SCHEDULE E

Sport Makes a Difference, Facts and Figures, 2005

FACTS & FIGURES

2005

Sport Nova Scotia

ALSO SUPPORTED BY: Doctors Nova Scotia — For doctors. For health. For you.

Introduction

Sport Makes a Difference is a Sport Nova Scotia advocacy campaign. This publication is part of the campaign and is intended to educate decision-makers in business and politics, health care workers, social service providers, educators, parents, and youth about the benefits of amateur sport to our community, health, youth, and economy.

Through this publication, Sport Nova Scotia hopes to give concrete data that motivates Nova Scotians of all ages to join a sport, encourage more financial investment and support in amateur sport from the private sector, and from all three levels of government – municipal, provincial, and federal.

It should be noted that though every effort has been made to provide a comprehensive collection of up-to-date research, this publication is best approached as a general overview to the issues. Ideally, the researcher will use it as a starting place and/or reference guide for further information.

The following "Sport" definition was approved by Sport Nova Scotia and is what sport refers to throughout the 2005 Sport Makes A Difference Facts and Figures Manual:

Sport

An activity performed with the goal of engaging in competition or improving personal sport performance. Sport requires the use of specialized neuromuscular skills, tactics, and strategies with a considerable degree of difficulty, risk and/or effect.

Sport does not include activities in which the performance of a motorized vehicle is a primary determinant of the competitive outcome. As well, physical and leisure activities that do not involve competition or performance improvement objectives are excluded.

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Benefits of Sport: Community

Community Involvement

Sports get people involved in their community

Canadians love sport. It gives them pleasure and helps them to define themselves and their communities. In any one year, Canadians are involved as active participants in sport—more than eight million in 2004.

Bloom, Michael, Michael Grant, and Doug Watt (July 2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

Sport improves social cohesion. Sport participants experience a high degree of interaction with other individuals, which improves interpersonal relationships, establishes the basis for relationships of trust, and builds teamwork skills that generate gains in social cohesion.

Bloom, Michael, Michael Grant, and Doug Watt (July 2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

Sport is a valuable and important means of organizing and enhancing a wide set of transferable skills that are important in work and life, according to a survey of respondents.

Bloom, Michael, Michael Grant, and Doug Watt (July 2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

Nearly 13.7 million adult Canadians (55%) take part in sport as active participants, volunteers, or attendees, or some combination of the three.

Bloom, Michael, Michael Grant, and Doug Watt (July 2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

Recreation helps train leaders, who build strong communities, and can create partnerships and renew community spirit.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 23 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts608/index.asp>.

Forty-eight percent of individuals believe that community sport brings people together, and 43% believe that it builds community pride.

Canadian Centre for Ethics in Sport. National Survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

The inception of new facilities in 19 medium-sized cities across Canada have provided a springboard for growth in sports excellence and fitness, as well as for the training of coaches, technical officials, and sport administrators.

Canada Games. Introduction. 22 July 2005 < http://www.canadagames.ca/Content/GamesHome.asp?langid=1>.

A national survey of 5,937 respondents aged 15 and over told the federal government that Canadians want money spent on entry-level sport programs and participation projects rather than high-performance sport. Additionally:

- **96% believe that participation in sport maintains good health;**
- **91% say physical education should be mandatory to Grade 12;**
- **82% say money must be spent on developing participation in amateur sport;**
- **81% say the performance of elite athletes gives them pride in being Canadian;**
- **76% believe participation in sport reduces crime;**

- **75% believe participation in sport reduces health costs;**
- **74% think the government should increase funding to build and renovate sport facilities;**
- **63% think participation in sport reduces the number of school dropouts;**
- **51% say the performance of elite athletes inspires them to regular participation in sport.**

Ministry of Canadian Heritage (28 April 2001). "National Canadian Survey." The Globe and Mail.

In 1998, 54% of Canadian children ages 5 to 14 regularly took part in some kind of organized sports activity.

Statistics Canada. General Social Survey. 18 July 2005 <http://www.statcan.ca>.

The majority (61%) of Canadians belonged to at least one group or organization. Sports and recreational organizations, such as hockey leagues, health clubs or golf clubs, were reported most often.

Statistics Canada. "General Social Survey: Social Engagement." The Daily. 18 July 2005 < http://www.statcan.ca/Daily/English/040706/ d040706b.htm>.

Family income plays an important role in children's level of involvement in sports. Participating in organized sports may require the purchase of equipment, the payment of user fees, contribution to travel costs and so on. Just under one-half (49%) of children from households with earnings under $40,000 were active in sport, compared with 73% of those from households earning over $80,000.

Statistics Canada (Sept. 12 2000). "Canadian social trends: Children's participation in sports." The Daily. 21 July 2005 <http://www. statcan.ca/Daily/English/000912/d000912a. htm>.

Odds of participating in sports are over 12 times higher for children with two parents active in sports and a household income of $80,000 or more, compared with children of inactive parents in a household with income under $40,000.

Statistics Canada (Sept. 12 2000). "Canadian social trends: Children's participation in sports." The Daily. 21 July 2005 <http://www. statcan.ca/Daily/English/000912/d000912a. htm>.

Six in 10 (61%) of Canadians report having had their children involved in community sport.

Johnston, Natasha (18 July 2002.) "National survey reveals that the power of community sport remains unfulfilled." Canadian Centre for Sports Ethics. 23 June 2005 <http://www.cces. ca/pdfs/CCES-MR-2002Survey-E.pdf>.

Parental involvement and household income play an important role in determining whether children will play organized sports. Children from households with active parents and higher incomes are far more likely to participate in sports than children in households with inactive parents and lower incomes.

Statistics Canada (Sept. 12 2000). "Canadian Social Trends." The Daily. 5 July 2005 <http:// www.statcan.ca/Daily/English/040614/ d040614b.htm>.

When at least one parent was involved in amateur sport in some capacity, their child's participation rate jumped to 83%.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http:// www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

When neither parent was involved in amateur sport, the proportion of children active in sport was only 36%.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Findings indicate when a child or youth holds a positive attitude toward physical activity, he or she perceives that significant others believe he or she should participate in physical activity, and feels that he or she has the requisite ability to participate, that individual will form a strong intention.

Mummery, W. K., J. C. Spence, and J. H. Hudec (2000). "Understanding physical activity intention in Canadian school children and youth: An application of the theory of planned behaviour." Research Quarterly For Exercise and Sport 71. 2: 116–124.

Almost 2.2 million (54%) children aged five to 14 regularly took part in some kind of organized sport activity, according to the 1998 General Social Survey (GSS). Participation rates were almost identical whether children lived in a two-parent (54%) or a lone-parent (53%) family.

Statistics Canada (12 September 2000). "Canadian Social Trends." The Daily. 5 July 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Fifty-eight percent of Nova Scotia residents are insufficiently active for optimal health benefits.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Physical inactivity declined significantly since the early 1990s, going from 68% in 1994 to 58% in 2000 and 2001.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

In 2002, 20% of Canadians aged 20 and over reported participating regularly in sport. Twenty-four percent were moderately active, while 56% of Canadians are inactive.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 10 July 2005 < http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Slightly more women (59%) than men (53%) are physically inactive.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 10 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Among regular participants, 4.4 million Canadians (46%) reported being involved in sport activities through a club, league, or organization, and 3.1 million (33%) had participated in a competition and/or tournament in the 12 months preceding the survey.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 10 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

In Halifax, more than 1,470 people participated and more than 10,000 people observed the 2005 Manulife Halifax Dragon Boat Festival.

Ferguson, Jamie. "Homepage." Manulife Dragon Boat Festival. 10 July 2005 <http://www.dragonboat.halifax.ns.ca/>.

Soccer is the most popular sport among children 5 to 14, with 31% of athletically active children playing regularly. Swimming and hockey are tied for second place, at 24% each. At the bottom of the top ten list are volleyball (5%) and cycling (3%).

Statistics Canada. The Daily. 26 July 2005 <http://www/statcan.ca/Daily/English/000912/d000912a.htm>.

Almost 48% of active children participated in more than one sport over the year.

Statistics Canada. The Daily. 26 July 2005 <http://www/statcan.ca/Daily/English/000912/d000912a.htm>.

Out of nearly 100 sports played, involvement is strongly concentrated in about a dozen sports, including ice hockey, golf, soccer, baseball, basketball, volleyball, skiing, swimming and cycling. The 2004 pattern of active participation closely resembles 1998, with 13 sports appearing in the top 15 in both years.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

In 1998, ice hockey was the most popular sport of men (12%), with golf a close second (11.1%). Swimming was reported most often by women surveyed (5.6%).

Statistics Canada (Oct. 5 2004). Most Popular Sports. 12 July 2005 <http://www40.statcan.ca/l01/cst01/arts16.htm>.

Golf, hockey, baseball, swimming, and basketball were the five sports in which the largest number of people participated through an organization as well as in a competition and/or tournament.

Statistics Canada (Oct. 5 2004). Most Popular Sports. 12 July 2005 <http://www40.statcan.ca/l01/cst01/arts16.htm>.

Eighty-five percent of Nova Scotians report walking as an activity they do in their free time, and 14% say they participate in individual sport in an unstructured environment.

Canadian Fitness and Lifestyle Research Institute. 2000 Physical Activity Monitor. 12 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2000survey/2000_ns.html>.

According to a survey, about one in four Canadians (24.5%) said they participated in recreation and leisure activities because it contributes to their physical health.

Statistics Canada. Canadian Survey. 12 May 2005 <http://www.statcan.ca>.

The majority of Nova Scotians are involved in physical activity during their free time for 7.4 hours. The average time people are actually physically active is about 39 minutes.

Canadian Fitness and Lifestyle Research Institute. 2000 Physical Activity Monitor. 12 July <http://www.cflri.ca/cflri/pa/surveys/2000survey/2000_ns.html>.

In Nova Scotia, common barriers that prevent people from participating in recreation activities, are:

- **76% lack of time;**
- **68% lack of energy;**
- **34% lack of skill;**
- **57% lack of interest or motivation;**
- **41% feeling ill or uncomfortable;**
- **53% illness or disability;**
- **30% fear or injury;**
- **40% cost.**

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Almost 60% of people interviewed in a recreation and leisure survey said that their free-time activities involve family members. The majority (74%) identified their home as a place where they would be likely to participate in leisure activities.

Nova Scotia Sport and Recreation Commission (1993). A Survey of Leisure Patterns and Behaviours of Nova Scotians.

About 15 million Canadians over the age of ten participate in some physical activity at least every other day for 30 minutes or more.

Canadian Fitness and Lifestyle Research Institute. Physical Activity and Lifestyle in Canada. 14 July 2005 <www.cflri.ca/pdf/e/95palife.pdf>.

Sport is seen as a method of involving socially and economically vulnerable persons in improving their quality of life.

True Sport. Fitness and Amateur Sport. 15 June 2005 <http://www.truesportpur.ca/index.php/featuretopic/5>.

The social need for recreation has been identified as a means for community involvement and an expression of citizenship.

True Sport. Fitness and Amateur Sport. 15 June 2005 <http://www.truesportpur.ca/index.php/featuretopic/5>.

1.17 million (est.) Canadians volunteer in organized sports, 5% of Canadians, and 18% of all volunteers.

Sport Volunteer Fact Sheet. Pro Ontario. 12 Oct. 2005 <http://www2.proontario.org/proontario/PDF/SPORTVOLUNTEER_factsheet.pdf>.

The number of sport volunteers in Canada increased by 27% between 1995 and 1996.

Statistics Canada. Sport Participation in Canada. July 19 2005 <http://pch.gc.ca/progs/sc/info-fact/part_e.cfm>.

One of every four adults in Ontario volunteers. Twenty percent volunteer for sport, fitness, or recreation organizations.

Giving and Volunteering (2003). Who are Ontario's Volunteers? 18 July 2005 <http://www.givingandvolunteering.ca/factsheets/1997_ON_who_are_ontarios_volunteers.asp>.

Approximately one in three residents in Nova Scotia (34% or 253,000 people) volunteered through a charitable or non-profit organization in the year 2000.

Volunteering in Nova Scotia. 2000 National Survey of Giving, Volunteering, and Participating. 23 June 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/Volunteering/Volunteering_in_Nova_Scotia.pdf>.

The number of Nova Scotia residents that volunteer within their communities has declined by 4% (38% to 34%) since 1997.

Volunteering in Nova Scotia. 2000 National Survey of Giving, Volunteering, and Participating. 23 June 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/Volunteering/Volunteering_in_Nova_Scotia.pdf>.

In 2000, Nova Scotia volunteers contributed an estimated 47.2 million hours to helping those in need, caring for their environment, and contributing to their local communities.

Volunteering in Nova Scotia. 2000 National Survey of Giving, Volunteering, and Participating. 23 June 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/Volunteering/Volunteering_in_Nova_Scotia.pdf>.

In 2000, 13% of volunteer hours were spent at recreational events (sporting events) and 8% of volunteer hours were spent on health-related issues.

Giving and Volunteering. 2000 National Survey of Giving, Volunteering, and Participating: Volunteering in Nova Scotia. 23 June 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/Volunteering/Volunteering_in_Nova_Scotia.pdf>.

In Atlantic Canada, the percentage of population who volunteered was higher than the national average. In fact, Nova Scotians volunteered more time, on average, in 2000, giving 186 hours of their time.

Giving and Volunteering. 2000 National Survey of Giving, Volunteering, and Participating: Volunteering in Nova Scotia. 23 June 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/Volunteering/Volunteering_in_Nova_Scotia.pdf>.

Four in ten Canadians are currently involved in community-level sports, either as a participant, volunteer, or as a parent of children engaged in sports.

Canadian Centre for Ethics in Sport. National survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

Sixty-three percent of Canadians participate in some physical activity at least once a week. One in five participate in an activity that is directed by an instructor, coach, or supervisor. Seventeen percent are involved in a competitive sport activity, with organized leagues or races.

Stephens, T., and C. L. Craig (1990). The Well-Being of Canadians. Canadian Fitness and Lifestyle Research Institute. Ottawa.

Evidence shows that rates of participation in recreational activities are lower for children in low-income families and higher for children in high-income families.

Canadian Council and Social Development (27 March 2001). The Progress of Canada's Children: The Good News and the Bad News. 23 June 2005 <http://www.ccsd.ca/facts.html>.

Statistics Canada found that of those surveyed: 34.2% regularly participate in sport, 19% a club or organization, and 12.3% through a competition and/or tournament. Of those involved in amateur sport: 7.1% coach, 3.9% referee/ official/umpire, 7.0% are administrators or helpers, and 31.5% are spectators at amateur sport competitions.

Statistics Canada (Dec. 23 2004). General Social Survey. 23 June 2005 <http://www40.statcan.ca/l01/cst01/arts18.htm>.

Fifty-four percent of children played in organized sports.

Canada's Children and Youth (12 Nov. 1999). _ A Physical Activity Profile.

A gender gap exists when it comes to competing in sporting events. Of the three million Canadians competing, over two-thirds were men.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

In 1998, 34% of the Canadian population (aged 15 years and older) participated in sport on a regular basis, down almost 11 percentage points from the 45% reporting participation in 1992.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Male participation rates continue to be higher than those of females. While the proportion of both adult males and females playing sports declined, males playing sports (43%) continue to outnumber females playing sports (26%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Sport participation levels decrease dramatically as we age, particularly after the age of 20.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

In 1998, residents of the Atlantic Provinces reported the lowest levels of sport participation.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

The higher the level of education attained, the higher the sport participation rate. Nearly one-half (46%) of those holding a university degree regularly participated in sport.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

The higher the household income, the higher the rate of sport participation for the individual. In 1998, 51% of respondents in households earning incomes of $80,000 or more participated in sports, compared to one-quarter of respondents in households earning less than $20,000.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Golf replaced hockey as the number one sport in Canada. Today, more than 1.8 million Canadians reportedly play golf on a regular basis (7.4% of the adult population) compared to 1.3 million (5.9%) in 1993.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Just over half (54%) of Canadian children aged five to 14 were actively involved in sport. Girls (48%) tend to be less active in sport than boys (61%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Over half (55%) of "active Canadians" belonged to a local club, community league, or other local amateur sport organization in 1998. This represents a substantial 20 percentage point increase in the proportion of active Canadians belonging to sports clubs in 1993 (34%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>. Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

The number of Canadians coaching amateur sport doubled from 839,000 Canadians in 1992 (4%) to 1.7 million in 1998 (7%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

In 1998, 34% of Canadians 15 years of age and older (8.3 million) participated regularly in one or more sport.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Young Canadians participated in sports in larger proportions than any other ages. Eighty-nine percent of males aged 15–18 participated regularly in sport, compared with 64% of females of the same age group. While Canadians aged 55 and over had the lowest participation rates, approximately one in four participated on a regular basis (28% for males, compared with 22% for females).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Swimming, soccer, baseball and hockey were the four most popular sports of children between the ages of six and ten, while baseball, swimming, hockey and basketball were the most popular sports of children between the ages of 11 and 14. Swimming was the only sport in which children under age six participated in large numbers.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Participation in organized school sport (other than physical education classes) increases the probability of participating regularly in sport as an adult. In 1992, 52% of the people who reported participation in an organized school sport reported participating regularly in the past year, compared to 37% for those who had not participated in organized schools sport.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Fifty-five percent of Canadians indicated they did not participate in sport on a regular basis. The major reasons for not participating in sporting activities were: lack of time (27%), no interest (19%), health (14%), age (11%), and disability (4%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

A greater proportion of females than males reported a lack of interest in sports (21% versus 16%) and a slightly higher proportion of males said they had no time for sport (29% versus 26%).

