recreation centres.” Their philosophy, strategies and approaches to address this and other issues can be found at their website:

<http://www.gov.saanich.bc.ca/resident/community/services/aastrategy.pdf>.

⁷³ Vital Aging Network, University of Minnesota. Retrieved from http://www.van.umn.edu/options/2e_recreation.asp

BC has a old sport and recreation infrastructure with over 70% of it over 25 years old.⁷⁴ New construction is not keeping pace with the current or future needs of the community. Truly, if we commit to creating more livable communities (for everyone), we will have to invest in building and maintaining our infrastructure.

Case Studies and Resources for Social, Cultural and Educational Opportunities

[Experience Corps Baltimore](#) - July 2004. Older adults “use their time, talent and experience” to work with elementary age school children to help them with their education.

[Senior Theatre League of America](#) - August 2004. Seniors’ theatre clubs.

[Seniors Making Art](#) - July 2004. Bellevue, WA. The programs are eight or ten week courses that enable older adults to learn a variety of art methods.

[Maple Grove SeniorNet Learning Center](#) - June 2004. A program to teach older adults about computers.

FROM DESIGN TO LIVABLE COMMUNITY

Identify the Issues

What is the process for moving from design of a livable community to its actualization? The first step is understanding the facts. These next points cover a few key issues relative to the design of livable communities.⁷⁵

- People tend to get less exercise as outlying suburbs are further developed and the distances between malls, schools and places of employment and residence increases.
- People are less willing to walk in their neighbourhoods when they have to deal with stresses like traffic congestion, noise, and the threat of violence.
- Most parking lots are built as close as possible to final destinations in order to increase convenience and safety for motorists, but this discourages walking.

The Victoria (BC) Transport Policy Institute⁷⁶ recently reviewed the land use impacts on transportation and walkability in our province. The following represents a short summary of their findings:

- Mixed land uses (housing, commercial, institutional) reduces per capita vehicle use, and increases walking by 5-15%.
- Increased access to services reduces vehicle mileage by as much as 30%.
- Traffic calming reduces vehicle travel and increases walking and cycling.
- Residents of more walkable communities typically walk 2-4 times as much and drive 5-15% less than if they lived in more automobile-dependent communities.
- Improved services increases transit ridership and reduces automobile trips.
- Various programs and strategies that encourage more efficient travel patterns reduce vehicle travel by as much as 30%.

⁷⁴ BC Recreation and Parks Association Letter to Federal Government. August, 2006. Retrieved from http://www.bcrpa.bc.ca/about_bcrpa/documents/2006FederalConsultationonInfrastructure.pdf

⁷⁵ Communications Toolkit. Active Living Network (US). Retrieved from www.activeliving.org

⁷⁶ Litman, T. 2006. Land Use Impacts on Transport: How Land Use Factors Affect Travel Behaviour. Victoria Transport Policy Institute. Retrieved from <http://www.vtppi.org/landtravel.pdf>

Implement Strategies to Support Change

The Active Living Network in the US⁷⁷ proposes the following strategies to support change. Although from the US, the issues mirror the concerns described above from our province.

- Place higher density housing near commercial centres, transit lines and parks.
- Design communities around people rather than automobiles.
- Work with urban planners to implement traffic calming and retrofitting projects.
- Create through-streets – streets that connect people to each other – to encourage traveling in the community other than by car.
- Shorten blocks to help create a compact development that promotes physical activity.
- Create commercial centres, rather than strip malls, to encourage walking.
- Mix land uses.
- Require common space in the new development such as pocket parks, community centres and neighbourhood schools.
- Make shopping centres and business parks into all-purpose activity centres.
- Place parking lots a suitable distance from buildings.
- Incorporate areas for secure bicycle storage in building designs.
- Adding artwork and music to stairwells leads to a significant increase in people using the stairs.
- Use point-of-decision prompts at stairways to encourage people to use the stairs.

