Prosper and Live Long: The Next Generation of the Health Determinants Approach to Health and Physical Activity

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Introduction

Physical inactivity has been identified as a primary risk factor for psychological and physical ill health and as a health care burden (Katzmarzyk, Gledhill, & Shephard, 2000).

The benefits of an active lifestyle have been known to North Americans for over 40 years, yet 57–64% all Canadians are not active enough to reap any such health benefits (Towards a Healthy Future, 1999; CFLRI, 1999). The situation may actually be much worse: it has been suggested that the activity rate of Canadians is inflated due to small percentages of the adult population accounting for a large majority of total participation in the 10 most popular activities (Barber & Havitz, 2001). Further, evidence demonstrates that the least physically active Canadians are un- or under-employed, have lower incomes and education levels, are smokers, experience more stress, and have poorer overall health (Towards a Healthy Future, 1999). Those who could benefit the most from including exercise in their lives are the least active. If physical activity is such a good thing, why aren’t more people active?

Currently, the health research that is reported to us about the causes of diseases in general—and particularly heart disease, cancer, diabetes and other chronic illnesses—is that these result from biological imbalances in our bodies that reflect faulty lifestyle choices. A typical message is similar to that offered by British Medical Officer Liam Donaldson:

10 Tips for Better Health

1. Don't smoke. If you can, stop. If you can't, cut down.
2. Follow a balanced diet with plenty of fruit and vegetables.
4. Manage stress by, for example, talking things through and making time to relax.
5. If you drink alcohol, do so in moderation.
6. Cover up in the sun, and protect children from sunburn.
7. Practice safer sex.
8. Take up screening opportunities to detect disease symptoms.
10. Learn the First Aid ABC—airways, breathing, circulation.

At first, it is difficult to disagree with such a Letterman-style top-10 list for improving
one’s health. The problem with this message is that a wealth of research—virtually none of it reported in the Canadian and USA media—indicates that the factors that have the greatest impact on whether we develop life-threatening diseases are usually out of our personal control and fundamentally tied to culture and socio-economic status (Kawachi et al., 1997; Labonte, 1998; Wilkinson & Marmot, 1999). More specifically, many large-scale studies find that poverty and income levels and the environments in which we live, rather than medical and lifestyle factors such as the 10 Tips, are better predictors of whether we develop diseases such as heart disease and cancer and life expectancy (hence the title of this presentation).

The purpose of this presentation is to offer a population-health perspective on physical activity by taking into consideration a “determinants of health” approach to nurturing active living. Population health is defined by Health Canada as an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups. I will begin by providing a brief overview of the determinants of health literature. I will offer a perspective to strengthening the effectiveness of improving lifestyle behaviours. This perspective situates what, at first glance appears to be individual choices about lifestyle habits, such as physical activity, in the broader context of community structures and how professionals can nurture and facilitate with citizens, rather than describe and prescribe for clients, an active lifestyle. Toward the end of my talk, I will offer an alternative top 10 list for improving one’s health, a new conceptualization of ‘lifestyle,’ and a new meaning for the FITT acronym. Finally, I will conclude with how this approach might suggest we go about fostering healthy lifestyles.

An Overview of the Literature

Let me begin by presenting a brief overview of the major studies in the literature that have led to the present thinking about the determinants of population health. Not surprisingly, the focus on the importance of lifestyle behaviours appears frequently in the early studies. Little by little, however, the evidence linking the social, cultural, and economic environment to lifestyle behaviour, and ultimately health, begins to mount and in the end, is overwhelming and irrefutable (Marmot & Wilkinson, 1998).

The Alameda County Study

In the early 1960s, a study entitled “Health and Ways of Living: The Alameda County Study” was conducted in California. Its original purpose was to investigate lifestyle habits and their influence on the health and mortality of the residents of Alameda County. Almost 7,000 people, aged 20 years and over, were surveyed regarding their “health and ways of living,” including gathering demographic information (education, income, occupation, marital status, etc.). Ten years later, the researchers went back to Alameda County and interviewed the same group of people with the exception of about 1,000 people who had died in the interim. After reviewing the information, the researchers found five health practices to significantly influence mortality: smoking, excessive alcohol consumption, low levels of exercise, being over or under weight, and having less than seven or more than nine hours of sleep per day.