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Community Pride

Sport builds a sense of community pride

Canadians generally hold strong beliefs about the positive contribution that physical activity opportunities have on the quality of life in their community. In particular, half of the respondents moderately agreed, and an additional 28% agreed a great deal, that such programs contribute to community spirit and pride.

Alberta Community Development. Recreations Make Communities Happen. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts608/index.asp>.

Friendships generated through recreation are closer than those generated in other life situations, such as work.

Kanters, Michael (1996). "The Health Benefits of Parks and Recreation." Illinois Periodicals Online January/February.

Eighty-six percent of respondents in a 1993 survey at the Canada Games agreed that sport unites Canadians and makes them proud of their country.

Benefits of Investing in Sports. 18 July 2005 <http://www.edmontonsport.com/pdf_folder/ESC_Benefits_of_Invensting_in_Sport.pdf>.

As a Secretary of State for External Affairs, Joe Clark once explained in a speech: "Canada's athletes are usually better known than Canada's diplomats…Our best athletes become symbols, and speak to the work of what Canada is and can become."

TrueSport (2005). The Report of the Minister's Task Force of Federal Sport Policy. 29 June 2005 <www.truesportpur.ca/index.php/partner/2>.

Sport offers pride in who we are and what we collectively accomplish.

TrueSport (2005). The Report of the Minister's Task Force of Federal Sport Policy. 29 June 2005 <www.truesportpur.ca/index.php/partner/2>.

Beyond the impact on youth, a significant number of Canadians also see community-level sports significantly benefiting their local communities as a source of fun and recreation (64%), crime reduction (49%), unity (48%), community pride (43%), and tradition and history (26%).

Canadian Centre for Ethics in Sport. National Survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

Physical activity and recreation programs also provide important leadership opportunities and contribute to building a sense of community and belonging.

Kerr, G. (1992)."The role of sport in preparing youth for adulthood." Youth in Transition: Perspectives on Research and Policy. Toronto: Thompson Educational Publishing Inc.

Recreation and park opportunities, facilities, programs, and the quality of the local environment help to generate community pride.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts608/index.asp>.

In 1996, 87% of athletes reported that national pride is an important factor in their decision to pursue their sport at a high level and that they view their role in society as representatives of Canada (94%), as a source of pride for Canadians (92%), and as a role model for youth (98%).

Sport Canada. Status of the High Performance Athlete Survey. 24 June 2005 <http://www.pch.gc.ca/progs/sc/pubs/sas_e.cfm>.

Almost every Canada Games' alumni developed lifelong friendships with people from other provinces. This has broadened their knowledge about Canada and provided insights about what it means to be Canadian.

Canada Games (22 June 2002). Canada Games Program. 22 June 2005 <http://www.gov.ns.ca/src/infoserv_sport_canadagames.htm>.

Unifying Community Members

Sport brings community members together

Sport can help communities grow.

Alberta Community Development. Building Strong Communities: Sport…For the Health of It. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts612/index.asp>.

Recreation provides opportunities for various groups in the community to work together on the same project.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts608/index.asp>.

Recreation gives people the chance to share their cultural differences, thus growing stronger together.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts608/index.asp>.

During the gambling crisis in the Akwesasne Territory in 1990, the sport of lacrosse was used as a "healing" process to bring a divided community back together.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ontario: Public Works and Government Services Canada.

The nature of physical activity—active, interactive, highly emotional—provides the possibility of exploring and practicing values, teamwork, goal-setting, peer-teaching, conflict resolution, and so on.

Martinek, T. J., and D. R. Hellison (1997). Fostering Resiliency in Underserved Youth Through Physical Activity.

Sport offers a common experience and a shared language relevant to our day-to-day lives.

TrueSport (2005). The Report of the Minister's Task Force of Federal Sport Policy. 29 June 2005 <www.truesportpur.ca/index.php/partner/2>.

The thousands of sport events and media coverage every day across this country provide cultural glue.

TrueSport (2005). The Report of the Minister's Task Force of Federal Sport Policy. 29 June 2005 <www.truesportpur.ca/index.php/partner/2>.

Ethnic groups use sport as a means of coping with urban life.

Alberta Community Development. Building Strong Communities: Sport…For the Health of It. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts612/index.asp>.

Sport can be used as a unifying force within the community.

Alberta Community Development. Building Strong Communities: Sport…For the Health of It. 24 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts612/index.asp>.

Sport and recreation programs and facilities—the necessary complement to physical education—are an important part of community redevelopment and regeneration. Such programming provides important opportunities for learning humanistic and social skills, strengthens cohesion, and sense of belonging

Goldberg, Barry (1995). Sports and Exercise for Children with Chronic Health Conditions. Champaign, Ill.

Community and family

Sport helps to create a healthy lifestyle

Adults in 2004 see more individual and household benefits from sport than they did in 1998. Seven major types of benefits are: physical fitness and health gains, fun, recreation and relaxation, sense of achievement, family and household activity, skills development, new friends and acquaintances, and preparation for competition.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

The vast majority of active sport participants, volunteers, and attendees all rate sport as an important source of skills gains that they can apply away from sport.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

People are willing to pay a larger amount for a home located close to an attractive park or open space area than they are for a home further away.

Crompton. J. L. (2001)."The Impact of Parks on Property Values." Parks and Recreation 36.1.

The most important skills gains [from sport involvement] are transferable skils which can be put to good use in every kind of workplace and at every level of responsibility within an organization.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

In families where parents are involved in sport as both athletes and volunteers, their children have high levels of sport participation.

Kremearik, Frances (2000). "Promoting the Benefits of Sport." A Collection of Peer-Reviewed Journal Articles and Reports.

Ninety percent of women who engage in sports and fitness with their mates find that it has improved their relationship.

(1997). "Pairing with a Partner can Improve Your Workout." Jet.

The less television children watched, the more likely they get along with their family.

Canadian Fitness and Lifestyle Research Institute. 18 May 2005 <http://www.cflri.ca>.

The participation of parents in amateur sport increases the likelihood that their children will also participate.

Canadian Fitness and Lifestyle Research Institute. 18 May 2005 <http://www.cflri.ca>.

The father's participation in sport increased the participation of his children by 11%, while the participation of the mother had a greater effect, with an increase of 22% in the participation of her children.

Statistics Canada (May 16, 2003). Sport Participation in Canada. 27 June 2005 <http://www.pch.gc.ca/progs/sc/info-fact/1998-psc-spc/index_e.cfm>.

Amateur sport participation among youth increases the likelihood that they will continue as adults.

Canadian Fitness and Lifestyle Research Institute. 18 May 2005 <http://www.cflri.ca>.

One-third (36%) of Canadian parents of children under the age of 18 have not been able to enroll their children in sport or recreational activity when they wanted to because it was too expensive.

Ipsos-Reid/Canadian Tire poll. Canadian Tire Launches National Canadian Tire JumpStart program. 26 July 2005 <http://www.newswire.ca/en/releases/archive/February2005/08/c1230.html>.

More than one out of every two Canadian parents (53%) with annual household income of less than $60,000 are unable to register their children in sport or recreational activity when they wanted to because it was too expensive.

Ipsos-Reid/Canadian Tire poll. Canadian Tire Launches National Canadian Tire JumpStart program. 26 July 2005 <http://www.newswire.ca/en/releases/archive/February2005/08/c1230.html>.

Two-thirds (67%) of Canadians say that if they could, they would help a child from a low-income family participate in an organized sporting activity by making a financial donation.

Ipsos-Reid/Canadian Tire poll. Canadian Tire Launches National Canadian Tire JumpStart program. 26 July 2005 <http://www.newswire.ca/en/releases/archive/February2005/08/c1230.html>.

Sports in the community help to develop the neighborhood and reduce crime.

Kremearik, Frances (2000). "Promoting the Benefits of Sport." A Collection of Peer-Reviewed Journal Articles and Reports.

Participation rates in all types of activities increase with increased income. Yet the presence of a civic neighbourhood and good parks can counteract the deleterious effect of low income on the participation rates of children.

Norrie, Hon. M., and J. F. Mustard (1999). "Early Years Study: Final Report." The Canadian Institute for Advanced Research.

Participation in recreation activities helps contribute to marital stability, and a stronger family unit.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 23 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts605/index.asp>.

Co-operation in leisure activities is positively related to family satisfaction, family interaction, and family stability.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 23 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts605/index.asp>.

Sport opportunities made available through community leagues and community service organizations play an important role in socialization of children and adolescents.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 23 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts605/index.asp>.

Introducing good activity habits at an early age develops healthy attitudes and values for the future.

Alberta Community Development. Building Strong Communities: Recreation Makes Communities Happen. 23 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts605/index.asp>.

Personal Development

Sport builds character

Sporting and play activities help children learn to build character, courage, and respect for others. Youth find sport enables them to channel their energy, competitiveness, and aggression in socially beneficial ways.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

Of the values identified that appear to be promoted by community sport, teamwork leads the way at 72%, followed by commitment (63%), hard work (56%), striving for excellence (55%), fair play (53%), courage to try new things (52%), respect for others (52%), and honesty (41%).

Canadian Centre for Ethics in Sport. National Survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

By focusing on citizen development, trained coaches can instill values, habits, and skills to help Canadians reach their full potential—to live healthy, productive lives, acquire self-discipline and self-confidence, learn leadership skills and tolerance of others—benefiting themselves and society.

(2002). "Partners in Coach Education." Building Citizenship Through Sport 9.

Seventy-six percent of children who exercised felt accepted by other students, while only 65% of children who didn't exercise felt the same.

CFLRI (1999). Canada's Children and Youth: A Physical Activity Profile. <http://www.cflri.ca/pub.html>.

Canadians believe that sport participation develops a wide range of skills and attitudes, including teamwork, leadership, problem-solving, decision-making, communications, personal management, and administrative skills.

Bloom, Michael, Michael Grant, and Doug Watt (2005). "Strengthening Canada: The Socio-Economic Benefits of Sport Participation in Canada." The Conference Board of Canada.

In a Tryfit demonstration project for disadvantaged women, all of the participants felt better about themselves as a result of the program, which included a physical fitness and social component.

Government of Australia (June 2001). Sport and Recreation Plan. August 2005 <http://www.ausport.gov.au/fulltext/2001/tas/osrplan_benefits.pdf>.

Through unstructured play activities, children learn to build confidence, self-esteem and creativity.

Alberta Community Development. Recreation Builds Strong Families. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts605/ index.asp>.

Benefits of Sport: Health

Your body is the only one you have—so take care of it!

General Health

Fight Health Problems with Physical Activity

People who are usually inactive can improve their health and well-being by becoming even moderately active on a regular basis. The physical activity does not need to be strenuous to achieve health benefits, although greater health benefits can be achieved by increasing the amount (duration, frequency, or intensity) of physical activity.

Canadian Fitness and Lifestyle Research Institute (2002). National Population Health Survey, 1998/99. 15 Jun. 2005 <http://www.cfli.ca>.

Walking remains the most popular physical activity, cited by 69% of adults as an activity they did during the past three months. It is followed by gardening (48%), home exercise (29%), swimming (24%), and bicycling (24%).

Canadian Fitness and Lifestyle Research Institute (2002). National Population Health Survey, 1998/99. 15 Jun. 2005 < http://www.cfli.ca>.

Physical inactivity declined significantly since the early 1990s, going from 68% in 1994 to 57% in 1998.

Canadian Fitness and Lifestyle Research Institute (2002). National Population Health Survey, 1998/99. 15 Jun. 2005 < http://www.cfli.ca>.

Slightly more women (59%) than men (53%) are physically inactive.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2002. 4 July 2005 <http://www.cflri.ca>.

Physical activity boosts energy levels, improves resistance to disease, controls weight and high blood pressure, and counteracts some effects of aging.

Alberta Community Development (2004). Recreation Builds Strong Families. 8 July 2005 <http://www.cd.gov.ab.ca/ building_ communities/sport_ recreation/resources_links / recfacts/general_index/recfacts605/ index. asp>.

Exercise is good for PMS. It is said to help counteract fluid retention. It also helps the release of endorphins, the body's chemicals that are responsible for increased feelings of well-being.

Saffron, Lisa (1999). Women's Health. London, 1999.

More women (46%) than men (33%) are aware of some guidelines for physical activity.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2000. 8 July 2005 < http://www.cflri.ca>.

Exercise beginning in childhood helps prevent chronic illnesses later in life. Children's hearts, lungs, muscles, and bones cannot develop without being exercised.

Wolfe, Karen (2001). "Exercise and Children". Discovery Health: Disease and Conditions. 14 July 2005 <http:// www.healthanswers.com/ centers/topic/overview.asp?id= childrens+healt h&filename=628.htm>.

Eight in ten (79%) of Canadians describe themselves as being "very fit" (20%) or "somewhat fit" (58%), and the number of self-described fit Canadians has remained the same as one year ago.

Ipsos-Reid (2001). Canadians and Fitness. 22 Jun. 2005 <http://www.ipsos-na.com /news/ pressrelease.cfm?id=1268>.

Regular physical activity increases levels of "good" cholesterol (high-density lipoprotein, or HDL), which helps people manage stress and improve the efficiency of the heart, lungs, and muscles. Even modest levels of low-intensity exercise are beneficial if done regularly. And physical activity can give energy.

Heart and Stroke Foundation of Canada (2004). Healthy Living Risk Factors—Cholesterol. 17 Jun. 2005 <http://ww2.heartandstroke.ca>.

More than half of Canadian children are not active enough for optimal growth and development. Therefore, they are not as healthy as they could be.

CPS Advisory Committee (2002). Healthy Active Living for Children and Youth.

Twenty-five percent of children are considered obese, and that number is rising.

CPS Advisory Committee (2002). Healthy Active Living for Children and Youth.

A few studies suggest that physical activity may be useful in preventing and treating sleep problems. Older people who exercise moderately on a regular basis take less time getting to sleep at night and generally sleep longer and more soundly than their sedentary counterparts.

Senior-Inet Online. Study Confirms Exercise Helps Seniors Sleep. 12 Jun. 2005 <http://www.senior-inet.com/articles/article12.htm>.

Regular exercise—particularly of the aerobic variety—strengthens the heart and improves the efficiency of the heart and lungs.

Healthier Weight Centre (2005). Physical Activity. 23 Jun. 2005 <http://www.healthierweight.co.uk/physical_benefits.asp>.

Aerobic fitness increases memory and reaction time.

Alberta Community Development (2005). Recreation Builds Strong Families. 23 Jun. 2005 < http://www.cd.gov.ab.ca/building_communities /sport_recreation/resources_links/recfacts/general_index/recfacts605/index.asp>.

Active people can maintain functional abilities and enjoy energy levels as though they were years younger.

Active Living (2005). Get Connected to Active Living. 23 Jun. 2005 <http://www.activeliving.ca>.

Active living can improve posture and enhance mobility.

Active Living (2005). Get Connected to Active Living. 23 Jun. 2005 <http://www.activeliving.ca>.

Growth hormone, a builder of lean tissue, decreases with age, but is released during exercise in young and old alike.

Cousins O'Brien, Sandra (2005). Fend off Health Problems with Activity. 23 Jun. 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/ general_index/recfacts152/index.asp>.

Some physical activity is better than none at all. The greatest gains are made when a person moves from being inactive to engaging in moderate physical activities such as walking and gardening.

Physical Activity and Body Image (1999). Vitality—Physical Activity, Self-esteem and Health.

Regular physical activity reduces the risk of high blood pressure, stroke, and coronary heart disease—the latter by as much as 50%.

Public Health Agency (2003). Physical Activity Unit. 11 July 2005 <http://www.phac-aspc.gc.ca/pau-uap/fitness/evidence.html>.

Regular physical activity has many positive health benefits. Not only does it help the heart, lungs, and muscles, but regular physical activity also gives you more energy, helps to control stress, and makes you "feel good" about yourself.

Community Health Services Department (2005). Preparing for Pregnancy and Birth. 8 July 2005 < http://www.lambtonhealth.on.ca/ pregnancy /healthybeginnings/physical.asp>.

The benefits of regular physical activity during pregnancy include: increasing levels of energy, improved mood state and body image, promotion of appropriate weight gain, prevention of diabetes and back pain, easier labour and delivery, and faster recovery.

Alberta Community Development. The Research File—Canadian and Lifestyle Research Institute: Exercise and Pregnancy. 10 July 2005 <http://www.cd.gov.ab.ca/building_ communities/>.

Exercise is associated with positive lifestyle choices that include non-smoking, improved eating habits, and maintenance of healthy body weight.