Best Practice Resources and Examples

Walkable Communities was established in the state of Florida in 1996. It was organized for the express purposes of helping whole communities, whether they are large cities or small towns, or parts of communities, i.e. neighbourhoods, business districts, parks, school districts, subdivisions, specific roadway corridors, etc., become more livable, more walkable and more pedestrian friendly. <http://www.walkable.org/>

Neighbourhoods, USA is a national non-profit organization committed to building and strengthening neighbourhood organizations. “Created in 1975 to share information and experiences toward building stronger communities, NUSA now continues to encourage networking and information sharing to facilitate the development of partnerships between neighbourhood organizations, government and the private sector.” The website contains a wealth of information on most of the topics addressed above. <http://www.nusa.org/neigh.htm>

Case Study: “Home for some lucky people is the neighbourhood of **Eastwood** in Syracuse, NY. Eastwood started out as a village, and a number of its residents would like to maintain its village atmosphere. For the sake of our community’s economic, social and physical health, we encourage [smart growth](#) and pedestrian-friendly development in a walkable, sustainable community.” <http://walkeastwood.org/newurbanism.html>

⁷⁷ Communications Toolkit. Active Living Network (US). Retrieved from www.activeliving.org

WHAT'S NEEDED: LEADERSHIP AND INVOLVEMENT

There are many factors, as noted, that contribute to the success of an aging-friendly livable community. An absolutely critical component is local leadership and key community stakeholder involvement by which to produce policy changes through collaborative efforts in planning, design and implementation. Powerful leaders who champion an issue increase public awareness and raise legitimacy, thereby increasing public involvement.

Best practices and case studies have clearly demonstrated that the wider the involvement, the better the results (see especially the resource from Eastwood, Syracuse, NY). As noted above, there is a wealth of resources to support efforts towards building more aging-friendly, livable community, but community engagement is the key.

The following is a continuum table, developed by Tamarack - An Institute for Community Engagement in Waterloo, Ontario.⁷⁸ It can be used to assess the readiness of community residents and lead the way towards a higher level of involvement.

The Community Engagement Continuum



The following excerpt, also taken Tamarack, perfectly sums up the process of leadership and involvement for a common purpose, such as building livable communities.

Building purpose.

To establish a strong common purpose, a community needs to develop a compelling vision, based on values shared by multiple stakeholders. We recommend that key people from different sectors, passionate about the issue, be invited to meet and share their ideas. Specifically, four broad representations should be included: citizens directly affected by the issue of concern, as well as leaders from government, business and the voluntary sector. This diversity of opinion increases the chances of success, as the vision they develop will resonate with the entire community. This multifaceted group will also have the resources, energy and credibility to achieve ambitious goals.

⁷⁸ Tamarack – An Institute for Community Engagement www.tamarackcommunity.ca

CONCLUSION AND RECOMMENDATIONS

This literature review was commissioned by the BC Recreation and Parks Association (BCRPA). BCRPA is seeking information on strategies that assist seniors to stay active and healthy. In British Columbia (BC), the Ministry of Health presented five key priority issues relevant to active aging. They are:

- Healthy Eating
- Injury Prevention
- Physical Activity
- Tobacco Cessation
- Social Connectedness

This literature review looks at issues, barriers and strategies for all of the five key priorities identified in the Ministry of Health and at livable communities in support of healthy aging. An international research review was conducted to describe:

- Consideration for personal and environmental factors such as demographics, living conditions, health, mobility, social support, etc.;
- Strategies and the elements of success for those strategies in each of the priority areas;
- Resources, tools, and examples of best practice, where available.

Recommendations

1. There is no one-size-fits-all approach for 'seniors'. Seniors are not a homogeneous group, except for age (i.e. over the age of 65), but even then there are variations within the age cohorts (older seniors vs. younger seniors).
2. Any strategies which are developed and implemented for each key priority area need to address specific issues and barriers relative to that priority area.
3. Strategies may be delivered in a multitude of settings, but need to be targeted to specific populations, again taking into account the issues and needs of those populations.
4. Two areas, social connectedness and injury prevention (other than falls), have less research investigation and have fewer strategies and concrete examples of best practice compared to the other areas. There are opportunities to contribute to the evidence in these areas with high quality evaluative support for concrete strategies.
5. The notion of 'Livable Communities' (for everyone) is more than a concept. There are many resources and real-life examples of livable communities. The establishment of livable communities should be encouraged and adopted to support healthy aging.

APPENDIX A – Details and References for Tobacco Cessation Evidence

There is good evidence that brief interventions from health professionals can increase rates of smoking cessation.⁷⁹ Healthcare professionals frequently advise patients to improve their health by stopping smoking. Such advice may be brief, or part of more intensive interventions. Simple advice has a small effect on cessation rates.⁸⁰

There are potential benefits of smoking cessation advice and/or counselling given by nurses to patients, with reasonable evidence that interventions can be effective. The challenge is to incorporate smoking behaviour monitoring and smoking cessation interventions as part of standard practice, so that all patients are given an opportunity to be asked about their tobacco use and to be given advice and/or counselling to quit.⁸¹