Exercise and smoking proved to be the most powerful predictors of mortality. Residents of Alameda County who had the lowest number of high-risk behaviours consistently had the lowest mortality rates regardless of age, sex, income, race, and initial health status. Those who practised only 0–2 health habits had more than twice the risk of dying. These findings supported the researchers’
original hypothesis. In addition, the researchers found that residents’ marital status, contacts with friends and family, and membership in church or community organizations also significantly predicted mortality independent of their income, occupation, education, age, race, and level of preventive health care they practised. Those who were the least socially well connected had twice the risk of dying from all causes as the more socially connected residents. Persons practising healthy behaviours were also more likely to be the socially well connected in Alameda County.

The researchers decided to go back yet again, and so 18 years after the initial study began, they interviewed those residents still alive. This time, they found income to be the most powerful influence on health and mortality: the poor had more than 1.5 times the risk of dying prematurely as the rich, even when the researchers statistically controlled for 13 risk behaviours (smoking, drinking, inactivity etc.). The researchers concluded, in opposition to the study’s original hypothesis, that general living conditions contributed more to residents’ long-term health status and mortality rates than did their lifestyle practices.

Whitehall Studies

In 1967, a British scientist named Michael Marmot began a series of studies called the Whitehall Studies, named after the large government building—Whitehall. The initial study was designed to explore the behavioural risk factors and health status of 17,000 British civil servants in office-based jobs. The hierarchy of British government employees is well defined and matches nicely with their income levels. From highest to lowest, the ranks of British civil servants are administrative, professional, clerical, and unskilled manual positions. It is important to note that all of these 17,000 government workers went to work every day in the same building and none were impoverished or deprived in terms of poverty levels.

Marmot gathered person-specific and longitudinal data, in a series of studies, for over 20 years and found that a gradient for risky behaviours and mortality existed from the top to bottom ranks. In other words, each rank of workers engaged in more risk behaviours, reported poorer health and more sick days, and higher mortality rates than the rank immediately above them. In fact, those workers in the manual and clerical ranks had 3.5 times the mortality rates of workers in the administrative ranks. When Marmot statistically analyzed these data, he found that the risk behaviours could only account for 25% of the gradient differences in mortality. For instance, although Marmot found behaviours to differ between positions in the hierarchy, even those few in the higher ranks who smoked were at lower risk from smoking-related disease than were smokers in the lower ranks. There was something about the social and occupational hierarchy scale of the British government that was contributing to poor health and early death.

Because Marmot found the gradient to exist for many different diseases, he suggested that there must be a common underlying factor in the social and work environments to account for these findings. Something was powerfully influencing health that was correlated with hierarchy per se. Marmot went on to study the characteristics of the civil servants’ work and found that the higher ranks of employment gave workers more control over decisions and more support to take risks, while at the same time was challenging and rewarding.

MRFIT

The Multiple Risk Factor Intervention Trial (MRFIT), a large US, seven-year clinical study, tested the hypothesis that coronary heart disease could be reduced through
lifestyle behaviour changes. The subjects were 6,500 men at high risk of developing coronary heart disease because they had high blood cholesterol, high blood pressure, or smoked. Each subject agreed from the outset to try to change eating and smoking habits and adhere to medication, and for seven years, received intensive, personalized care by professionals. A control group, consisting of men also at high risk of coronary heart disease, received what the researchers called “usual care”—advice and information to change, but no special counselling, education, or behaviour modification classes that the experimental group received. After seven years of follow-up, the men in the experimental group were somewhat successful in changing their behaviours, but so, it turned out, were the men in the control group. In fact, there were no significant differences in mortality between the two groups despite such specialized care for those subjects in the experimental group. The study concluded that these results were probably the best that could be expected when nothing had been done to influence forces in society that led to the development of risk behaviours in the first place and only attempted to change individual behaviour, one person at a time.