Fletcher, G. F., S. N. Blair, and J. Blumental (1992). "Statement of exercise." Benefits and Recommendations for the Physical Activity Programs for All Americans. 340–344.

Exercise can greatly improve lung endurance.

Canadian Fitness and Lifestyle Institute. Fend off Health Problems with Activity—Lifestyle Tips. 23 Jun. 2005 <http://www.cd.gov.ab.ca/building _communities/ sport_recreation/resources_links/ recfacts/general_ index/recfacts152/index.asp>.

A regular, preferable daily, regimen of at least 30 minutes of physical activity will reduce your risks of developing coronary heart disease, hypertension, cancer, and diabetes.

University of Arkansas (2005). Healthy Steps for Moving More. 14 July 2005 <http:// www.uaex.edu/healthy_steps /weight/healthy_ steps_ moving_more.htm>.

Some of the therapeutic benefits of physical exercise such as jogging or running include: increased interest in and improved attitudes toward school; reduced anger, restlessness, tension, stress, anxiety, and frustration; increased self-esteem, self-concept, and sense of competency and mastery; improved physical health and fitness; enhanced social interactions; and increased happiness.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

By using only 500 calories a week you become more healthy—so try going for a daily 15 minute walk, a 50 minute bike ride or an hour and a half of gardening.

Alberta Community Development. Recreation Benefits (2005). 23 Jun. 2005 <http://www. cd.gov.ab.ca/building_communities/sport_ recreation/resources_links/recfacts/general_ index/recfacts605/index.asp>.

Research shows a link between physical activity and good health

Lack of physical exercise or an inactive lifestyle is a risk factor for heart disease. A sedentary lifestyle is related to diabetes, obesity, high blood pressure, and high blood cholesterol. Regular, moderate physical activity helps prevent heart and blood vessel diseases and helps to control and reduce other risk factors. Physical activity is the most easily modifiable risk factor.

Heart BC (2004). Physical Inactivity. 25 July 2005 <http://www.heartbc.ca/public/exercise. htm>.

In a study of 314 subjects on self-assessed well-being, a well-developed social network and physical exercise were the most positive determinants of well-being.

Thorell, B., and K. Svardsudd (1990). "50-year-old people in Kingsor." Scandinavian Journal of Primary Health Care 8 (3): 157–163.

1978 British Civil Servants Dating back to the 1990's, Dr. Jeremy Morris studied London bus drivers and conductors, postal service workers and civil servants. His data indicated that physical activity, whether occupational or leisure-time, was inversely associated with coronary heart disease. Men engaging in fairly vigorous sporting activities experienced half the coronary artery disease of those who did not participate, independent of cigarette smoking, high blood pressure, high body mass and parental history of heart disease.

Active Living Canada. A Canadian perspective on physical activity and health.1996.

1962 US Railroad Employees Study two studies using subjects from the US railroad industry examined mortality and the relationship between sedentary employees (clerks) and more active switchmen and section men. Death rates were 11.83/1000 for clerks; 10.29/1000 for switchmen; and 7.62/1000 for section men, indicating an inverse relationship between physical activity and premature death.

Active Living Canada. A Canadian perspective on physical activity and health. 1996.

Statistics show that officers who are physically fit end up with less complaints, less injuries, and increased productivity because they feel better about themselves, feel better about their jobs, and they work harder because they have more energy. It reduces sick time, injuries on duty, and the incidence of cardiovascular disease

Strandberg, Keith W. "Health and Fitness for Law Enforcement."
SportsArt Fitness. 25 July 2005 < http://www.sportsartfitness.com/fitness_law.php>.

A study involving 497 individuals demonstrated that people who exercise regularly had a higher perceived health status than those who were just starting to exercise.

Langemo, D. K., *et al* (1990). "Prognostic significance of daily physical activity after first myocardial infarction." American Heart Journal 119(5): 1193.

In a study involving 1,385 sport participants and 292 non-sport participants, it was discovered that individuals who participated in sport scored significantly higher on a perceived health inventory than individuals who did not participate in sport.

Lamb, K. L., K. Roberts, and D. A. Brodie (1990). "Self-perceived health among sports participants and non-sports participants." Social Science and Medicine 31(9): 963–969.

Results from a study involving three groups of healthy males, 318 in each group, indicated that in a follow-up after 13 years, the group that actively participated in sport had the lowest mortality rate. The highest mortality rate was in those who had given up sport, and those who had never participated in sport had the intermediate mortality rate.

Grossarth-Maticek, R. *et al* (1990). "Sport activity and personality as elements in preventing cancer and coronary heart disease." Perceptual and Motor Skills. 71(1): 199–209.

General Health Facts

Regular participation in physical activity can increase a person's average life expectancy by as much as two years.

Canadian Council for Health and Active Living at Work (1998). Walk and Roll.

With an 8% increase in regular physical activity since 1981, active Canadians saved more than $4.4 billion in avoided health care costs.

Canadian Council for Health and Active Living at Work (1998). Walk and Roll.

Riding 6 km three times a week achieves a recommended minimum level of fitness.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa, Ont.

At the same level of intensity, a 20-minute bicycle ride has roughly the same health and fitness benefits as 20 minutes of running.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa, Ont.

A 1991 survey of 1,786 commuter cyclists in Ottawa-Carleton showed that 63% ranked health and fitness as their prime reason for cycling to work.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa, Ont.

Regular physical activity, when properly undertaken, can be effective in preventing and limiting the disabling effects of heart disease and stroke.

Kuntzleman, C. T., and G. G. Reiff (1992). "The decline in American children's fitness levels." Research Quarterly for Exercise and Sport 63(2): 107–111.

People of all ages who are generally inactive can improve their health and well-being by becoming active at a moderate-intensity on a regular basis. Moreover, physical activity need not be strenuous to be beneficial; people of all ages benefit from participating in regular, moderate-intensity physical activity, such as 30 minutes of brisk walking five or more times a week.

University of Arkansas (2005). Healthy Steps for Moving More. 14 July 2005 <http://www.uaex.edu/healthy_steps /weight/healthy_steps_moving_more.htm>.

"Active Living" is based on the premise that the benefits of physical activity go beyond the prevention of disease to include feeling better, having fun, socializing with others, increasing our abilities to function in daily life, and gaining more control over our lives. Active living connects the mind, body, and spirit in physical activity.

Ontario Ministry of Tourism and Recreation, Interprovincial Sport and Recreation Council, *et al*. Parks and Recreation Federation of Ontario: The Benefits of Parks and Recreation. 14 July 2005 <www.lin.ca/lin/resource/html/am0006a.pdf>.

Health of Canadians Facts

A full 64% of Canadians are still not active enough to benefit their health. This percentage has remained unchanged since 1995. The good news is that physical inactivity is at its lowest level in the 20 years we've been keeping track. In Canada, physical inactivity decreased from the early 1980s to the mid 1990s before stalling.

Canadian Fitness and Leisure Research Institute (2000). Canadians Still Not Active Enough. 14 July 2005 < http://www.cflri.ca/cflri/news/ 2000/0005pr.html>.

Thirty-nine percent of Canadians believe that "there should be financial incentives—that is, tax breaks—for those who maintain a healthy lifestyle as measured, for example, by BMI or blood pressure."

Ipsos News Center (2001). Canadians and Fitness. 22 Jun. 2005 <http://www.ipsos-na.com/news/pressrelease.cfm?id=1268>.

The majority of Canadians still face increased risk of chronic disease and premature death due to physically inactive lifestyles.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 11 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002survey.html>.

In 1996/97, 31% of Canadians reported that during the pervious year they had increased their physical activity for health reasons. Overall, 24% thought that this was the most important thing they should do to improve their physical health; lack of time was the most common barrier.

National Population Health Survey. Physical Activity of Canadians. 25 July 2005 <http://www.phac-aspc.gc.ca/ccdpc-cpcmc/cancer/publications/pdf/nphs_pae.pdf>.

Fourteen to 17 million adult Canadians could prevent early death if they did at least small amounts of physical activity every day.

Canadian Fitness and Lifestyle Research Institute. 1995 Physical Activity Monitor 11 July 2005 <http://www.cflri.ca/cflri/pa/surveys/95survey/95survey.htmlhttp://www.cflri.ca /cflri/pa/surveys/95survey/95survey.html>.

The number of Canadians considered physically active has doubled over the past 20 years, but there still aren't enough adults who are physically fit.

Picard, Andre (2004). "More Canadians active, but still not fit." Coalition for Active Living and The Globe and Mail. 4 July 2005 < http://www.activeliving.ca/English/ index.cfm?fa=MediaRoom.ArticleDetails&WNID=2146230642>.

Eighty percent of Canadians have at least one risk factor for cardiovascular disease (CVD), and 11% have three or more risk factors.

Heart and Stroke Foundation of Canada (2003). Growing Burden of Heart Disease. 17 Jun. 2005 <http://ww2.heartandstroke.ca>.

Thirty-four percent of Canadians aged 25 to 55 years are meeting the recommendation in Canada's Physical Activity Guide to Healthy Active Living, which calls for 30–60 minutes of low-intensity activity every day.

Katzmarzyk, Peter T., Norman Gledhill, and Roy J. Shephard (2000). "The economic burden of physical inactivity in Canada." Canadian Medical Association Journal 163(11): 1435–40.

If physical inactivity were completely eliminated in Canada, we could theoretically increase life expectancy and save 21,340 lives that are lost prematurely each year—10.3% of the total deaths among adults.

Katzmarzyk, Peter T., Norman Gledhill, and Roy J. Shephard (2000). "The economic burden of physical inactivity in Canada." Canadian Medical Association Journal 163(11): 1435–40.

The percentage of the population that is inactive has decreased by 10% (a 6 percentage point decrease from 62% to 56%) over the six-year period from 1994/5 to 2000/01.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey 2002survey.html>.

The level of physical inactivity decreased between the late 1990s and 2002. Physical inactivity increases with age.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey 2002survey.html>.

According to Statistics Canada's Food Statistics (2003), Canadian food consumption and dietary intakes show an upward trend in the last decade. From 1991 to 2002, energy intake from food has increased 18%, with fat consumption increasing the most (22%).

Statistics Canada. Canadian Consumer Trends in Obesity and Food Consumption. 25 July 2005 <http://www1.agric.gov.ab.ca/$department /deptdocs.nsf/all/sis8438#trends>.

In 2000/01, an estimated three million adult Canadians were obese, and an additional 6 million were overweight. Canada is part of what the World Health Organization has called a global epidemic of obesity.

Le Petit, Christel, and Berthelot, Jean-Marie. "Obesity: A Growing Issue." Statistics Canada.

A 1997 study suggested that 63% of Canadians are still not active enough to reap the health benefits of physically active lifestyle.

Katzmarzyk, Peter T., Norman Gledhill, and Roy J. Shephard (2000). "The economic burden of physical inactivity in Canada." Canadian Medical Association Journal 163(11): 1435–40.

The proportion of people who describe their health as excellent or very good declines with age. In 1998/99, 74% of 20 to 34-year-olds rated their health in either of these two above-mentioned categories; however, at age 75 and over, the figure was reaching a low of 37%.

Statistics Canada (2005). Self-Rated Health. 26 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/01103/high/canada/cself.htm>.

People living in large metropolitan areas and urban centres, where education levels are high, had the highest life expectancies in all of Canada. At the other end of the spectrum, people living in remote northern communities, where education levels are lower, had poorer health.

Berthelot, Jean-Marie, Nancy Ross, and Stéphane Tremblay. "Regional socio-economic context and health." Statistics Canada.

Twenty-nine percent of the population aged 20–34 (1.9 million) were physically active in their leisure time. Men are more likely than women to be physically active: 33.5% versus 23.5%. For both sexes, physical activity peaked at ages 12 to 14, and was much less common at older ages.

Statistics Canada (2003). "Leisure-time physical activity, by age group and sex, household population aged 12 and over, Canada, 2003." 25 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00604/tables/html/2167_03.htm>.

The physically active proportion of the population varied by province, with generally higher levels in the west. The figures ranged from 12% in Prince Edward Island and 13% in Newfoundland and Quebec, to 26% in British Columbia.

Statistics Canada. National Population Health Survey. May 2005 <http://www.statcan.ca>.

Not unexpectedly, weight was related to levels of physical activity. Just 17% of people who are physically active were overweight, compared with 22% of the moderately active, and25% of those who were sedentary.

Statistics Canada. National Population Health Survey. May 2005 <http://www.statcan.ca>. Nova Scotia Health Facts

Statistics Canada figures from 2003 show that 17.9% of adults in Halifax are considered obese, compared to the national rate of 15%.

Canadian Broadcasting Corporation (2005). Halifax Heavy on Obesity Scale. 13 July 2005 <http://novascotia.cbc.ca/regional/servlet/View?filename=ns-obesity-hfx2--50408>.

Nineteen point eight percent of men and 16.1% of women are carrying around too much weight to be healthy.

Canadian Broadcasting Corporation (2005). Halifax Heavy on Obesity Scale. 13 July 2005 <http://novascotia.cbc.ca/regional/servlet/View?filename=ns-obesity-hfx2--50408>.

Unhealthy eating and a lack of physical activity are two major reasons why so many people are overweight.

Canadian Broadcasting Corporation (2005). Halifax Heavy on Obesity Scale. 13 July 2005 <http://novascotia.cbc.ca/regional/servlet/View?filename=ns-obesity-hfx2--50408>.

Sixty-two percent of Nova Scotia adults aged 20 years and older are insufficiently active for optimal health benefits.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 11 July 2005 <http://www.cflri.ca>.

A 1993–95 mortality study released in Sept. 1997 in a Health Canada publication noted that Nova Scotia led the country in deaths from cancer, both for men and women.

Morris, C. (22 Sept. 1997). "Easterners' health abysmal." The Mail Star.

According to the Canadian Fitness and Lifestyle Research Institute, 62% of Nova Scotians and 61% of Canadians are currently too inactive to reap the health benefits of regular physical activity.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 11 July 2005 < http://www.gpiatlantic.org/releases/pr_inactivity.shtml >.

The life expectancy in Nova Scotia is 76.2 years, which ties for fifth place with Saskatchewan among the provinces.

Statistics Canada (2001). "Life expectancy, at birth, by sex and income group, Canada and provinces, 2001." 25 July 2005 <http://www.statcan.ca>.

According to the Canadian Fitness and Lifestyle Research Institute, 58% of Nova Scotians and 56% of Canadians are currently insufficiently active for optimal health benefits.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 11 July 2005 < http://www.cflri.ca /cflri/pa/surveys/2002survey/ 2002survey.html>.

Adding direct and indirect healthcare costs, the total economic burden of physical inactivity in Nova Scotia is estimated at $354 million annually.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 11 July 2005 < http://www.gpiatlantic.org/releases/pr_inactivity.shtml >.

Physical inactivity declined significantly since the early 1990s, going from 62% in 1994 to 55% in 1998.

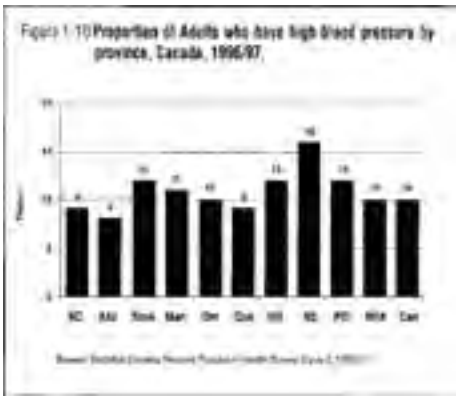
Canadian Fitness and Lifestyle Research Institute (2001). National Population Health Survey, 1998/99. 11 July 2005 < http://www.cflri.ca /cflri/pa/surveys /2001survey/ 2001_ns.html>.

The percentage of children in Nova Scotia who achieve the recommended 60 minutes or more in moderate and vigorous physical activity on most days of the week (five or more) are as follows:

	Males	Females
Grade 3	90%	92.3%
Grade 7	45%	28%
Grade 11	8.7%	5.1%

Sport and Recreation Commission Government of Nova Scotia (2004). Physical Activity Levels of Children & Youth in Nova Scotia. 25 July 2005 <http://www.gov.ns.ca/ohp/srd/publications/NS_PA_Report_revised.pdf>.

High blood pressure is an issue all across Canada, especially in Nova Scotia:



Statistics Canada (2003). Proportion of Adults who have High Blood Pressure by Province. 11 July 2005 <http://www.hc-sc.gc.ca/hpb/lcdc/bcrdd/hdsc2000/ppt/cvd4.pdf>.

Ninety-two percent of Nova Scotians report being somewhat or very satisfied with their health.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Sixty-one percent of Nova Scotians report exercising at least once a week in the past month.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Thirty-nine percent are inactive, and women are more likely than men to be inactive.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Seventeen percent of Nova Scotians report problems with activity due to poor health.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Common causes of activity limitation are musculoskeletal problems (51%), cardiovascular disease (13%), and respiratory problems (10%).

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Many Nova Scotians have unhealthy habits which contribute to diseases like cancer, heart disease and diabetes: eight in ten eat too much fat; and three in ten get very little physical activity.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Only 35% of Nova Scotians have a healthy weight (Body Mass Index 20–25).