Smoking cessation is a potentially appropriate role for community pharmacists because they are encouraged to advise on the correct use of nicotine replacement therapy (NRT) products and to provide behavioural support to aid smoking cessation. Trained community pharmacists, providing a counselling and record keeping support programme for their customers, have a positive effect on smoking cessation rates.⁸²

Proactive telephone counselling helps smokers interested in quitting. There is evidence of a dose response; one or two brief calls are less likely to provide a measurable benefit. Three or more calls increases the odds of quitting compared to a minimal intervention such as providing standard self-help materials, brief advice, or compared to pharmacotherapy alone. Telephone quitlines provide an important route of access to support for smokers, and call-back counselling enhances their usefulness.⁸³

A systematic review was carried out to determine the effectiveness of different forms of self-help materials compared with no treatment and with other minimal contact strategies; the effectiveness of adjuncts to self help such as computer-generated feedback, telephone hotlines and pharmacotherapy; and the effectiveness of approaches tailored to the individual compared with non-tailored materials. The main outcome measure was abstinence from smoking after at least six months follow up in people smoking at baseline. Results: Standard self-help materials may increase quit rates compared to no intervention, but the effect is likely to be small. We failed to find evidence that they have an additional benefit when used alongside other interventions such as advice from a healthcare professional, or nicotine replacement therapy. There is evidence that materials that are tailored for individual smokers are effective, and are more effective than untailored materials, although the absolute size of effect is still small.⁸⁴

At the moment there is insufficient evidence to support the use of any specific intervention for helping smokers who have successfully quit for a short time to avoid relapse. The verdict is strongest for interventions focusing on identifying and resolving tempting situations. There is very little research available regarding other approaches. Until more evidence becomes

⁷⁹ Lancaster, T. Silagy, C. Fowler, G. 2006. Training health professionals in smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁰ Lancaster, T. Stead, L.F. 2006. Physician advice for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸¹ Rice, V.H. Stead, L.F. 2006. Nursing interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸² Sinclair, H.K. Bond, C.M. Stead, L.F. 2006. Community pharmacy personnel interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸³ Stead, L. Perera, R. Lancaster, T. 2006. Telephone counselling for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁴ Lancaster, T. Stead, L.F. 2006. Self-help interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

available it may be more efficient to focus resources on supporting the initial cessation attempt rather than on additional relapse prevention efforts.⁸⁵

Group therapy offers individuals the opportunity to learn behavioural techniques for smoking cessation, and to provide each other with mutual support. Group therapy is effective for helping people stop smoking. There is not enough evidence to support the use of particular psychological components in a programme beyond the support and skills training normally included.⁸⁶ Smoking cessation counselling from a smoking cessation specialist can assist smokers to quit. Brief counselling was just as effective as intensive counselling.⁸⁷

Interventions designed to enhance partner support for smokers in cessation programs failed to detect an increase in quit rates.⁸⁸

Incentive and Contest Interventions

Quit and Win contests were developed in the 1980s by the Minnesota Heart Health Program, and have been widely used since then as a population-based smoking cessation intervention at local, national and international level. Quit and win contests at local and regional level appear to deliver quit rates above baseline community rates, although the population impact of the contests seems to be relatively low.⁸⁹

Incentives and competitions do not appear to enhance long-term cessation rates, with early success tending to dissipate when the rewards are no longer offered.⁹⁰

Pharmacological Interventions

There are different forms of nicotine replacement therapy – NRT - (gum, transdermal patch, nasal spray, inhaler and sublingual tablets/lozenges). Are combinations of NRT more effective than one type alone? How does this effectiveness compare to other pharmacotherapies? All of the commercially available forms of NRT are effective as part of a strategy to promote smoking cessation. They increase the odds of quitting approximately 1.5 to 2 fold regardless of setting. The effectiveness of NRT appears to be largely independent of the intensity of additional support provided to the smoker. Provision of more intense levels of support, although beneficial in facilitating the likelihood of quitting, is not essential to the success of NRT.⁹¹

Nicobrevin is a proprietary product marketed as an aid to smoking cessation. It contains quinine, menthyl valerate, camphor and eucalyptus oil. There is no evidence available from long-term trials that Nicobrevin can aid smoking cessation. This does not mean that it is not effective, just that there is no evidence.⁹²