The Black Report

Back in Britain, the Black Report was released in 1980 (Townsend & Davidson, 1982). The Report was authored by a commission whose task was to examine the health status of British citizens since the establishment of their (socialized) National Health Services in the early 1900s. With data spanning 70 years, the Report investigated the major causes of death and the mortality rates among Britain’s classes (classified according to occupation). The Report documented a consistent gradient in mortality, despite equal access to health care for all Britons and the major causes of death. At the beginning of the 20th century, infectious diseases were the great killers, while at the end of the same century, heart disease and cancer were the most prevalent—all higher in the lower classes. Lower-class Britons—the partially skilled and unskilled manual workers—experienced poorer health status and earlier death than the upper classes (professionals) at all stages of life. There proved to be materialistic and structural differences between the wealthy and the poor that influenced access to adequate nutrition, housing, education, employment, and better overall living conditions. Being deprived in any of these areas translated into poorer health.

The Report concluded that it was primarily the factors outside the health system—education, income, employment, housing, transportation, the environment, and the lifestyle choices made within those contexts—that affect health.

More recent studies have confirmed what the authors of the Black Report suspected. In an attempt to understand the lifestyle behaviours of adult Finnish men, Lynch, Kaplan and Salonen (1997) found that poor adult health behaviours and psychosocial characteristics (sense of hopelessness, depression, lack of coherence or meaning in life) were more prevalent among men whose parents were poor, regardless of their socio-economic standing as adults. The authors suggested that the environmental influences in childhood play themselves out later in adulthood. As such, the “free choice” associated with lifestyle behaviours may not be totally under individual’s control.

An American study examined the relation between characteristics of neighbourhoods and the incidence of coronary heart disease in four states over nine years. Residents of disadvantaged neighbourhoods had three times a higher risk of disease than residents of advantaged neighbourhoods, even when researchers statistically controlled for income, education, occupation, and
established risk factors for heart disease (smoking, high blood pressure etc.) (Diez Roux, Stein Merkin, Arnett, et. al., 2001). A similar story emerges in Ontario where the Institute for Clinical Evaluative Sciences tracked hospitalization rates for heart attacks, congestive heart failure, angina, and chest pains from 1992–1997. The place of residence for each patient was used to identify him or her as being from neighbourhoods that were ranked from highest to lowest in income. The hospitalization rate for the lowest-income neighbourhoods was 69% higher for heart attacks, 65% higher for congestive heart failure, 97% higher for angina, and 121% higher for chest pain than those in the highest income Ontario neighbourhoods.

Psychoneuroimmunology and Psychoneuroendocrinology

During these same decades of study (early 1960s–1990s), but in a different academic field of study, (psychoneuroimmunology and psychoneuroendocrinology—great additions to your Scrabble repertoire), scientists were examining the impact of stress on human biology and psychology. Based on Selye’s seminal work on stress and the “fight or flight” phenomenon, researchers looked at how similar sources of stress have different effects on different people, determined by how the event is perceived and, subsequently, how people cope with the stress.

The body’s reaction to stress includes responses in the immune, neural, and endocrine systems. For example, in the normal response to stress, the hormone cortisol is released throughout our bloodstream that kicks the nervous system into high gear, enabling us to stay and fight the stressor or run away as fast as possible from the stressful environment. As the emergency passes, a feedback system signals the decrease of cortisol production and systems return to normal (homeostasis). However, in some individuals, the feedback system fails to kick in, so that cortisol levels remain elevated, as does blood pressure, heart rate, etc. It is thought that this physiological high-alert state causes damage over the long term to a number of organs and physiological systems.

Interestingly, in studies of free-ranging baboons in Kenya, a link between social rank and the consequences of stress has been demonstrated. Baboons have a well-defined status of hierarchy (not unlike British civil servants), and the dominant and subordinate males differ in, among other things, differences in their endocrine systems and the effectiveness of the feedback loop that controls the level of cortisol in the blood. When subordinate males respond to stress, their cortisol levels remain higher, longer. In effect, they are on average less able to turn off the “fight or flight” response when it is no longer needed and seem to be in a continuous state of stress or anxiety. Humans suffering from depression show similar flaws in their feedback loop. In fact, Marmot measured the blood pressure of all his civil servants at work and found, on average, the measurements to be the same across the ranks. When he followed them home, however, and measured blood pressure there, the rates of the senior administrators fell much more than the others. Marmot thought they were better able to turn off the stress response.