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Forty-four percent of Nova Scotians are overweight or obese (BMI = or > than 27), which increases the risk of heart disease and other health problems.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

The group of communities with medical schools remains a powerhouse this year, with 13 out of 15 placing in the top half of all regions. Within Group 1, Halifax/Dartmouth made major gains, climbing nine places to rank 17th overall.

Hawaleshka, Danylo (2002). "Measuring Health Care." Health Care in Canada Report. 25 July 2005 <http://www.macleans.ca>.

Cape Breton placed 50th out of the 54 communities that the magazine examined for their health services.

Canadian Broadcasting Corporation (2002). Maclean's Magazine ranks health services in Canada. 22 July 2005 < http://www.cbc.ca/stories/2002 /06/09/health020609>.
Cardiovascular Disease Facts

Eight in ten Canadians have at least one risk factor for cardiovascular disease and 11% have three risk factors or more

Heart and Stroke Foundation of Canada (2002). Growing Burden of Heart Disease and Stroke in Canada 2003. Statistics Canada and the Canadian Institute for Health Information.12 July 2005 <ww2.heartandstroke.ca>.

A greater percentage of women than men die from stroke. In 1999, 8.5% of all female deaths in Canada were as a result of stroke compared to 5.6% for men.

Heart and Stroke Foundation of Canada (2002). 11 July 2005 <ww2.heartandstroke.ca>.

Thirty-five percent of all male deaths in Canada in 1999 were due to heart diseases, diseases of the blood vessels, and stroke. For women, the toll was even higher—37% of all female deaths in 1999 were due to cardiovascular disease.

Heart and Stroke Foundation of Canada (2002). 11 July 2005 <ww2.heartandstroke.ca>.

Cardiovascular diseases cost the Canadian economy over $18 billion a year according to a 1994 study by the Heart and Stroke Foundation of Canada.

Heart and Stroke Foundation of Canada (2002). 11 July 2005 <ww2.heartandstroke.ca>.

About 300,000 Canadians are living with the effects of stroke.

Heart and Stroke Heart and Stroke Foundation of Canada (2002). 11 July 2005 <ww2.heartandstroke.ca>.

Stroke costs the Canadian economy $2.7 billion a year.

Heart and Stroke Foundation of Canada (2002). 11 July 2005 <ww2.heartandstroke.ca>.

An inactive lifestyle is a risk factor for coronary heart disease. Regular, moderate-to-vigorous physical activity helps prevent heart and blood vessel disease. The more vigorous the activity, the greater your benefits.

American Heart Association. Risk Factors and Coronary Heart Disease. 25 July 2005 < http://www.americanheart.org/presenter.jhtml?identifier=235>.

The risk of cardiovascular disease is up to three times greater for people with diabetes. Physical activity helps to reduce this risk.

Canadian Fitness and Lifestyle Research Institute (1999). Benefits of Physical Activity. 8 Jun. 2005 <http://www.clfri.ca/cflri/tips/96/LT_11.html>.

With respect to coronary heart disease, the high prevalence and the relative risk of physical inactivity contribute to a greater impact on public health than can be seen with smoking or elevated cholesterol levels.

Canadian Fitness and Lifestyle Research Institute. The Research File. May 2005 <http://www.gov.ab.ca/mcd/ arl/rec/recfacts/100/fax102.htm>.

A study of 72,000 women aged 45 to 65 years demonstrated a dramatic 30% reduction in the incidences of coronary heart disease, stroke, and type 2 diabetes simply by brisk walking (>3 mph) for at least three hours a week, compared with those in the study who did less than three hours of brisk walking each week.

Manu, V. Chakravarthy, Michael J. Joyner, and Frank Booth (2002). "An Obligation for Primary Care Physicians to Prescribe Physical Activity to Sedentary Patients to Reduce the Risk of Chronic Health Conditions." 77: 165–173.

An increase in physical activity has the greatest potential to reduce coronary artery disease. A study showed a 4.7% reduction in short-term (18 months) health care costs for each active day per week reported by participants.

Pronk N. P., M. J. Goodman, P. J. O'Connor, and B. C. Martinson (1999). "Relationship between modifiable health risks and short-term health care charges." JAMA 282: 2235–9.

With respect to coronary heart disease, the high prevalence and the relative risk of physical inactivity contribute to a greater impact on public health than can be seen with smoking or elevated cholesterol levels.

Canadian Fitness and Lifestyle Institute. The Research File. May 2005 < http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts102/ index.asp>.

Inactive people are twice at risk as active people of developing coronary heart disease.

Canadian Fitness and Lifestyle Research Institute (1999). Benefits of Physical Activity. 8 Jun. 2005 <http://www.clfri.ca/cflri/tips/96/LT_11.html>.

Regular physical activity reduces the risk of high blood pressure, stroke, and coronary heart disease—the latter by as much as 50%.

Canadian Fitness and Lifestyle Research Institute (1999). Health Benefits and Costs to the Health-Care System. 22 July 2005 <http://www.clfri.ca/cflri/tips/96/ LT_11.html>.

For ischemic heart problems alone, treatment of which costs the health care system $2.3 billion annually, each percentage point increase in the number of people that are physically active (i.e. from 24.1% to 25.1%) would reduce annual treatment costs by $10.3 million.

Canadian Fitness and Lifestyle Research Institute (1999). Health Benefits and Costs to the Health-Care System. 22 July 2005 <http://www.clfri.ca/cflri/tips/96/ LT_11.html>.

The main risk factors for coronary artery disease (CAD), a primary cause of death in Canada, are cigarette smoking, high blood pressure, high blood cholesterol levels, and physical inactivity, all of which have similar risk ratios.

Grundy S. M., G. J. Balady, M. H. Criqui, G. Fletcher, P. Greenland, and L. F. Hiratzka (1997). "Guide to primary prevention of cardiovascular diseases. A statement for healthcare professionals from the Task Force on Risk Reduction." American Heart Association Science Advisory and Coordinating Committee. 95: 2329-31.

In Canada, heart disease and stroke remain the number one killers of both men and women. Each year, 79,000 Canadians die from heart disease and stroke. Imagine a city the size of Kingston, Ontario—with 79,000 people—wiped out each year.

Heart and Stroke Foundation of Canada (2005). Tips to Reduce Your Risk of Heart Disease. 12 July 2005 <http://ww2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=588&Src=heart&From=SubCategory#heart%20disease%20stat>.

A primary benefit of regular physical activity is protection against coronary heart disease.

Canadian Fitness and Lifestyle Research Institute (1999). Health Benefits and Costs to the Health-Care System. 22 July 2005 <http://www.clfri.ca/cflri/tips/96/ LT_11.html>.

In an American review of 43 studies, it was found that there was a significant inverse association between coronary heart disease and physical activity.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Santiago, Coyle, and Troupe (1991) found adults with physical disabilities who were involved in aerobic exercise programs had significant improvements in cardiovascular and metabolic functional capacity when compared to a non-exercising control group.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Physical inactivity is clearly identified as a primary risk factor in coronary heart disease, carrying a risk similar to smoking more than 20 cigarettes a day. Decline in exercise levels has implications for long-term health-care costs.

Hardman, Adrienne (1992). "The Benefits of Low-Intensity Exercise." Physical Activity and Health, Society for the Study of Human Biology Symposium. 34: 149. Cambridge University Press: Cambridge.

Some studies show that exercise can also reduce levels of low-density lipoprotein (LDL) cholesterol, the "bad" cholesterol that causes formation of plaques in blood vessels. At the same time, exercise might increase levels of high-density lipoprotein (HDL) cholesterol, the "good" type that helps keep arteries clean. This can also improve your cardiovascular health.

The Mayo Clinic: Special to CNN (2005). Exercise and Diabetes: How a Little Activity Can Help You Manage Your Condition. 25 July 2005 <http://www.cnn.com/HEALTH/library/DA/00036.html>.

Research has shown that individuals who climb 36+ flights of stairs a week have a 25% lower relative risk of death of cardiovascular disease than sedentary individuals.

Alberta Community Development (2005). Exercise. 25 July 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts116/ index.asp>.

Long-term regular exercise — 30 minutes most days of the week — can help manage your blood sugar (glucose) and weight, and improve your cardiovascular health.

The Mayo Clinic: Special to CNN (2005). Exercise and Diabetes: How a Little Activity Can Help You Manage Your Condition. 25 July 2005 <http://www.cnn.com/HEALTH/library/DA/00036.html>.

Compared to women who are active, an inactive woman has up to twice the risk of heart disease and stroke.

Heart and Stroke Foundation of Canada. 11 July 2005 <http://ww2.heartandstroke.ca>.

Physical inactivity has been established as a major factor for the development of coronary artery disease.

Heart and Stroke Foundation of Canada. 11 July 2005 <http://ww2.heartandstroke.ca>.

Physical activity leads to a decrease in the incidence of stroke.

Heart and Stroke Foundation of Canada. 11 July 2005 <http://ww2.heartandstroke.ca>.

The main risk factors for coronary artery disease (CAD), a primary cause of death in Canada, are smoking, high lipid concentrations, physical inactivity, and stress, according to a study of data from 52 countries.

Medical News Today (2004). Smoking, High Lipid Concentration and Stress Main Factors in Heart Attacks. 12 July 2005 <http://www.medicalnewstoday.com/medicalnews.php?newsid =12902 >.

An inactive lifestyle is a risk factor for coronary heart disease. Physical activity substantially reduces the risk of coronary heart disease, hypertension, type 2 diabetes, osteoporosis, and obesity.

Center for Cardiovascular Disease in Women (2003). Patient Education Information. 11 July 2005 <http://www.brighamandwomens.org/cardiovasculardisease/patient/education.asp>.

A person with diabetes who does just a bit of exercise during the workday can reduce the risk of dying from a heart attack or another cardiovascular condition

Meridian Health (2004). Workday Exercise Helps Reduce Heart Disease Risk For Diabetics: Light Activity Benefits Most. 11 Jun. 2005 < http://www.meridianhealth.com/ index.cfm/MediaRelations/News/BreakingNews/july3004.cfm>.

Women are more likely to die from heart attacks than men.

Heart and Stroke Foundation of Canada. 11 July 2005 <http://ww2.heartandstroke.ca>.

Heart disease and stroke are responsible for more female deaths in Canada than any other disease.

Heart and Stroke Foundation of Canada. 11 July 2005 <http://ww2.heartandstroke.ca>.

More than 1,300 Nova Scotians experience a stroke each year, and of those that survive, more than half require ongoing assistance with daily activities. Despite these statistics, more than half of our population cannot identify even two of the five vital warning signs of stroke.

Heart and Stroke Foundation. Foundation's Public Awareness Campaign Aims to Increase Nova Scotians' Knowledge of the Warning Signs of Stroke. 10 Jun. 2005 <http://ww2.heartandstroke.ca>.

Stroke is the fourth leading cause of death in Canada.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

Each year, about 16,000 Canadians die from stroke.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

There are between 40,000 to 50,000 strokes in Canada each year.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

In 2001, the Heart and Stroke Foundation allocated $7.6 million for stroke research.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

The direct cost of each new stroke is $27,500.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

The Heart and Stroke Foundation funds 60% of the heart and stroke research in the country, more than the federal and provincial governments combined.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

Smoking increases your chance of a stroke by 40%.

Heart and Stroke Foundation of Canada (2005). Stroke"Fore" Stroke Golf Challenge. 20 Jun. 2005 <http://209.87.231.94/Media_and_Events/Golf_Challenge.html>.

Compared to women who are active, an inactive woman has up to twice the risk of heart disease and stroke.

Heart and Stroke Foundation of Canada (2002). Know Your Risk Factors. 23 Jun. 2005 <http://ww2.heartandstroke.ca>.

Physical inactivity has been established as a major factor in the development of coronary artery disease. It also contributes to other risk factors such as obesity, high blood pressure and a low level of the good cholesterol, HDL. Moderate levels of physical activity have been found to protect against stroke.

Heart and Stroke Foundation of Canada. Health Dictionary. 15 Jun. 2005 <http://ww2.heartandstroke.ca>.

Cancer

Physical activity helps reduce cancer incidence

It's estimated that 30% to 40% of cancers worldwide could be prevented with healthy diets and exercise.

Canadian Cancer Society (2000). Canadian Cancer Statistics 2000. 17 Jun. 2005 <htpp://www.cancer.ca/stats2000/highle.htm>.

Sedentary people tend to have a higher risk of colon cancer and breast cancer than active people.

Canadian Fitness and Lifestyle Research Institute Lifestyle (1999). Tips Fend off Health Problems with Activity. 22 Jun. 2005 < http://www.cd.gov.ab.ca /building_communities/sport_recreation/resources_links/recfacts/general_index/ recfacts152/index.asp>

Nova Scotia had the most cancer deaths in Canada in 1998.
Cancer Surveillance. 20 Jun. 2005 <http://cynthera.ic.gc.ca>.

Data strongly suggests that continued participation in physical exercise can reduce the risk of breast cancer in pre-menopausal women, and emphasizes the importance of beginning an exercise regimen early in life and maintaining it during adulthood. However, in the US, fewer than 40% of young women in their junior and senior years of high school were enrolled in physical education classes, and only 20% of these students participated in vigorous physical activity three or more times a week.

Bernstein, L. *et al* (1994). "Physical exercise and reduced risk of breast cancer in young women." Journal of the National Cancer Institute. 86(18).

Individuals who are physically active can reduce their risk of developing colon cancer by 40% to 50% (4–10), with the greatest reduction in risk among those who are most active (10).

National Cancer Institute (2004). Physical Activity and Cancer. 25 July 2005 < http://www.cancer.gov/newscenter/pressreleases/PhysicalActivity>.

Women who exercise regularly from menarche throughout their childbearing years can significantly reduce their risk of contracting pre-menopausal breast cancer. Women who exercised at least four hours per week reduced their risk by more than 50%, and women who exercised one to three hours per week reduced their risk by 30%.

Feminist Majority Foundation (1995). "The feminist majority foundation's task force on women and girls in sports." Empowering Women in Sports 4.

Cancer Facts

In Nova Scotia, in 2005 an estimated 5,200 new cases of cancer will be diagnosed and 2,500 cancer deaths are expected this year.

Canadian Cancer Society. Nova Scotia Statistics. 20 Jun. 2005 <http://www.cancer.ca/ccs/internet/standard/0,3182,3490_370710__langId-en,00.html>.

An estimated 149,000 Canadians will be diagnosed with cancer in 2005, and 69,500 Canadians will die from the disease.

Canadian Cancer Society (2005). Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca>.

An estimated 5,200 Nova Scotians will be diagnosed with cancer in 2005, and 2,500 Nova Scotians will die from the disease.

Canadian Cancer Society (2005). Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca>.

An estimated 870 Nova Scotians will be diagnosed with lung cancer in 2005. An estimated 690 people will die of the disease.

Canadian Cancer Society (2005). Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca>.

Research shows exercise can be the best medicine for cancer patients.

Canadian Cancer Society (2004). Research Shows Exercise Can Be the Best Medicine. 20 Jun. 2005 <http://www.cancer.ca>.

For men, exercise is the best thing to do for their physical and mental health. According to Dr. Segal, resistance training reduces fatigue, increases muscular strength, and improves quality of life for men with prostate cancer.

Canadian Cancer Society (2004). Research Shows Exercise Can Be the Best Medicine. 20 Jun. 2005 <http://www.cancer.ca>.

Nova Scotia's cancer rate of 455.15 in 100,000 is the highest in Canada.

Cancer Surveillance On-Line. 2002 <http://cythera.ic.gc.ca>.

Women who lead active lifestyles may reduce their risk of breast cancer, even if they only start exercising regularly after menopause.

Canadian Cancer Society (2002). 6 July 2005 <www.cancer.ca>.

Physical activity can reduce the risk of colon cancer by at least 20 to 30%.

Canadian Cancer Society (2002). 6 July 2005 <www.cancer.ca>.

Evidence is growing for the role of physical activity in preventing prostate cancer.

Canadian Cancer Society (2002). 6 July 2005 <www.cancer.ca>.

In 2005, the most frequently diagnosed cancers will continue to be breast, lung and colorectal cancer for women and prostate, lung and colorectal cancer for men.

Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca/vgn /images/portal/cit_86751114/46/63/404104374ns_cancerinnovascotiaandcanada_en.pdf>.

In 2005, lung cancer will continue to be the leading cause of cancer death in Nova Scotia for men and women. Accounting for 270 female deaths and 420 male deaths.

Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca/vgn /images/portal/cit_86751114/46/63/404104374ns_cancerinnovascotiaandcanada_en.pdf>.

Cancer is the leading cause of premature death in Canada, being responsible for almost 30% of all potential years of life lost.

Canadian Association for the Advancement of Women and Sport and Physical Activity (2002). Exercise Cuts Breast-Cancer Risk by a Third. 10 Jun. 2005 <http://www.caaws.ca/english/index.htm>.

Routine daily physical activity throughout a woman's life can reduce her risk of breast cancer, and when detected and treated early, the chances of recovery are better.

Cancer in Nova Scotia and Canada. 20 Jun. 2005 <http://www.cancer.ca/vgn /images/portal/cit_86751114/46/63/404104374ns_cancerinnovascotiaandcanada_en.pdf>.