⁸⁵ Hajek, P. Stead, L.F. West, R. Jarvis, M. Lancaster, T. 2006. Relapse prevention interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁶ Stead, L.F. Lancaster, T. 2006. Group behaviour therapy programmes for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁷ Lancaster, T. Stead, L.F. 2006. Individual behavioural counselling for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁸ Park, E-W. Schultz, J.K. Tudiver, F. Campbell, T. Becker, L. 2006. Enhancing partner support to improve smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁸⁹ Hey, K. Perera, R. 2006. Quit and Win contests for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁰ Hey, K. Perera, R. 2006. Competitions and incentives for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹¹ Silagy, C. Lancaster, T. Stead, L. Mant, D. Fowler, G. 2006. Nicotine replacement therapy for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹² Stead, L.F. Lancaster, T. 2006. Nicobrevin for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

Is Lobeline, a partial nicotine agonist (a compound that stimulates or enhances activity of the cell receptors) which has been used in a variety of commercially available preparations, effective to help stop smoking? There is no evidence available from long term trials that lobeline can aid smoking cessation. This does not mean that it is not effective, just that there is no evidence.⁹³

Clonidine was originally used to lower blood pressure. It acts on the central nervous system and may reduce withdrawal symptoms in various addictive behaviours, including tobacco use. Clonidine is effective in promoting smoking cessation, but prominent side-effects prohibit the usefulness of clonidine for this purpose.⁹⁴

There are at least two theoretical reasons to believe antidepressants might help in smoking cessation. Nicotine withdrawal may produce depressive symptoms or precipitate a major depressive episode and antidepressants may relieve these. Nicotine may have antidepressant effects that maintain smoking, and antidepressants may substitute for this effect. The authors concluded that antidepressants bupropion and nortriptyline aid long term smoking cessation but selective serotonin reuptake inhibitors (e.g. fluoxetine) do not. The fact that only some forms of antidepressants aid cessation and that they do so regardless of depressive symptoms strongly suggests that their mode of action is independent of their antidepressant effect.⁹⁵

Acupuncture and Hypnotherapy Interventions

Acupuncture and related techniques are promoted as a treatment for smoking cessation in the belief that they may reduce nicotine withdrawal symptoms. There is no consistent evidence that acupuncture, acupressure, laser therapy or electrostimulation are effective for smoking cessation, but methodological problems mean that no firm conclusions can be drawn.⁹⁶ (They *might* be, but the studies were not well designed and implemented.)

Hypnotherapy is widely promoted as a method for aiding smoking cessation. It is proposed to act on underlying impulses to weaken the desire to smoke or strengthen the will to stop. The authors' could not show that hypnotherapy has a greater effect on six month quit rates than other interventions or no treatment. The effects of hypnotherapy on smoking cessation claimed by uncontrolled studies were not confirmed by analysis of randomized controlled trials.⁹⁷

Exercise and Community-based Interventions

Are exercise-based interventions alone or combined with a smoking cessation programme more effective than a smoking cessation intervention alone? So far the research has been very weak in this area. Trials are needed with larger sample sizes, sufficiently intense exercise interventions, equal contact control conditions and measures of exercise adherence in order to evaluate effectiveness.⁹⁸

Are community-wide programmes which use multiple channels to provide reinforcement, support and norms for not smoking effective for reducing the prevalence of smoking? The failure of the largest and best conducted studies to detect an effect on prevalence of smoking is

⁹³ Stead, L.F. Hughes, J.R. 2006. Lobeline for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁴ Gourlay, S.G. Stead, L.F. Benowitz, N.L. 2006. Clonidine for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁵ Hughes, J.R. Stead, L.F. Lancaster, T. 2006. Antidepressants for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁶ White, A.R. Rames, H. Campbell, J.L. 2006. Acupuncture and related interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁷ Abbot, N.C. Stead, L.F. White, A.R. Barnes, J. 2006. Hypnotherapy for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

⁹⁸ Ussher, M. 2006. Exercise interventions for smoking cessation. *Cochrane Database of Systematic Reviews*, 3.

disappointing. A community approach will remain an important part of health promotion activities, but designers of future programmes will need to take account of this limited effect in determining the scale of projects and the resources devoted to them. Cigarette consumption and quit rates were only reported in a small number of studies. The two most rigorous studies showed limited evidence of an effect on prevalence. In the US COMMIT study there was no differential decline in prevalence between intervention and control communities, and there was no significant difference in the quit rates of heavier smokers who were the target intervention group. In the Australian CART study there was a significantly greater quit rate for men but not women.⁹⁹

⁹⁹ Secker-Walker, R.H. Gnich, W. Platt, S. Lancaster, T. 2006. Community interventions for reducing smoking among adults. *Cochrane Database of Systematic Reviews*, 3.