Animal studies further reinforce the importance of social support in compromising health: rabbits who were petted, had music played to them, and fed a cholesterol-rich diet had 60% less atherosclerosis than rabbits given the same diet and “usual” laboratory treatment. This was so even through both groups of animals had similar cholesterol levels! Another study with monkeys found that, although fed the identical high-fat diet, depending on their position in the hierarchy scale, monkeys
showed very different degrees of blockages of the coronary artery.

As well, laboratory studies gathered evidence that stress increases susceptibility to illness, particularly among subjects who perceived stress as more negative or who felt they had less control over the stressful situation, or their ability to cope, including less social support: One study experimentally infected subjects with the rhinovirus infection (common cold). Those who developed symptoms reported significantly greater stress than those who remained symptom-free. Similarly, another study gave medical students a Hepatitis B vaccine inoculation on the last day of a three-day exam period. Those students who felt less stressed demonstrated a stronger immune response to the vaccine, as did those who reported greater social support.

Finally, in an attempt to distinguish between the effects of current stress versus cumulative stress on health, 394 participants were exposed to either a respiratory virus or a placebo. All were asked to report on the number of major stressful life events in the past year having a negative impact, and their perception of the current stress load in their life. The results indicated that perceived current stress was not related to symptoms, while 44% of subjects reporting symptoms reported stressful life events, unrelated to health behaviours.

And, so a picture began to emerge that led researchers to think more carefully about the environments in which people live, work, and play and how the characteristics of these environments influence their stress levels, sense of control, and choice of lifestyle behaviours.

**Income Distribution and Relative Deprivation**

During this same time period, another British scholar, Richard Wilkinson, developed the notion of absolute and relative deprivation as related to health. Absolute deprivation refers to poverty and the lack of economic and political control to access proper shelter, nutrition, employment, recreation, etc. Obviously, absolute deprivation contributes greatly to poor health status and early death, as the Black Report documented.

Relative deprivation speaks to one’s place in society compared to others, similar to Marmot’s findings of Whitehall workers. In arriving at these two distinctions, Wilkinson examined worldwide patterns of per capita income (the average amount of income for the population), physical deprivation, rates of infection and chronic disease, and life expectancy. He found that, as we might expect, as per capita income increases in the developing nations, life expectancy increased while physical deprivation and rates of infection and chronic disease were reduced.

In the developed nations, however, life expectancy is less responsive to changes in income levels. What is important to life expectancy in developed countries, like Canada, Sweden, US, UK, etc., is how income is distributed among citizens. In countries where there are minimal differences between how much money the rich and the poor have (e.g., Japan, Sweden), people live longer and have better overall health, regardless of the actual per capita dollar amount. On the other hand, in countries where the difference between the amount of money the rich and poor have is large (e.g., the US), life expectancy is not as high, even though—on paper—it appears that the average income is greater. So, it’s not the absolute levels of wealth that determines a country’s overall level of
healthfulness (at least as indicated by life expectancy). Rather, it is relative levels of wealth, or the gap between the richest and the poorest which is significant—the bigger the gap, the lower the overall life expectancy. In other words, big gaps in income are bad for everybody’s health in that country, rich or poor. After reviewing worldwide data on this phenomenon, Wilkinson concluded that a per capita income of $5,000 is the threshold between absolute deprivation—being too poor to afford the healthy choices or live in healthful living conditions—and relative income inequalities.