The benefits of eating well and being more active are: more energy; stronger muscles and bones; lower risk of other health problems, such as heart disease, stroke, and diabetes; and better overall well being.

Canadian Cancer Society (2005). Eat Well Be Active. 20 Jun. 2005 <http://www.cancer.ca>.

Diabetes

Physical activity helps prevent diabetes

Heart disease is two to four times more common in people with diabetes than without.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Diabetes is a leading cause of adult blindness.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

In Canada, people with diabetes account for 28% of all new cases of serious kidney disease.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Worldwide, half or more of all non-traumatic limb amputations are due to diabetes.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

More than ever before, people with diabetes can expect to live active, independent. and vital lives if they make a lifelong commitment to careful management of the disease. Regular exercise helps your body lower blood sugars, promotes weight loss, reduces stress and enhances overall fitness.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

In Canada, it is estimated that at least $9 billion ($US) is spent annually on treating people with diabetes and its complications.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Scientists believe that lifestyle and type 2 diabetes are closely linked. This means that lifestyle is one area individuals can focus on to help prevent or delay the onset of the disease. A healthy diet, weight control, exercise and reduction in stress are important prevention steps.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

The World Health Organization (WHO) estimates the number of people with diabetes in the world will reach an alarming 300 million by 2025.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

It is estimated that diabetes and its complications cost the Canadian health care system $9 billion each year.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Physical inactivity and sedentary lifestyle make diabetic symptoms and complications worse.

Canadian Fitness and Lifestyle Research Institute. Fend off Health Problems with Activity. 25 July 2005 < http://www.cflri.ca/cflri/tips/96/LT96_02.html>.

The type of diabetes that starts in adulthood can be controlled totally or in part with a regular exercise and nutrition program.

Canadian Fitness and Lifestyle Research Institute. Fend off Health Problems with Activity. 25 July 2005 < http://www.cflri.ca/cflri/tips/96/LT96_02.html>.

2 million Canadians have diabetes.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Physical activity can reduce the risk of developing non-insulin dependent diabetes by as much as 50%.

The standing committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

There are two types of diabetes. Insulin-dependent diabetes mellitus, formerly called juvenile-onset, relies on a balance of nutrition, medication, and physical activity as forms of intervention. Non insulin-dependent diabetes mellitus (NIDDM), or adult-onset, can be controlled through a combination of diet, exercise, and medication.

Derksen, C., and S. Rorke. (1996). "Diabetes prevention: A school-based model of intervention. The CAHPERD Journal 4–5.

Non insulin-dependent diabetes mellitus (NIDDM) usually occurs in someone over forty years of age who consumes excess calories, exercises little, and is overweight. Obesity, low levels of physical activity, and stress are the causes of NIDDM.

Derksen, C., and S. Rorke. (1996). "Diabetes prevention: A school-based model of intervention. The CAHPERD Journal 4–5.

Properly managed exercise is recommended for the diabetic, even when there are problems with glucose regulation. Exercise appears to reduce blood glucose levels and increase the effectiveness of insulin.

The Canadian Association of Sport Sciences (1998). International Conference on Exercise, Fitness and Health: Policy Summary Report. Toronto, Ont.

Diabetes is a leading cause of death by disease. If it is left untreated or improperly managed, the high levels of blood sugar associated with diabetes can slowly damage both the small and large blood vessels in the body, resulting in a variety of complications.

Canadian Diabetes Association (2002). Diabetes Facts. 10 Jun. 2005 <http://www.diabetes.ca/Section_about/>.

Diabetes is the most common cause of adult blindness in the western world.

Canadian Diabetes Association. Complications: The Long-term Picture. 15 Jun. 2005 < http://www.diabetes.ca/Section_About/complications.asp>.

Diabetes Facts

Research has found that women who engage in vigorous exercise at least once a week had a lower risk of developing diabetes compared to women who did not exercise, irrespective of obesity.

Colberg, Sheri R. (2000)."Exercise and Diabetes Control" The Physician and Sports Medicine 28(4): 63–81.

Diabetes affects more than one million Canadians, with 60,000 new cases diagnosed each year.

Derksen, C., and S. Rorke. (1996). "Diabetes prevention: A school-based model of intervention. The CAHPERD Journal 4–5

In 2000, diabetes was the sixth leading cause of death.

National Diabetes Information Clearinghouse. Diabetes Overview. 25 July 2005 <http://www.niddk.nih.gov/health/diabetes/pubs/dmover/dmover.htm#scope>.

In 2002, diabetes cost the United States $132 billion.

National Diabetes Information Clearinghouse. Diabetes Overview. 25 July 2005 <http://www.niddk.nih.gov/health/diabetes/pubs/dmover/dmover.htm#scope>.

Diabetes is associated with long-term complications that affect almost every part of the body. The disease often leads to blindness, heart and blood vessel disease, stroke, kidney failure, amputations, and nerve damage.

National Diabetes Information Clearinghouse. Diabetes Overview. 25 July 2005 <http://www.niddk.nih.gov/health/diabetes/pubs/dmover/dmover.htm#scope>.

Diabetes costs the health care system over $9 billion annually.

Canadian Wellness (2002). Newsletter. 26 July 2005 <http://www.canadianwellness.com/newsletter/newsletterfebruary02.htm>.

Cardiovascular disease is the leading cause of death among those with diabetes. Exercise can help counteract the risk of developing cardiovascular disease by improving the flow of blood vessels and increasing a heart's pumping efficiency.

The Mayo Clinic: Special to CNN. "Exercise and diabetes: How a little activity can help you manage your condition." 25 July 2005 <http://www.mayoclinic.com>.

Mental Health

Mental state is improved with physical activity

Twenty-four percent of Canadians feel really stressed a. In out once a month, 43% feel really stressed a few times a week, and 9% feel really stressed all the time.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 < http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Three-quarters of Canadians feel really stressed at least once per month.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 < http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Only 23% of Canadians report never feeling depressed. Meanwhile, 23% feel depressed once a year or less often, and 21% feel depressed a few times per year.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 < http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Canadians appear to prefer to deal with stress through exercise and meditation/relaxation over talking and other forms of stress relief

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 < http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Twenty-one percent of Canadians said that exercise was the main way they coped with stress.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Physical activity is one of the easiest and most cost-effective ways to achieve the objective of having a healthier population, physically and mentally.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Mental disorders account for over $5 billion in direct costs to the health care system each year.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

In 1994–95 there were over 210,000 admissions to Canadian hospitals for mental conditions, accounting for almost 16 million days in hospital.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Physical activity may help improve mental health and even prevent some mental health disorders by improving self-confidence, self-esteem, and other psychological variables.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Physical activity is clearly associated with fewer symptoms of anxiety and depression, is a proven antidote to stress, and has a positive effect on mood.

Canadian Mental Health Association (2001). 2001 COMPAS Survey. 13 July 2005 <http://www.cmha.ca/bins/content_page.asp?cid=5-34-184-185&lang=1>.

Exercise releases endorphins, the body's own mood-elevating, and pain-relieving compounds. It reduces levels of the stress-depression hormone, cortisol, in the blood.

Rice, Carolyn. "Exercise Can Fight Depression." The Karen Yantz Women's Cardiac Awareness Center. 13 July 2005 < http://www.karenyontzcenter.org /fitness/exercise/18.asp>.

Physical activity is accompanied by reduced anxiety and stress.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Physical activity helps to reduce mild to moderate depression.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Active people enjoy increased psychological well-being.

Canadian Fitness and Leisure Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 <http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

According to the Canadian Psychiatric Association, as many as 47% of Canadians report being "severely stressed several times a week."

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Physical activity seems to be comparable to psychotherapy for treating milder cases of anxiety and depression.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Physical activity is one of the best ways to increase self-esteem.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

A single exercise session often leads to a reduction in anxiety, lasting from two to four hours.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Aerobic activities work best for alleviating mental stress—any of Canada's favorites will do the trick: walking, cycling, swimming, and many others.

Canadian Fitness and Leisure Research Institute (1998). Coping with Stress. 13 July 2005 < http://www.cflri.ca/cflri/tips/98/LT98_05.html>.

Being active reduces anxiety, tension, and depression. It also improves sleep quality, induces relaxation, reduces the need for psychotropic drugs, improves social interaction, and reduces disruptive behaviour.

Canadian Fitness and Leisure Research Institute (1998). Exercise a Plus for Mental Health. 13 July 2005 < http://www.cflri.ca/cflri/tips/94/LT94_07.html>.

Some suggestions for dealing with stress:

- **Set priorities, don't rush;**
- **Keep a diary;**
- **Talk to others;**
- **Listen to your body;**
- **Learn to relax;**
- **Fit physical activity into your life.**

Canadian Fitness and Leisure Research Institute (1998). Coping with Stress. 13 July 2005 < http://www.cflri.ca/cflri/tips/98/LT98_05.html>.

Positive personal and social behaviours and interpersonal relationships are developed through active involvement in a variety of physical activities.

Nova Scotia Department of Education and Culture (1998). Physical Education Curriculum: Grades Primary–6. 1998.

Moderate exercise of as little as five to 30 minutes' duration has been found to produce significant tranquillizing effects, and routine vigorous exercise can reduce the intensity and duration of anxiety.

Kahn, Howard (2003). Stress and Work. 26 July 2005 <http://www.som.hw.ac.uk/bushk2/docs/stressandworkexamDec2003.doc>.

Exercise reduces depression among individuals with a physical disability.

Canadian Centre for Occupational Health and Safety (2004). What Is Active Living? 26 July 2005 < http://www.ccohs.ca/oshanswers/psychosocial/active_living.html>.

The greater the level of participation in recreation activities, the lower the level of depression experienced.

Canadian Centre for Occupational Health and Safety (2004). What Is Active Living? 26 July 2005 < http://www.ccohs.ca/oshanswers/psychosocial/active_living.html>.

Physical activity helps neutralize tension at work or in the family. Active living builds up resistance to stress.

Canadian Centre for Occupational Health and Safety (2004). What Is Active Living? 26 July 2005 < http://www.ccohs.ca/oshanswers/psychosocial/active_living.html>.

Physical activity can reduce the negative symptoms of dementia such as Alzheimer's disease. It can also temper other mental disturbances in older adults. Being active reduces anxiety, tension and depression, improves sleep quality, induces relaxation, reduces the need for psychotropic drugs, improves social interaction and reduces disruptive behaviour.

Alberta Community Development. Fend off Problems With Physical Activity: Building Strong Communities. 11 Jun. 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts152/index.asp>.

Mental Health Facts

Depression costs the United States $43 billion every year.

(2002)."Exercise and depression." American Fitness 18.

In 1998/99, almost 1.1 million Canadians (4%) of the population aged 12 or older had experienced symptoms of depression within the last year.

Statistics Canada (2001). Health Indicators: Depression. 26 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/depres.htm>.

In 1998/99, 6% of all Canadian women aged 12 or older had experienced at least one major depressive episode in the previous year, compared with 3% of men. This pattern holds true across all age groups.

Statistics Canada (2001). Health Indicators: Depression. 26 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/depres.htm>.

In 1998/99, Nova Scotia residents were most likely (6%) to have suffered at least one major depressive episode in the previous year.

Statistics Canada (2001). Health Indicators: Depression. 26 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/depres.htm>.

Nova Scotia has the lowest numbers of reported male and female suicides in the three Atlantic provinces.

Statistics Canada. Potential Years of Life Lost to Suicide: 2000/2001. 26 July 2005 <http://www.statcan.ca>.

Each year, approximately 11,000 Nova Scotian adults enter the formal mental health system for some form of observation, assessment, or treatment.

Statistics Canada (1995). The Nova Scotia Health Survey, 1995. June 2005 <http://www.statcan.ca>.

Men are more likely to commit suicide than women because they use more final methods.

Statistics Canada. 20 June 2005 <http://www.statcan.ca>.

Suicide is the most common cause of death for Nova Scotian men between the ages of 25 and 41.

Statistics Canada. 1995 National Population Health Survey. 20 Jun. 2005 <http://www.statcan.ca>.

For both sexes, a high level of chronic stress was associated with depression.

Statistics Canada. 20 June 2005 <http://www.statcan.ca>.

Regular physical activity and recreation have moderate effects on the psychological health of normal people, and marked beneficial effects for those at high-risk.

Goldberg, B. (1995). Sports and Exercise for Children with Chronic Health Conditions. Champaign, Ill: Human Kinetics.

Health and well-being are linked to self-esteem and a positive body-image. People who feel good about themselves and their bodies tend to lead more physically active lives, follow a pattern of healthy eating, and are less likely to be smokers.

"Body image, health and well being—the social dynamics." The CAHPERD Journal Spring: 26–27.

The use of habitual exercise as a stress management technique has the benefits of mood enhancement, increased self-esteem and reduced psychological and physical stress reactions. Further, the greater the skill in exercise, the greater the appreciation of the quality of life and self-discovery through exercise.

Berger, B. G. (1994). "Coping with stress: The effectiveness of exercise and other techniques." Quest 46: 100–109.

The more participation and satisfaction in sports, outdoor recreation, and other leisure activities you experience, the higher your perceived level of wellness will be. Ragheb, M. G (1993). "Leisure and perceived wellness: A field investigation." Leisure Sciences: An Interdisciplinary Journal.

Some of the therapeutic benefits of mixed recreation activities for mentally ill and emotionally disturbed persons include: increased quantity and quality of social interactions; increased range of interests; enhanced self-concept; and increased fun for patients.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Canada's high rate of unemployment, around 11% nationally, has intensified stress related illness.

Canadian Healthcare Manager (1994). "The resulting cost to the health care system in 1993 was more than $1 billion."

Skeletal Health

Physical activity helps to make strong bones

Osteoporosis, or porous bone, is a disease characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures of the hip, spine, and wrist. Men as well as women suffer from osteoporosis, a disease that can be prevented and treated.

National Institute of Health Osteoporosis and Related Bone Diseases National Resource Center (2002). Osteoporosis Overview. 13 July 2005 <http://www.osteo.org/osteo.html>.

Present evidence suggests that exercise retards the rate of bone loss. Without exercise, bones tend to weaken with age and can reach a critical level in older adults, leaving individuals susceptible to fracture.

National Institute of Health Osteoporosis and Related Bone Diseases National Resource Center (2002). Osteoporosis Overview. 13 July 2005 <http://www.osteo.org/osteo.html>.

The daily calcium requirement for individuals aged 4–9 is 800 mg. Those aged 9–18 should intake 1300 mg; 19–50, 1000 mg; over 50, 1500 mg; and pregnant or lactating women should get 1000 mg daily.

Osteoporosis Society of Canada (2002). Health Tips 2002. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

Osteoporosis is a major public health threat for 28 million Americans, 80% of whom are women.

Osteoporosis Society of Canada (2002). Health Tips 2002. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

One point four million Canadians suffer from osteoporosis.

The Osteoporosis Society of Canada (2002). About Osteoporosis. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

In the United States, it is estimated national direct expenditures (hospitals and nursing homes) for osteoporosis and related fractures is $14 billion each year.

National Institute of Health Osteoporosis and Related Bone Diseases National Resource Center (2002). Osteoporosis Overview. 13 July 2005 <http://www.osteo.org/osteo.html>.

One in four women over the age of 50 have osteoporosis. One in eight men over 50 also have the disease. However, the disease can strike at any age.

The Osteoporosis Society of Canada (2002). About Osteoporosis. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

Without effective action on osteoporosis prevention and treatment strategies, it is estimated that by 2018, Canada will spend at least $32.5 billion treating osteoporotic fractures. Given the increasing proportion of older people in the population, these costs will likely rise.

The Osteoporosis Society of Canada (2002). About Osteoporosis. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

The reduced quality of life for those with osteoporosis is enormous. Osteoporosis can result in disfigurement, lowered self-esteem, reduction or loss of mobility, and decreased independence.

The Osteoporosis Society of Canada (2002). About Osteoporosis. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

The statistics related to hip fractures are particularly disturbing. There were approximately 25,000 hip fractures in Canada in 1993. Seventy percent of hip fractures are osteoporosis-related. Hip fractures result in death in up to 20% of cases, and disability in 50% of those who survive.

The Osteoporosis Society of Canada (2002). About Osteoporosis. 13 July 2005 <http://www.osteoporosis.ca/english/health%20tips/health%20tips%202002/default.asp?s=1>.

Regular activity such as walking, weight training, and low-impact aerobics can safely help to offset age-related bone loss, decrease fracture risk, and improve the quality of life for older women.

National Institutes of Health Osteoporosis and Related Bone Disease National Resource Centre (2001). Exercise and Bone Health. 13 July 2005 <http://www.osteo.org/newfile.asp?doc=r707i&doctype=HTML+Fact+Sheet&doctitle=Exercise+and+Bone+Health>.

Healthy Body Weight

The skinny on physical activity and healthy body weight

In Nova Scotia, men are more likely to be overweight than women and exercise less.

Nova Scotia Department of Health (2003). The Nova Scotia Health Survey, 1995. 11 July 2005 < http://www.gov.ns.ca/health/1995-survey/default.htm>.