There are numerous studies supporting Wilkinson’s premise (e.g., the April 1996 issue of the British Medical Journal). All have demonstrated that an income gradient exists for all major diseases: not only do the poor get more diseases than those of us who are better off, but they are also in poorer health once they get the disease and have worse outcomes in terms of long-term sickness and early death. Research on high blood pressure amongst African-American males (Klag et. al., 1991) and on the relative low birth weight rates of African-American babies irrespective of their mother’s socio-economic status (Wise & Pursley, 1992) indicates that it is not race, but rather racism (and, hence, a lower social ranking) that is and continues to be, a major risk factor (or more accurately, risk condition) for poorer health status of African-Americans.

More recently, Raphael (2001) estimated that 23 % of all premature years of life lost prior to age 75 in Canada can be attributed to income differences. Of these premature deaths related to income differences, the greatest proportion of these years lost—22%—is caused by heart disease and stroke. Seventeen per cent are a result from injuries, and 14% from cancers. And numerous studies indicate that the social and material conditions under which we live—especially during childhood—are far greater determinants of whether we die from illness than our adult “lifestyle choices” (Keating & Hertzman, 1999). How can we, as professionals, influence income distribution? It does seem beyond our scope of practice, to say the least! Robert Putnam provides a clue.

Social Capital

Robert Putnam is a Harvard professor who has researched the most recent concept thought to contribute to health—social capital. In his analyses of Italian regions in the 1970s and the difference between the north and south political structures and efficiencies, Putnam discovered that the prosperous communities in north-central Italy had a long history of civic involvement and social solidarity and a non-corrupt political community. His longitudinal studies argue that the north-central communities became prosperous—and healthy—because they were civic, not the other way around. From this emerged the notion of social capital.

Social capital refers to the networks, norms, relationships, and trust in a society or community that facilitate coordination and cooperation for the benefit of all. Social capital includes things like a community’s number and strength of local organizations, number and strength of volunteers, sense of belonging among its residents, voting rates, literacy, and violence and education rates. In other words, people feel connected and equal to one another and care what happens in the community. In his latest publication, Bowling Alone—The Collapse and Revival of American Community (2000), Putnam has meticulously documented his argument that such positive characteristics of social capital are related to a more equal distribution of wealth in a community and the overall health of its residents, regardless of the
actual profile of the residents’ lifestyle behaviours.

Moreover, because social capital is a public good, and increases with use, it can be shared by everyone. Putnam has argued that opportunities such as playing on sports teams, bowling in teams, and other recreational activities, nurture the social capital of a community because they bring together diverse individuals in a common pursuit. Encouraging public involvement on recreation commissions, not-for-profit boards, volunteering, and advocating for programs for at-risk groups (youth, low income, single mothers, etc.), and trails in public parks all help to generate social capital as well as redistribute some of the wealth via tax dollars.

There is Canadian evidence that what is understood as social capital is supported by publicly funded structures and processes (Raphael et. al., 2001). For example, a McMaster University/Hamilton YMCA study explored how subsidized recreation contributed to improving the quality of life for low-income families (Haldane, 2001). Thirteen hundred children in single parent/social assistance families were randomly assigned to one of five groups (employment retraining, recreation, public health nurse visits, combination of three services, self-directed use of these services). The results found that the recreation group alone:

- was associated with the lowest per child annual expenditures for health/social services four years later, even after including the cost of recreation;
- paid for itself within one year because of reduced use of professional services; and,
- maintained the academic, social, and physical competence of children with behaviour disorders at the two- and four-year follow-up.

**The Sociobiological Translation**

The Sociobiological Translation is a model put forth that attempts to integrate these many ideas and explain how health is influenced by a myriad of factors in our lives. Identity begins to take shape early in life, perhaps at age two or three, and is completely formed by around age 18. Once formed, it is one of the most stable and durable of all personality traits. Identity is constructed from observations and experiences, prominently early in life in the home with parents and siblings, later in school with other students and teachers, in the neighbourhood with friends, and in work circumstances. The observation of inequality in housing, education, social acceptance, job type, and income is observed and experienced by a child and also contributes to one’s identity and to one’s expectations about how life will unfold.

Later in, and throughout life, the stark reality of inequality is experienced. There may be limited opportunity for jobs, education, housing, and income; social segregation; discrimination, etc. When expectations and reality clash, there is a dissonance or gap between what a person would like to do or become and what seems accomplishable, inevitably causing stress—both cumulative and current—that a person must deal with. The sense of a lack of control over one’s future, or the inability to cope, triggers biological signals that are antecedent of disease and illness.

**Summing Up**

To summarize, the major concepts in the determinants literature suggest that we acknowledge and understand that:

- living conditions influence and reflect individuals’ choices concerning eating, smoking, exercising, substance
use, etc. (Alameda County Study; MRFIT; the Black Report);
- one’s place in the “social” hierarchy and characteristics of work, despite risky lifestyle behaviours, influences health and life expectancy (Whitehall Studies);
- how income is distributed in society affects health status (Wilkinson);
- a civil and trusting community promotes health and life expectancy (Putnam); and
- how we cope with the stress that results from the gap between our expectations and experiences influences our physiological and psychological well-being (Sociobiological Translation).

**Revised Tips for Health**

So, what does this have to do with helping people improve their health and exercise a little more and a little more often? Admittedly, this review leaves out many details and presents a somewhat abstract version of the determinants literature. However, at this point, I’m hoping you will agree that the dietary, substance, and exercise choices one makes in the day-to-day routine of his/her life is interdependent on his/her living conditions. “People make choices in the context of community norms and broader social and economic conditions” (Lyons & Langille, 2000, p. 20). Which leads us to a revised version of the 10 tips for better health.

Reading these 10 tips, we begin to understand just how silly lists are for advising people about how to achieve health, given that some of the items on the list are largely out of their control. Many feel the same way about the first list—simply admonishing people not to smoke trivializes the complexities of their life, and is not helpful.

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**An Alternative 10 Tips for Better Health (adapted from David Gordon of Bristol University in the UK)**

1. Don’t be poor. If you can, stop. If you can’t, try not to be poor for long.
2. Pick your parents well. Make sure they aren’t poor, and that they nurture your sense of identity, self-esteem, etc., well from an early age. It also helps if your parents live long and don’t pass on a long list of family diseases.
3. Graduate from high school, and if possible, go on to post-secondary education.
4. Don’t work in a stressful, low-paid, repetitive manual job in which you have little decision-making authority or control.
5. Learn how to control your cortisol feedback loop.
6. Be able to afford to go on a foreign holiday and sunbathe (with SPF 30+).
7. Practise not losing your job and don’t become unemployed.
8. Be sure to live in a community where you trust your neighbours and feel that you belong.
9. Don’t live next to a busy major road, in a densely populated urban ghetto, or near a polluting factory, but rather where there is access to walking/cycling trails, parks, and a variety of recreational programs and services. Not surprisingly, unsafe neighbourhoods present a barrier for physical activity, particularly for seniors, women, racial/ethnic minorities, and for persons with a high school education or less (Centers for Disease Control, 1999).
10. Learn how to make friends and keep them. Social support and connections may be the most clearly established determinant influencing physical activity among adults (Sallis & Owen, 1999), women (Sallis et al., 1992) and youth (Booth et al., 1997).
Healthy Lifestyles Concept

In 1984, the World Health Organization (WHO) defined health as “a complete state of physical, mental, and social well-being and not merely the absence of disease or infirmity. It is the ability to identify and to realize aspirations, to satisfy needs and to change and cope with the environment. Health is therefore a resource for everyday life, not the objective of living.” This reflected a broad understanding of health, but it wasn’t until 1998 that WHO, based on the influence of the determinants literature, broadened the definition of lifestyle to be: a way of living based on identifiable patterns of behaviour that are determined by the interplay between an individual’s personal characteristics, social interactions, and socio-economic and environmental living conditions.

A healthy lifestyle, WHO suggested, is less about acquiring certain lifestyle skills and engaging in specific habits, but is more useful if thought of as competencies and an orientation to creating a mutually supportive environment for healthy living. Integral to this new concept is recognizing that health and lifestyle not only influences individual health, but also the lifestyles of others and the conditions in the community that contribute to healthy lifestyles.