Overweight people are more likely to develop conditions such as arthritis, asthma, gout, and back problems.

Leblanc, Susan (30 Mar. 2000). "Cut the fat and cut the red ink, researcher suggests." Chronicle–Herald. 13 July 2005 < http://www.halifaxherald.com/cgi-bin/home/displaypackstory?2000/03/30+167.raw+GPIAtlantic+2>.

Regular exercise may reduce leptin levels, the hormone thought to be related to weight gain.

Stanton, M. (2000). "Control your fat hormone." Prevention 22.

Physical activity is accompanied by a reduced risk of obesity.

Canadian Fitness and Leisure Recreation Institute. Benefits of Physical Activity. 15 Jun. 2005 <http://www.cflri.ca/cflri/tips/96/ LT96_11.html>.

One half hour of exercise every day can take off (and keep off) as much as 25 pounds per year.

Alberta Community Development (2004). Benefits of Sports. 8 July 2005 < http://www.cd.gov.ab.ca /building_communities/ sport_recreation/resources_links/recfacts/general_index/recfacts116/index.asp >.

Physical activity is essential for preventing children from becoming obese.

Alberta Community Development (2004). Benefits of Sports. 8 July 2005 < http://www.cd.gov.ab.ca /building_communities/ sport_recreation/resources_links/recfacts/general_index/recfacts116/index.asp >.

Regular physical activity is essential to maintaining a health body weight.

Edward, Peggy (2003). "Evening the odds: adolescent women, tobacco, and physical activity". Canadian Association for the Advancement of Women and Sport and Physical Activity. 13 July 2005 <http://www.caaws.ca/Girls/eveningodds.htm>.

Both obesity and inactivity are modifiable risk factors of cardiovascular disease.

Nova Scotia Department of Education and Culture (1998). Physical Education Curriculum: Grades Primary–6.

Physical activity affects body composition and weight favourably by promoting fat loss.

Public Works and Government Services Canada: The standing committee on Canadian heritage and the sub-committee on the study of sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability: Everybody's Business. Ottawa, Ont.

Active individuals have a lower risk of being overweight.

Public Works and Government Services Canada: The standing committee on Canadian heritage and the sub-committee on the study of sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability: Everybody's Business. Ottawa, Ont.

Regular physical activity will help to control weight, build lean muscles and reduce fat.

(1995). The report of the Surgeon General on physical activity and health.

In the United States, the Surgeon General's Workshop on Health Promotion and Aging (1989) notes that the maintenance of proper body weight is known to increase longevity and that physical exercise contributes to achieving optimum body weight.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Obesity is related to under-activity and overeating, both of which predispose women to heart disease risk, hypertension, adult-onset diabetes, gall bladder disease and possibly cancer. In addition, research indicates that osteoporosis is associated with a sedentary lifestyle.

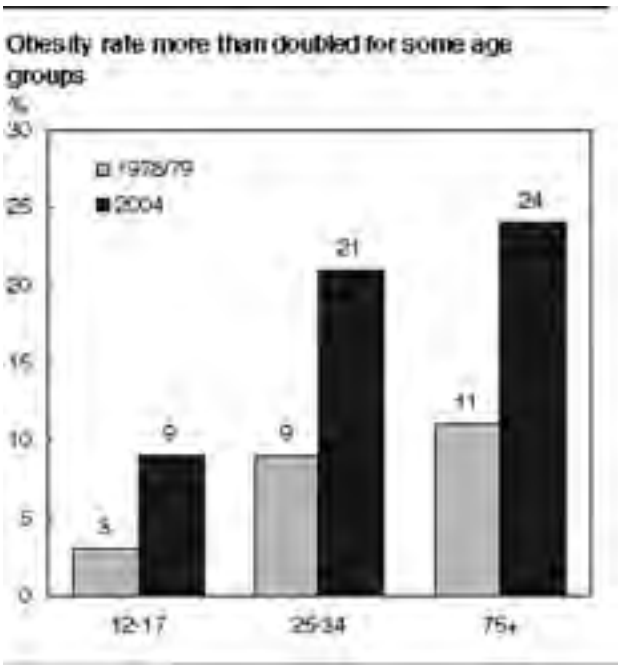
Wells, C. L. (1990). Women, Sport and Performance: A Physiological Perspective (2nd ed.). Champaign, Il: Human Kinetics.

Healthy Body Weight Facts

Obesity rates among children and adults have increased substantially during the past 25 years, according to new results from the Canadian Community Health Survey (CCHS), which directly measured the height and weight of respondents.

Nova Scotia's capital is the second fattest city in Canada, according to a new report. Using Statistics Canada figures from 2003, the Association for Canadian Studies found that 17.9% of adults in Halifax are considered obese, compared to a national rate of 15%. The report also breaks that down by gender, with 19.8% of men and 16.1% of women carrying around too much weight to be healthy.

Canadian Broadcasting Corporation (2005). Halifax Heavy on Obesity Scale. 27 Jun. 2005 < http://novascotia.cbc.ca/regional/servlet/View?filename=ns-obesity-hfx20050408>.



Statistics Canada (2005). "Canadian Community Health Survey: Obesity among Children." The Daily. 22 July 2005 <http://www.statcan.ca/Daily/English/050706/d050706a.htm>.

Physical activity is essential for preventing children from becoming obese. Today, many children arrive at school without breakfast, eat fried food from the cafeteria at lunch, and devour microwave meals for dinner.

Ko, Marnie (2002). "A Spreading Crisis." Report / Newsmagazine (National Edition) 29.7.

Physical Activity: any bodily movement that produced by skeletal muscles that results in energy expenditure.

Health at Every Size. 14 July 2005.

Exercise: physical activity done for the expressed purpose of improving or maintaining physical fitness.

Health at Every Size. 14 July 2005.

According to new Statistics Canada figures, the majority of Canadians are tubby, with 46% of the population overweight and another 15% medically obese. Two-thirds of Canadians are at increased risk for sudden death, colon cancer, heart disease, and other medical conditions because they are not active enough, according to the Canadian Fitness and Lifestyle Research Institute.

Ko, Marnie (2002). "A Spreading Crisis." Report / Newsmagazine (National Edition) 29.7.

In the next decade, at least three million Canadians are expected to develop type 2 diabetes, a lifestyle disease preventable by good nutrition and physical exercise.

Ko, Marnie (2002). "A Spreading Crisis." Report / Newsmagazine (National Edition) 29.7.

Four in ten (42%) Canadians consider themselves overweight, up 6 points from 36% in June 2000. Today, 38% (versus 33% in 2000) describe themselves as "somewhat overweight" and 4% (versus 3% in 2000) say that they are "very overweight."

Ipsos-Reid (2001). Canadians and Fitness. 22 Jun. 2005 <http://www.angusreid.com/pdf/media/mr010724_1.pdf>.

Obesity costs Nova Scotia $1 billion per year, which includes lost work and healthcare costs.

Kranc, Joel (2004). Atlantic Report: Prevention Plan. 12 May 2005 <http://www.benefitscanada.com/content/legacy/Content/2004/12-04/prevention.pdf>.

The cost of obesity in Nova Scotia is estimated to be $120 million per year in direct health care costs, and as much as $250 million per year when costs such as lost productivity are included.

Cancer Care Nova Scotia. Healthy Eating and Physical Activity. 23 Jun. 2005 <http://www.cancercare.ns.ca/inside.asp?cmPageID=102>.

The obesity rate in Atlantic Canada is above 20%, which is above the national average of 14.9% and the United States.
Kranc, Joel (2004). Atlantic Report: Prevention Plan. 12 May 2005 <http://www.benefitscanada.com/content/legacy/Content/2004/12-04/prevention.pdf>.

Obesity mortality is on the rise. In 1985 there were 2,500 (5.1%) Canadians aged 20–64 who died due to obesity complications. In the new millennium there were close to 4,500 (9.3%) of Canadians whose deaths were attributable to obesity.

Kranc, Joel (2004). Atlantic Report: Prevention Plan. 12 May 2005 <http://www.benefitscanada.com/content/legacy/Content/2004/12-04/prevention.pdf>.

Children, who are obese over a long period of time, as well as those who become obese in later childhood and adolescence, are more likely to remain overweight as adults.

Heart and Stoke Foundation of Canada (2002). Your Family—Healthy Weight and Children. 2 Jun. 2005 <http://ww2.heartandstroke.ca>.

Sedentary Living

It is estimated that physical inactivity costs the Nova Scotia health-care system $66.5 million a year in hospital, physician, and drug costs alone, equal to 4% of total government spending on these services. When all direct health-care costs are added, including private expenditures, a sedentary lifestyle costs Nova Scotians $107 million a year in direct medical care expenditures.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 14 July 2005 <http://www.gpiatlantic.org/publications/abstracts/inactivity-ab.shtml>.

Physical inactivity costs the Nova Scotia economy an additional $247 million each year in indirect productivity losses due to premature death and disability. Adding direct and indirect costs, the total economic burden of physical inactivity in Nova Scotia is estimated at $354 million annually.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 14 July 2005 <http://www.gpiatlantic.org/publications/abstracts/inactivity-ab.shtml>.

If just 10% fewer Nova Scotians were physically inactive—that is, if the rate of physical inactivity were 56% instead of 62%— the province could save an estimated $4.6 million every year in avoided hospital, drug, and physician costs, and $7.5 million in total health-care spending. Added to an estimated $17 million in productivity gains, total economic savings to Nova Scotia from a 10% reduction in physical inactivity amount to $24.7 million.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 14 July 2005 <http://www.gpiatlantic.org/publications/abstracts/inactivity-ab.shtml>.

More than 700 Nova Scotians die prematurely each year due to physical inactivity, accounting for 9% of all premature deaths.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 14 July 2005 <http://www.gpiatlantic.org/publications/abstracts/inactivity-ab.shtml>.

If physical inactivity were completely eliminated in Canada, we could theoretically increase life expectancy and save 21,340 lives that are lost prematurely each year—10.3% of the total deaths among adults.

Katzmarzyk P. T., N. Gledhill, and R. J. Shephard (2000). "The economic burden of physical inactivity in Canada." Canadian Medical Association Journal. 163.11: 1435–40.

Life expectancy at birth in Canada was 79.7 years in 2002.

Canadian Institute for Health Information. Less Than One-Fifth of Adult Canadians Smoke—The Lowest Rate Among OECD Countries. 19 July 2005 <http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=media_09jun2005_e>.

$2.1 billion is the annual cost of physical inactivity to Canadians

Kaman, Robert, and L. Willingness. "Fiscal resources promote physical fitness?" Canadian Medical Association Journal 163.11: 1467.

Sedentary Canadians have five times the risk of getting heart disease than those who exercise moderately during their free time.

Statistics Canada. July 2000 <http://www.statcan.ca>.

Men who were initially sedentary, but who started participating in moderately vigorous sports had a 23% lower risk of death than men who remained inactive.

Paffenbarger, Hyde, Wing, Lee, Jung, and Kamper. Sport for Life. Jun. 1999 <http://www.sport.mb.ca/sfl.htm>.

Inactive people report more reductions in daily activities as a result of acute health problems.

Canadian Fitness and Lifestyle Research Institute. Benefits of Physical Activity. May 2005 <http://www.cflri.ca/cflri/tips/96/ LT96_11.html>.

Sedentary Living Facts

Seventy-two percent of Nova Scotians are inactive.

Facts on Current Physical Activity Levels of Canadians. 12 July 2000 <http://www.paguide.com/english/back3e.htm>.

Sixty percent of Americans get little or no exercise.

Louis, M. (2001). "Do nothings: Everybody knows they should exercise. So why do so few people actually do it?" The Wall Street Journal.

Obesity rates jumped from 12% in 1991 to 17.9% in 1998 in the United States.

Louis, M. (2001). "Do nothings: Everybody knows they should exercise. So why do so few people actually do it?" The Wall Street Journal.

In a recent survey, 63.8% of Atlantic Canadian respondents said they did not regularly participated in sports.
General Participation in Sports Survey. May 2000.

In 2002, Nova Scotians watched 23.7 hours of television a week, which was up from 22.1 hours in 1997.

Statistics Canada (2002). "Average hours per week of television viewing." 22 Jun. 2005 <www.statcan.ca>.

Children between the ages of 2–11 watched 15.9 hours of television a week.

Statistics Canada (2002). "Average hours per week of television viewing." 22 Jun. 2005 <www.statcan.ca>.

Adolescents 12–17 watched 15.9 hours of television a week—the highest in Canada.

Statistics Canada (2002). "Average hours per week of television viewing." 22 Jun. 2005 <www.statcan.ca>.

Men 18 and over watched 23.0 hours of television a week.

Statistics Canada (2002). "Average hours per week of television viewing." 22 Jun. 2005 <www.statcan.ca>.

Women 18 and over watched 27.8 hours of television a week.

Statistics Canada (2002). "Average hours per week of television viewing." 22 Jun. 2005 <www.statcan.ca>.

If you are inactive, studies show that the impact on your health is on par with smoking a pack of cigarettes each day.

Canadian Fitness and Lifestyle Research Institute (1998). "Inactivity major health risk for Canadians." 14 July 2005 <http://www.cflri.ca/cflri/news/98/9801pr.html>.

The public health costs attributable to physical inactivity are from one to two times that of smoking.

Canadian Council for Health and Active Living at Work (1998). Walk and Roll.

The Canadian Fitness and Lifestyle Research Institute estimates that inactivity is responsible for a $700-million-per-year drain on the health care system.

Canadian Fitness and Lifestyle Research Institute. <http://wwww.cflri.ca>.

The economic savings attributed to an individual who moves from a sedentary lifestyle to one that includes physical activity of moderate duration and intensity is double compared to someone who quits smoking

Canadian Council for Health and Active Living at Work (1998). Walk and Roll.

Sedentary living generally increases with age. Twenty-seven percent of men and 36% of women age 18–34 were inactive, according to a 1995 survey.

Nova Scotia Dietetic Association and Nova Scotia Department of Health (1997). Nutrition for Health: The Nova Scotia Agenda for Action.

Back Pain

Four out of five adults experience at least one bout of back pain at some time during their lifetime.

The Mayo Clinic: Special to CNN (2004). Back Pain. 14 July 2005 <http://www.mayoclinic.com/invoke.cfm?id=DS00171>.

Although back pain is common, it's also quite possible to prevent most back problems with simple steps such as exercise and adopting new ways to sit and stand. Even if you've injured your back before, you can learn techniques to help avoid recurrent injuries. Reconditioning through low-impact aerobic exercise is very useful for both rehabilitation and maintenance of the lower back.

The Mayo Clinic: Special to CNN (2004). Back Pain. 14 July 2005 <http://www.mayoclinic.com/invoke.cfm?id=DS00171>.

Reconditioning through low-impact aerobic exercise is very useful for both rehabilitation and maintenance of the lower back. Aerobically conditioned patients will have fewer episodes of low back pain, and will experience less pain when an episode occurs.

Spine Heath. Exercise and Back Pain. 21 July 2005 <http://www.spine-health.com/start/email/jan2001.html>.

Physical activity reduces the risk of back problems. Trunk flexion and pelvic tilt exercises reduce the recurrence of acute lower back problems.

Canadian Fitness and Lifestyle Research Institute. Benefits of Physical Activity. May 2005 <http://www.cflri.ca/cflri/tips/96/ LT96_11.html>.

Arthritis

Exercise is an important component of arthritis self-management. Aqua fitness is a highly recommended form of exercise for people with arthritis.

The Arthritis Society. 14 July 2005 <http://www.arthritis.ca/>.

If you have arthritis, regular exercise can: relieve pain and stiffness, increase flexibility, improve balance, and help you relax and sleep better.

The Arthritis Society. 14 July 2005 <http://www.arthritis.ca/>.

Seniors Health Facts

For older adults, physical activity increases the likelihood of continued independent living; however, 60% of older adults are inactive.

Public Health Agency of Canada (2003). Why Should I be Active? 14 July 2005 <http://www.phac-aspc.gc.ca/pau-uap/paguide/older/why.html>.

At age 75 and over, those that were happy with their health was reaching a low of 37%.

Statistics Canada (2005). Self-Rated Health. 26 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/01103/high/canada/cself.htm>.

The physical decline in body function attributed to aging is really caused by insufficient use of the body.

Anon (1997). "How exercise makes you feel and look younger." Jet.

Approximately one-half of seniors are physically active for 15 minutes or more at least 12 times per month. The most popular physical activities are walking, gardening, home exercise, swimming, and dancing.

Seniors' Mental Health and Addictions Issues. 15 May 2005 <http://www.heretohelp.bc.ca/publications/factsheets/seniors.pdf>.

A study found that seniors who participated in a regular activity program experienced long-term psychological benefits as a result.

Anon (Jan. 2001). "Active Seniors Less Susceptible to Depression." Journal of Physical Education, Recreation and Dance. Reston.

At least 10% of persons over the age of 65, and 50% of those older than 85 years have some form of cognitive impairment.

Yaffe, Kristien (2001). "A Prospective Study of Physical Activity and Cognitive Decline in Elderly Women." Archive of Internal Medicine 161.