Lifestructures instead of Lifestyles

As the readings by Lyons and Langille (2000) and Kimiecik and Lawson (1996) make clear, interventions aimed solely at “one-size-fits-all” individual behaviour change are limited:

Specifically, they have had only modest results; require individual or small group counseling and so entail high cost; require voluntary, sustained, and often intense effort on the part of the individual; and have limited impact on overall health because they usually focus on only one aspect of health…“Lifestyle” is an adaptation to one’s social environment. Unless lifestyle is constructed (as a category of intervention) in concert with the way that lifestyle is experienced by target group(s), interventions are unlikely to succeed (Lyons & Langille, 2000, p. 34, 42).

In order to motivate behavior change, it is imperative that we begin to understand each individual’s behavior within its larger social context (Kimiecik & Lawson, 1996, p. 115).

Rather than focusing on exercise, diet, and substance use as behaviours that one rationally chooses to do at random, the notion of lifestyle is more useful once we understand the determinants of lifestyle choice—that is, what factors, structure, context, and conditions influence our lifestyle habits. Keeping in mind the previous discussion of the determinants literature, Lyons and Langille (2000) offer the following eight determinants of lifestyle choice:

1. Personal life skills—literacy, numeracy, decision-making, and problem-solving, creative and critical thinking, empathy, mutual support, self-help and advocacy, communication, and coping. These are not necessarily linked to specific health practices, but all contribute to helping people increase control over their life and health. Education, income, and type of job are the most powerful predictors of activity level. Those with college or university education, high incomes, and “professional” jobs are most likely to be active and least likely to be sedentary (Frankish, Milligan, & Reid, 1998). These are the individuals with the money, knowledge, organizational
resources, support and motivation—the personal life skills—to engage in active living.

2. Perceived stress in life. Not only does stress contribute independently to disease through such a pathway as described in the Sociobiological Translation, but stress also contributes indirectly by making it more difficult to engage in healthy living.

3. The influence of norms and culture both reflects and limits lifestyle choice.

4. Control over one’s life and a sense of coherence about the world enhance one’s ability to choose the healthy behaviour over the unhealthy one. Canada’s 1997 National Population Health Survey found that Canadians in the lower-income group were 2.6 times more likely to have a low sense of control over their lives than the higher-income third of Canadians. Specifically, 47% of the lower-income group reported seeing the world as meaningless, events as incomprehensible, and life’s challenges as unmanageable.

5. A sense of belonging is critical to health. To a large extent, connectedness and belonging may overcome the traditional epidemiological risk factors of smoking, physical inactivity, obesity, or poor nutrition (Putnam, 2000)—risks that are more prevalent among those with lower incomes (Towards a Healthy Future, 1999). In fact, social connectedness may be of greatest importance to families living with low incomes and having fewer educational resources (Runyan & Hunter, 1998) and for those experiencing depression (Stevenson, 1998).

6. Let’s face it, the healthy choice in life is not always the most pleasurable and the benefits of healthy living are not always immediately reaped or apparent. Even the most disciplined among us choose unhealthy behaviours because they meet immediate needs. This is particularly true for the more disadvantaged among us for whom the future may hold little promise. The act of smoking is a means of controlling stress (and appetite), and is immediately rewarding in a life where there may be few other pleasures.

7. Personality traits, such as learned helplessness or individuals who are “other” directed (believe that luck/fate is responsible for their lot in life) can discourage uptake of healthy behaviours. Those who are optimistic about life also tend to have better health and live longer: it is thought that they cope positively with the stress in their life.

8. Overabundance of choice and information about what is the “right” thing to do (to self-examine breasts or not?) can confuse and paralyze people rather than galvanize them into action. To be consistent and clear, information should be accompanied by public policies and services that reinforce the decision to be active.

A New Meaning to the Acronym for FITT

Helping someone increase his or her level of physical activity within a determinants approach, then, requires a new way to conceptualize the FIT(T) principle. In addition to finding people’s interests, skills, abilities, etc., I suggest we need to consider the following.