A study on the effects of exercise on loss of cognitive ability in elderly women found that even moderate exercise was associated with less risk of cognitive decline in older women.

Yaffe, Kristien (2001). "A Prospective Study of Physical Activity and Cognitive Decline in Elderly Women." Archive of Internal Medicine 161.

Adults over 60 participating twice a week in the Elderobics Program in Halifax reported the following benefits: improved balance, strength and walking abilities, more energy, a greater sense of safety while walking, a reduced fear of falling, and an increased sense of well-being.

Canadian Fitness and Lifestyle Research Institute. The Research File. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts152/ index.asp>.

For older adults, physical activity that includes interaction with others is likely to increase life satisfaction.

Canadian Fitness and Lifestyle Research Institute. The Research File. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts152/ index.asp>.

For older adults, physical activity increases the likelihood of continued independent living.

Canadian Fitness and Lifestyle Research Institute. The Research File. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts152/ index.asp>.

Cortisol, a stress-fighting hormone, tends to stay too long in the blood of older people. Physical activity helps to keep it down.

Canadian Fitness and Lifestyle Research Institute. Lifestyle Tips. May 2005 <http://www.cd.gov.ab.cabuilding_communities/sport_recreation/resources_links/recfacts/general_index/recfacts152/ index.asp>.

Canadians over 65 are less active now than at the end of the eighties.

Canadian Fitness and Lifestyle Research Institute. Older Canadians Becoming Less Active. May 2005 <http://www.cflri.ca/cflri/tips/96/LT96_07.html>.

Active living, or integrating physical activity into daily life, may cut age declines in half.

Parks and Recreation Canada (March/April 1997). Don't Sweat It!

Deterioration in heart functioning, muscular strength and joint flexibility is largely the result of inactivity, not aging in itself. Active living can increase bone strength, lower the risk of osteoporosis, improve posture and enhance mobility.

Parks and Recreation Canada (March/April 1997). Don't Sweat It!

Older people can maximize their quality of life by keeping fit and mobile through physical activity.

Canadian Fitness and Lifestyle Research Institute. Strength Training for Older Adults. June 2005 <http://www.cflri.ca/cflri/tips/97/LT97_07.html>.

Strength improves mobility, lowers the risk of falls and hip fractures, and expands a person's capacity for accomplishing everyday tasks independently.

Canadian Fitness and Lifestyle Research Institute. Strength Training for Older Adults. June 2005 <http://www.cflri.ca/cflri/tips/97/LT97_07.html>.

The downward trend for women at retirement age is particularly troubling. After menopause, women face a higher risk of cardiovascular disease and osteoporosis. With lower levels of estrogen no longer offering adequate protection, physical activity would be of great benefit in offsetting the effects of these diseases. Canadian Fitness and Lifestyle Research Institute. Older Canadians Becoming Less Active. June 2005 <http://www.cflri.ca/cflri/tips/96/LT96_07.html>.

Older people often experience a loss of oxygen uptake, which can have debilitating effects. In a longitudinal study, it was concluded that habitual exercise can be effective in preventing, or slowing, this decline.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Health in the Workplace

Two in five working Canadians say that constant tight deadlines at work are important (quite a bit or very important) in stopping them from being active.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 18 July 2005 <http://www.cflri.ca/cflri/cflri.html>

Two in five working Canadians state that lack of time due to work is an important barrier to their activity.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 18 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

One-quarter of working Canadians say that the lack of pleasant places to walk, bicycle, or be active near work is important as a barrier to their activity.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 18 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

One-third of working Canadians say that roads near work are too busy for safe walking or cycling and this is an important barrier in preventing them from being active.

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 18 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Roughly nine in ten working Canadians believe that regular physical activity improves one's ability to cope and reduces stress (88%); improves productivity (87%); help one recover more quickly from minor illnesses (85%); and be more effective on the job, for example, by improving concentration (83%).

Canadian Fitness and Lifestyle Research Institute. 2002 Physical Activity Monitor. 18 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Workers can reduce fatigue through proper nutrition, stress control and exercise.

Canada Safety Council (2005). Fatigue. 23 July 2005 <http://www.safety-council.org/info/OSH/fatigue.htm>.

According to Health Canada's most recent National Wellness Survey, 17.5 % of companies offer on-site wellness programs, and 64% offer wellness initiatives.

Health Canada (April 10 2002). "Employers embrace wellness at work." The Globe and Mail.

On-the-job inquiries cost $125 billion in the United States, according to a 1999 estimate by the National Safety Council. That includes $62 billion in lost wages and productivity, $19.9 billion in medical costs, and $16.7 billion in other employer costs.

Goodman, David. "Fit employees have fewer workplace injuries." The Associated Press. 22 July 2005 <www.canoe.ca/Health0107/11_fitwork-ap.html>.

In a 1998 health-risk appraisal study of 943 Xerox employees, 5.6% of those who participate made workers compensation claims, compared with 8.9% of non-participants. And the average cost per injury was $6,506 for participants and 9,482 for non-participants. Goodman, David. "Fit employees have fewer workplace injuries." The Associated Press. 22 July 2005 <www.canoe.ca/Health0107/11_fitwork-ap.html>.

In 1987, the medical journal Hand Surgery reported that at Ethicon Inc., a regime of exercises performed for seven minutes, two times a day, brought about a 62% decrease in medical department visits for MSI-related disorders.

Kohler, G (1995). "Fit for work: A self-defence approach to safety." Occupational Hazards 187–189.

Although schools cannot dictate the personal behaviours of staff members, they can make it easier for staff to become physical activity role models by sponsoring school-site health promotion programs. School staff also can play an important role in promoting youth physical activity by disseminating information about community-based sport and recreation programs to students and by helping these programs gain access to school facilities outside of school hours.

Center for Disease Control. Promoting Better Health For Young People Through Physical Activity and Sports. May 2005 <http://www.cdc.gov/nccdphp/dash/ presphysactrpt>.

In the *Journal of Occupational Health Safety* (1989), Allers reported injury reductions for five companies ranging from 56% to 91%, after preventative stretching exercises were adopted.

Kohler, G (1995). "Fit for work: A self-defence approach to safety." Occupational Hazards 187–189.

At BC Hydro in Vancouver, a study of back fitness intervention among a group of 29 chronic back injury patients reported that 80% of participants reported no time lost due to back pain after one year of program implementation, 73% attributed a reduced risk of back injury due to their participation, 20% did back exercises regularly before the program, and 93% intended to continue with exercises after the project was completed.

Kohler, G (1995). "Fit for work: A self-defence approach to safety." Occupational Hazards 187–189.

Fifteen million Canadians spend one-half of their waking hours at work.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

The American Heart Association conducted a study of 8,301 men and women employed at 35 corporations across the country and found that those who were most physically fit had a 37% lower absenteeism rate than those who were unfit.

Rivers, Trails and Conservation assistance–National Park Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

A study by the American Heart Association reported that Control Data Corporation in Minneapolis, Minnesota saw a 30% reduction in medical claim costs and a 35% reduction in the length of hospital stays for people participating in a health promotion program.

Rivers, Trails and Conservation assistance–National Park Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

The Canada Life Assurance Company study (Cox *et al*. 1981) showed a 22% reduction in absenteeism employees participating regularly in a fitness program. Productivity was shown to increase by 7%. With reduced employee turnover, large economic gains were realized because fitness program adherents showed fewer turnovers than non-participants.

Rivers, Trails and Conservation assistance–National Park Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

A 1998 Health Canada survey of 120 companies showed that more and more companies are beginning to realize the benefits of exercise in the work place. The survey showed that from 1980 to 1990 over 50% of the companies had implemented some kind of healthy living program.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

Fatigue, inattention, accidents and low productivity are more common among inactive employees. Fit employees miss fewer days of work, have fewer accidents, are less prone to the harmful effects of stress, and have higher job satisfaction than non-fit ones

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

Fewer disability days have been reported for physically active employees.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

Physical activity programs can reduce the incidence of injury by 25% and, per capita, workers' compensation costs can be reduced by 45% if employees are regularly active.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

Organizations with active living initiatives have reported that absenteeism has been reduced.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

It was reported that it was beneficial and cost-effective for companies to run even a modest wellness program.

Canada Safety Council (2005). Active Living at Work. <http://www.safety-council.org/info/OSH/active.html>.

Lack of time, energy and motivation are most frequently rated as important barriers to being active by Canadian adults, followed by long-term illness or disability, cost, feeling uncomfortable or ill at ease, lack of skill and fear of injury. In fact, two in five working Canadians say that constant tight deadlines at work are important (quite a bit or very important) in stopping them from being active.

Canadian Fitness and Lifestyle Research Institute (2002). Barriers to Being Active. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Most workplaces in Canada do not have policies concerning flexibility of jobs to encourage physical activity within the company. For example, 74% of companies do not have policies allowing employees to work at home, 21% allow this as informal practice, and only 4% of companies have a formal policy allowing telecommuting. Similarly, 66% of workplaces do not have policies for job sharing, 21% informally allow this, and 13% have formal policies on this option.

Canadian Fitness and Lifestyle Research Institute (2002). Barriers to Being Active. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Roughly one-quarter (28%) of workplaces have formal policies allowing dress down days or casual dress codes, while 44% allow this as informal practice, and 28% do not have policies (formal or informal practices) as a means of encouraging physical activity. Roughly two-thirds of companies do not have policies allowing extended lunch hours for employees to participate in physical activity (67%) or policies encouraging employee participation or organization of special physical activity events during work (57%)

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Most (82%) Canadian companies have formal policies concerning private health insurance benefits for employees. Only 16% do not have policies for private health insurance, whereas a mere 3% do so as informal practice. Although the majority of workplaces do not promote physical activity opportunities as an incentive during the recruitment of new employees (74%), 17% do so as an informal practice, and a further 10% have formal policies in place.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Amenities supporting employee physical activity are available at many workplaces in Canada: 67% of workplaces have change areas or locker rooms; 55% have bicycle racks; and 40% have showers at, or nearby, the workplace.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Relatively few companies in Canada have physical activity equipment and facilities at or nearby the workplace. Less than one-third of workplaces report employee access to exercise equipment, such as weights or stationary bicycles, 27% have access to off-site physical activity and fitness facilities, and 17% state that they have fitness facilities or exercise rooms on-site.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Roughly one-third of Canadian companies report that short lunch breaks prevent starting or expanding workplace physical activity programs.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Half of Canadian companies state that they have easily accessible stairwells; however, only a mere 6% of companies actually post signs that encourage the use of stairs. Half of all companies also have access to open spaces for physical activity at work, 43% have access to nearby walking or bicycling trails, and 32% have access to community facilities, such as schools after normal school hours or community centres.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

The availability of physical activity, sports, and recreation opportunities at workplaces varies across Canada. Most companies (71%) hold recreational events like golf tournaments or ski trips, and roughly half of workplaces offer team sports, such as softball, hockey, or soccer. In addition, just over one-quarter offer special physical activity events, like Sneaker Day or The Corporate Challenge for Physical Activity, and less than 15% support other related events, such as Healthy Workplace Week, or offer individual sports, such as tennis.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

The availability of fitness programs is very limited in Canadian workplaces. Less than 15% of companies offer group exercise programs on-site (13%), access to fitness testing or physical activity counseling (11%), seasonal programs that encourage year-long participation (9%), or individual fitness programs (7%).

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Equal proportions of Canadian companies (26% each) report that low employee interest or motivation to participate and to organize a physical activity program prevents them from starting or expanding such a program.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Almost one-third of companies cite a lack of required staff, trained personnel, or volunteers to manage the program as a barrier, and 20% consider lack of management support or interest to be an issue.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor. 14 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Smoking Facts

Smoking hurts young people's physical fitness in terms of both performance and endurance—even among young people trained in competitive running.

CDC. "Preventing tobacco use among young people." Facts on Youth Smoking, Health, and Performance. May 26: 28.

Physical inactivity is as dangerous to our health as smoking.

Public Health Agency of Canada (Oct. 8 2003). Why Should I Be Active: Physical Activity Unit. 14 July 2005 <http://www.phac-aspc.gc.ca/pau-uap/paguide/older/why.html>.

More than half of adult Canadians (54%) were classified as never-smokers in 2002, while another 25% were classified as former smokers.

Health Canada Tobacco Control Programme. Canadian Tobacco Use Monitoring Survey. 20 Jun. 2005 <http://www. hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/index.html>.

In the year 2000, Nova Scotia had the highest smoking rate in Canada (29%), the heaviest consumption of cigarettes per smoker, and the highest rate of nicotine addiction in the country.

Colman, Ronald. "The Cost of Tobacco in Nova Scotia." Cape Breton Cancer Symposium.

If 10% of Nova Scotia smokers quit, the province would save $1 billion over 30 years and save 92,000 life years, compared to the costs incurred if these quitters had kept smoking.

Colman, Ronald. "The Cost of Tobacco in Nova Scotia." Cape Breton Cancer Symposium.

Canada ranked 14th lowest among 19 countries that reported on tobacco consumption (grams per capita) for 2003.

Canadian Institute for Health Information. Less Than One-Fifth of Adult Canadians Smoke—The Lowest Rate Among OECD Countries. 19 July 2005 <http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=media_09jun2005_e>.

Tobacco smoke kills over 45,000 people in Canada each year. That's more than the total of all murders, alcohol-related deaths, car accidents, and suicides.

Health Canada (Aug. 2002). The Scoop. 20 Jun. 2005 <http://www.hc-sc.gc.ca/hecs sesc/tobacco/youth/scoop.html#ugly>.

Eighty-five percent of all lung cancer causes in Nova Scotia are due to tobacco.

Canadian Cancer Society (Dec. 2002). Nova Scotia Tobacco Stats. 19 July 2005 <http://www.cancer.ca/ccs/internet/standard/0,3182,3490_324369__langId-en,00.html>.

If 10% of Nova Scotians quit smoking, the province would save $1 billion over 30 years and 92,000 life years.

Canadian Cancer Society (Dec. 2002). Nova Scotia Tobacco Stats. 19 July 2005 <http://www.cancer.ca/ccs/internet/standard/0,3182,3490_324369__langId-en,00.html>.

Non-smokers who are exposed to second-hand smoke are at a higher risk of getting cancer and other lung diseases. More than 300 non-smokers die from lung cancer each year because of second-hand smoke.

Canadian Cancer Society (2002). Second-Hand Smoke. 19 July 2005 <http://www.cancer.ca/ccs/internet/standard/0,3182,3490_324369__langId-en,00.html>.

Twenty-one percent of Canadians over the age of 15 are smokers—a total of 5.4 million Canadians.

Tobacco and Health of Canadians (Jan. 26 2005). Physicians for a Smoke-Free Canada. 14 July 2005 <http://www.smoke-free.ca/Health/pscissues_health.htm>.

At least 1,000 non-smokers will die this year in Canada—over 300 lung cancer deaths and at least 700 deaths from coronary heart disease will be caused by second-hand smoke

Health Canada (Aug. 2002). The Scoop. 20 Jun. 2005 <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/youth/scoop.html#ugly>.

According to the Canadian Tobacco Use Monitoring Survey (CTUMS) results for 2004, just over 5 million people or 20 percent of the population aged 15 years and older, were current smokers.

Health Canada Tobacco Control Programme (2004). Canadian Tobacco Use Monitoring Survey. 20 Jun. 2005 <http://www. hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/index.html>.

Approximately 23% of men age 15 years and older were current smokers, slightly higher than the proportion of women (17%).

Health Canada Tobacco Control Programme (2004). Canadian Tobacco Use Monitoring Survey. 20 Jun. 2005 <http://www. hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/index.html>.

Encouragingly, smoking rates continue to decline across Canada. In 2002 slightly more than one in five Canadians aged 15 and older were current smokers (21%). This compares with 35% of Canadians who reported being current smokers in 1985. Since the first CTUMS in 1999, the smoking rate has declined by 15%, or four percentage points (from 25%).

Health Canada Tobacco Control Programme (2004). Canadian Tobacco Use Monitoring Survey. 20 Jun. 2005 <http://www. hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/index.html>.

Eighty-five percent of adult smokers had their first cigarette when they were 19 years old or younger.

Health Canada (Jan. 27 2004). You and Me Smoke Free. 26 July 2005 <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/youth/>.

More than 1,000 non-smokers die each year in Canada due to tobacco use—over 300 lung cancer deaths and at least 700 deaths from coronary heart disease will be caused by second-hand smoke

Health Canada. The Scoop. 25 July 2005 <http://www.hc-sc.gc.ca/hecs-sesc/ tobacco/youth/scoop.html#ugly>.

It is estimated that smoking can induce infertility in women still in their late 30s.

Matikainen, Tina, Gloria I. Perez, and Andrea Jurisicova (2001). Nature Genetics 28: 355–360 .

Women who exercise vigorously while trying to quit smoking are more likely to kick the habit.

"Exercise helps women quit." May 2005 <http://www.caaws.ca/>.