Factors or Features in their life that influence their decision to be active or not. Does their culture and social situation encourage physical activity? Do they work in a meaningful job? Are they stressed and unable to cope? The best investments in healthy lifestyles are community-based initiatives and strategies that improve basic living conditions and strengthen communities (Lyons & Langille, 2000).
Absolute and relative income level. Do they have enough money to be able to afford to exercise while paying for the other necessities of life? Relative to others in their community, are they up or down the social/income scale? Is physical activity the last thing they’re thinking about in their daily struggle just to survive? How might their rank in the community—and the norms and culture associated with it—influence their decision to be physically active or not? Thirty-seven per cent of Canadians feel that it is beyond their financial means to engage in physical activity (CFLRI, 1999).

Sense of trust in their community. Do they live in a safe and open neighbourhood? Are they well connected in their community? Do they know whom to contact to look after their kids while they exercise, and do they trust them to care for their kids? Forty per cent of Canadians find it difficult, if not impossible, to find someone to be active with, or to find a program where they can participate with their children (CFLRI, 1999).

Increasing outreach programs, creating social connections among people to be active, and family-oriented services were recommended as ways to increase physical activity. Almost one-quarter of adult Canadians find their neighbourhood unsafe in which to exercise, citing traffic, crime, poorly lit and maintained sidewalks and cycling lanes as specific examples (CFLRI, 1999). Creating and supporting local community recreation centres, events, and groups offer a venue for people to meet together, get to know one another, and advocate for issues that foster health.

Expectations of and experiences in life, and how any gaps between the two are dealt with and translate into health or illness. Changing the living conditions and circumstances for different groups of Canadians experiencing inequity will take time, resources, and commitment. Start now. In the meantime, we can enhance people’s ability to cope with the gap between their expectation and experience through counselling, education, and increasing their skills and capacities.

Fostering Healthy Lifestyles

As Lyons & Langille (2000) point out, fostering healthy lifestyles requires much more than simply giving people knowledge and information about what is the right thing to do. Indeed, providing too much information, without the accompanying policies, resources and opportunities, can backfire. Many behaviour education and incentive strategies have had limited success because of their reliance on the import of information and rewards, focusing on target symptoms and risk factors, and an assumption that it will lead to individual behaviour change without a complementary change in the environment. Such “interventions,” while completely sincere and well meaning, are often misguided when they do not deal with the larger picture of lifestyle and its determinants.

Greater success has been achieved with more comprehensive approaches that combine creating supportive environments through advocacy and public policy, and community-level initiatives that involve multiple stakeholders and citizen participation. Rather than focus on risk behaviours or factors, there is an emphasis on the development of coping skills and resources, as well as strengthening community policies and opportunities that facilitate and support individual healthy lifestyle decisions (e.g., Frisby & Fenton, 1998; Haldane, 2001; Wharf Higgins & Reed, in press).
An Example of a Determinants Approach to Enhancing Healthy Lifestyles: The Panorama Recreation Diabetes Project

In the Saanich Peninsula on Vancouver Island, we are just beginning a three-year research project, funded by Health Canada, examining the contribution of community recreation services in the primary prevention of type 2 diabetes in at-risk populations. It is a participatory design, meaning that the exact nature of the “interventions” (recreation programs and services) will be defined with the help of research participants. Once we have assessed community resources, assets, and the needs of the participants, we will define objectives, evaluation measures, and the content of programs and services.

We are not following the traditional approach that focuses on the primary risk factors for diabetes (obesity and physical inactivity) for the at-risk group (people with borderline blood glucose intolerance) with the standard lifestyle intervention (nutrition, smoking cessation, exercise). Rather, we are using a determinants approach to help us identify the major barriers (economic, cultural, socio-environmental) to living a diabetes-healthy life for at-risk populations (families living on low incomes, isolated seniors, people living with disabilities, First Nations). Working with a number of community partners (Silver Threads, Peninsula Community Services, public health, First Nations bands, Salvation Army, Canadian Diabetes Association), we are hoping to strengthen the capacity of local agencies to meet the needs of their constituents with tailored programs, services and policies in order to reduce the risk of developing type 2 diabetes.

References