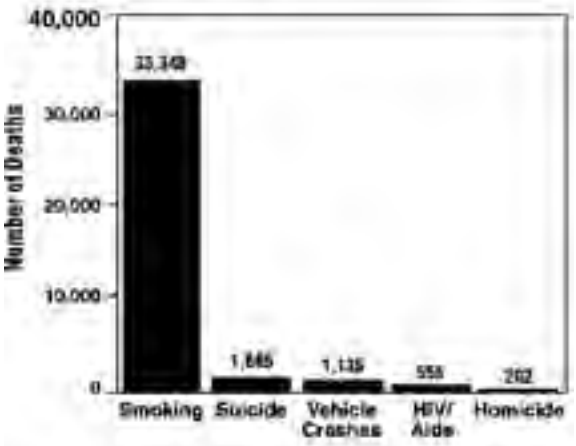
Tobacco is the second major cause of death in the world.

World Health Organization (8 July 2005). News for Nova Scotia. 19 July 2005 <http://www.chpna.ca/chpna/index.php?section=news&page=read&cat=novascotia&id=5>.

There were 136,900 cases of cancer in Canada and 66,200 deaths from cancer.

Canadian Cancer Society (2002). Canadian Cancer Statistics.

Figure 79 **Future causes of premature death among 100,000 smokers age 15, Canada, 1996**



Source: Ellison L, Morrison HI, de Groh M, et al. *Health Consequences of Smoking Among Canadian Smokers: An Update*. Laboratory Centre for Disease Control, Health Canada, 1999.

There were nearly five million smoking deaths in the year 2000.

QuitSmokingSupport. The Global Deaths From Smoking. 27 July 2005 <http://www.quitsmokingsupport.com/global.htm>.

Men were more likely to die from smoking than women.

QuitSmokingSupport. The Global Deaths From Smoking. 27 July 2005 <http://www.quitsmokingsupport.com/global.htm>.

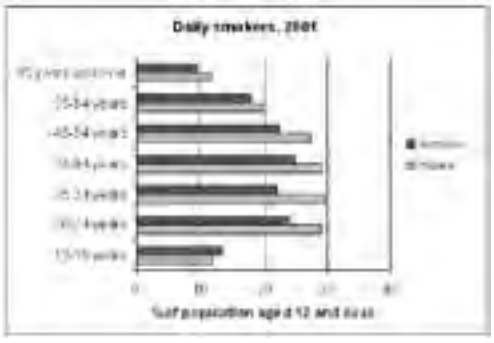
Of the 6.7 million Canadians aged 12 or older who were smoking on either a daily or occasional basis ("current smokers") in 1996/97, 24% had quit by 2000/2001

Statistics Canada (2001). Health Indicator: Quitting Smoking. 27 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/quit2.htm>.

23.4% of the Nova Scotia population smoked in 2001

Statistics Canada (2001). Health Indicator: Quitting Smoking. 27 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/quit2.htm>.

The following chart displays the percentage of Canadians smoking in 2001 by gender and age:



Statistics Canada (2001). Health Indicator: Quitting Smoking. 27 July 2005 <http://www.statcan.ca/english/freepub/82-221-XIE/00601/high/quit2.htm>.

More than 50,000 studies have linked smoking to death and disability from cardiovascular diseases, various cancers, and chronic lung diseases.

(1996)."Smoking to stay thin—the body-image connection." The CAHPERD Journal 34–35.

Smoking is the leading cause of death in Canadian women. More than 15,000 women die each year in Canada as a result of tobacco-related causes.

(1996)."Smoking to stay thin—the body-image connection." The CAHPERD Journal 34–35.

Although complex influences are involved, strong circumstantial evidence links existing trends in the prevalence of smoking with concern about weight—based in turn on low self-esteem and distorted body-images.

(1996)."Smoking to stay thin—the body-image connection." The CAHPERD Journal 34–35.

Research suggests that negative body-image is a major factor in women's smoking. Evidence cited in this review, includes a 1985 survey of Canadian girls that found that 42% of girls who smoked were worried about being overweight, compared with more than 34% of nonsmokers.

(1996)."Smoking to stay thin—the body-image connection." The CAHPERD Journal 34–35.

Cigarette smoking is now considered to be the most significant cause of premature death and disability in Canada and other industrialized nations.

(1996)."Smoking to stay thin—the body-image connection." The CAHPERD Journal 34–35.

Three in ten adults smoke cigarettes every day.

Nova Scotia Department of Health. The Nova Scotia Health Survey, 1995.

After age 40, cancer and heart disease are the leading causes of death in both men and women. Smoking is a factor in both these diseases.

Nova Scotia Department of Health. The Nova Scotia Health Survey, 1995.

Twenty-nine percent of Nova Scotians smoke daily and one-third of this group are heavy smokers.

Nova Scotia Department of Health. The Nova Scotia Health Survey, 1995.

Men are more likely than women to be smokers and heavy smokers

Nova Scotia Department of Health. The Nova Scotia Health Survey, 1995.

In Nova Scotia, illnesses caused by smoking account for $55 million in hospitalization costs each year.

Nova Scotia Department of Health. The Nova Scotia Health Survey, 1995.

Asthma Facts

Asthma is a chronic lung disease that causes shortness of breath, tightness in the chest, and coughing and wheezing. There is no cure for asthma, but it is treatable and control can be achieved so that you can live a normal, active life.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

An estimated 300 million people suffer from asthma worldwide.

Asthmatic Bronchitis. 9 May 2005 <http://www.asthmaticbronchitis.com/>.

Asthma is responsible for one of every 250 deaths worldwide.

Asthmatic Bronchitis. 9 May 2005 <http://www.asthmaticbronchitis.com/>.

Approximately three million Canadians have asthma. Asthma is a leading cause of pediatric admissions to hospitals.
AllergyExpo2005. 9 May 2005 <http://www.allergyexpo.com/public/faq.php>.

In children, asthma is a leading cause for hospitalization and one of the most leading causes for school absenteeism.

Asthmatic Bronchitis. 9 May 2005 <http://www.asthmaticbronchitis.com/>.

In Canada, approximately 20 children and 500 adults die each year from asthma.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

It is estimated that more than 80% of asthma deaths could be prevented with proper asthma education.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

Asthma affects over 2.5 million Canadians, including 10 to 15 percent of Canadian children, and is a leading cause of admissions to hospital for people of all ages.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

Nine Canadians die a week because of their asthma. However, with proper use of medication and avoidance of triggers are the best ways to prevent asthma attacks.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

Ninety-one percent of people with asthma think their asthma is under control. Unfortunately, 57% of them are wrong.

Asthma in Canada (2005). Did You Know? 9 May 2005 <http://www.asthmaincanada.com>.

Parkinson's Disease

Physical activity ease the symptoms of Parkinson's

Light exercise helps ease the symptoms of Parkinson's Disease.

Marus, J (2000). "Exercise eases Parkinson's." Prevention 52.

Exercise can improve the emotional well-being of a Parkinson's patient by giving them a feeling of accomplishment.

(2000). Can Diet and Exercise Programs Help Relieve Symptoms? 10 May 2005 <http://www.ninds.nih.gov/health_and_medical/pubs/parkinson_ disease_htr.htm#diet>.

Back Pain

Physical activity keeps you limber

Reconditioning through low-impact aerobic exercise is very useful for both rehabilitation and maintenance of the lower back. Aerobically conditioned patients will have fewer episodes of low back pain, and will experience less pain when an episode occurs.

Spine Health (2001). Exercise and Back Pain. 14 July 2005 <http://www.spine-health.com/start/ email/jan2001.html>.

Physical activity reduces the risk of back problems. Trunk flexion and pelvic tilt exercises reduce the recurrence of acute lower back problems.

Canadian Fitness and Lifestyle Research Institute (1999). Benefits of Physical Activity. 14 July 2005 <http://www.cflri.ca/cflri/tips/96/LT96_11.html>.

Benefits of Sport: Youth

Overall benefits

Sport helps kids become stronger; mentally and physically

A recent survey by the Canadian Centre for Ethics in Sport (CCES) revealed that almost all Canadians (92%) believe that community-level sport can have a positive influence on the personal and moral development of youth.

Canadian Centre for Ethics in Sport. National Survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

Physical activity reduces stress, strengthens the heart and lungs, increases energy levels, helps you maintain and achieve a healthy body weight—and it improves your outlook on life.

Active Healthy Kids Canada. Trends in Physical Activity Among Children. 28 July 2005 <http://www.activehealthykids.ca/Ophea/ActiveHealthyKids/facts.cfm>.

About one-third of children from low-income families rarely participated in organized sports, compared to one-quarter of high-income children.

ISUMA (2000). "Family Income and Child Well-Being." Canadian Journal of Policy Research 1.2.

Seventy-six percent of children who exercised felt accepted by other students, while only 65% of children who didn't exercise felt the same.

Canadian Fitness and Lifestyle Research Institute. May 2005 <http://www.cflri.ca>.

Increasing participation in physical activity can decrease a student's study time; yet, their academic performance is maintained as their level of physical activity increases.

Shepard, R. J. "Curricular physical activity and academic performance." Pediactric Exercise Science 9.2.

Learning appears to occur more rapidly in the classroom when more curricular time (14-26%) is devoted to physical education.

Shepard, R. J. "Curricular physical activity and academic performance." Pediactric Exercise Science 9.2.

Physical activity produces overall physical, psychological, and social benefits for a lifetime because inactive children are likely to become inactive adults.

American Heart Association. Exercise (Physical Activity) and Children. 23 Jun. 2005 <http://www.americanheart.org/presemter.jtml?Identifier=4596>.

Participating in sports, joining clubs or groups, and taking music, dance or art lessons are examples of ways in which young people can participate in their community, learn new skills, and socialize beyond their family boundaries.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Beyond the obvious health benefits, organized sports also provide children with an opportunity to learn from coaches, instructors, and mentors. Participating as a member of a team teaches children important leadership skills, instills self-confidence, and improves social abilities such as sharing and co-operation.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Children's involvement in cultural and recreational activities can protect them from emotional and social problems.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Participating in unorganized sports also contributes to children's good health and the acquisition of social and co-operative skills.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Inactive kids become inactive adults.

Nova Scotia Sport and Recreation Commission (2001). Towards Physically Active Children and Youth in Nova Scotia.

Kids need regular exercise to build strong bones and muscles. Exercise also helps children sleep well at night and stay alert during the day.

Mayo Clinic: Special to CNN (26 January 2005). Keeping Kids Active: Ideas for Parents. 5 July 2005 <http://edition.cnn.com/HEALTH/library/FL/00030.html>.

About three-quarters of children in low-income families rarely participate in organized sports, compared to one-quarter of children in high-income families. The participation rate increases across the entire income range, but particularly for those with incomes above $40,000. Undoubtedly, the high cost of equipment, instruction, and facility fees that are required to participate in many sports acts as a strong deterrent to children in lower-income families.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Children from low-income families are still less likely to participate in unorganized sports than are children in middle-income families. Compared to the results for organized sporting activities, the difference in the participation rates for children in low- and high-income families is lower.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Recent evidence has shown that students who participate in extracurricular activities, such as sports teams, are less likely to use drugs than the general student population.

School Drug Testing. Extracurricular Activities Cut Drug Use. 27 July 2005 <http://www.aclutx.org/pubed/positionpapers/studentdrugtesting.htm>.

Children's movement experiences are intimately connected with their intellectual, emotional, social, physical, and motor development.

Pica, Rae. "More Movement, Smarter Babies." Babies Online. 27 July 2005 <http://www.babiesonline.com/articles/moremovementsmarterkids.asp>.

Most of the brain is activated during physical activity. Movement increases blood vessels that allow for the delivery of oxygen, water, and glucose ("brain food") to the brain. And this can't help but optimize the brain's performance!

Pica, Rae. "More Movement, Smarter Babies." Babies Online. 27 July 2005 <http://www.babiesonline.com/articles/moremovementsmarterkids.asp>.

Over half of Canadian children, aged 5–17, are not active enough to achieve health benefits based on calories burned for body weight.

Canadian Fitness and Lifestyle Research Institute. May 2005 <http://www.cflri.ca>.

The current recommendation in Nova Scotia suggests 60 minutes of moderate activity within a 24-hour period.

Canadian Fitness and Lifestyle Research Institute. May 2005 <http://www.cflri.ca>.

Children who are physically active tend to perform better in school and are less likely to smoke than their non-active peers.

Canadian Fitness and Lifestyle Research Institute. May 2005 <http://www.cflri.ca>.

In 1993, the *Journal of the American Medical Association* reported on a study that found participation in school athletics programs substantially reduced the likelihood that adolescents would begin smoking.

Kagan, Jerome, and Susan B. Gall (1998). "Sports." The Gale Encyclopedia of Childhood and Adolescence.

Girl athletes receive substantial benefits from participation in sports. Girls that participated in school athletics are 92% less likely to use drugs, including tobacco and alcohol, and 80% less likely to get pregnant. Additionally, they are three times more likely to graduate from college.

Kagan, Jerome, and Susan B. Gall (1998). "Sports." The Gale Encyclopedia of Childhood and Adolescence.

An increasing number of children are obese, and if no intervention is made, 80% of them will stay overweight as adults. This can put them at risk for many medical problems, including diabetes, high blood pressure, high cholesterol, and sleep apnea. Obesity can also adversely affect their self-esteem.

Weight Loss and Management Guide for Children (Feb. 5, 2003). Weight Loss Guide. 11 July 2005 <http://www.keepkidshealthy.com>.

Youth Facts

Seventy-five percent of grade 7 males and 65% of grade 6 females could hypothetically achieve the Nova Scotia physical activity criteria with as little as 30 minutes of moderate to vigorous physical activity each day of the week.

Sport and Recreation. Physical Activity Levels of Children and Youth in Nova Scotia. 29 Jun. 2005 <http://www.gov.ns.ca/src >.

In Nova Scotia, 58% of youth aged 12–19 are not active enough for optimal growth and development. The optimal amount of physical activity can be achieved by a playing team sports for an hour or a half hour of running, combined with an accumulated hour of walking throughout the day.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2002. 29 Jun. 2005 <http://www.cflri.ca.ca>.

The following chart reports the percentage of students who accumulated the Nova Scotia recommendation of 60 minutes or more of moderate or vigorous physical activity each day:

2000-2002	Grade 3	Grade 7	Grade 11
Male	90%	45%	8.7%
Female	92.3%	28%	5.1%

Province of Nova Scotia. Active Kids Healthy Kids: A Nova Scotia Physical Activity Strategy for Children and Youth. Fall 2002.

Nova Scotia parents report that 65% of children usually do homework for part of the time between the end of classes and dinner, and 77% also reportedly engage in other sedentary activities, such as reading, watching television, or playing computer or video games.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2001. 29 Jun. 2005 <http://www.cflri.ca.ca>.

Girls are significantly less active than boys, with 64% of girls and 52% of boys being considered physically inactive. Moreover, fewer girls than boys meet the criterion for optimal growth and development (12% versus 20%).

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2001. 29 Jun. 2005 <http://www.cflri.ca.ca>.

Youth living in higher income families are the least likely to be physically inactive (44% versus between 57% and 67% for other income levels.)

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2001. 29 Jun. 2005 <http://www.cflri.ca.ca>.

Walking is the most popular physical activity among Canadian children, with 82% participating. Bicycling was reported by 45% of children.

Canadian Fitness and Lifestyle Research Institute. 2000 Physical Activity Monitor. 27 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2000survey/2000survey.html>.

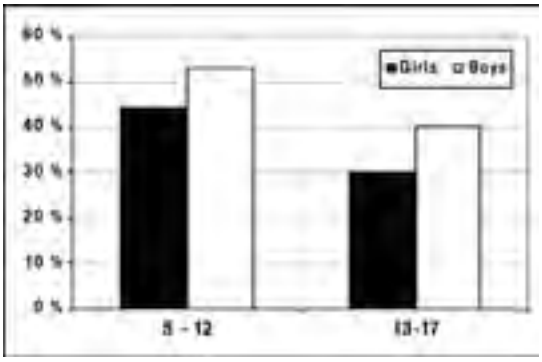
Girls are less active than boys. Thirty-eight percent of girls and 48% of boys are considered active enough for optimal health benefits.

Canadian Fitness and Lifestyle Research Institute. 2000 Physical Activity Monitor. 27 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2000survey/2000survey.html>.

Among United States high-school students, more than one in three (35%) do not participate regularly in vigorous physical activity.

Promoting Better Health for Young People through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

Physical activity levels among children and youth:



Canadian Fitness and Lifestyle Research Institute. 2000 Physical Activity Monitor. 27 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2000survey/2000survey.html>.

Regular participation in vigorous physical activity drops from 73% of grade 9 students to 61% of grade 12 students.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

Nearly half (45%) do not play on any sports teams during the year. Nearly half (44%) are not even enrolled in a physical education class; enrollment in physical education drops from 79% in grade 9 to 37% in grade 12.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

The average hours per week of television viewing in Canada has not changed in the last five years, hovering around 22 hours per week.

Statistics Canada. The Daily. March 31, 2005 <http://www.statcan.ca/Daily/English/050331/d050331b.htm>.

From a level of 14.3 hours per week in 1998, young men aged 18 to 24 have consistently reduced their hours of TV viewing to 11.1 hours in 2003. Young women in the same age group went from 17.6 hours in 1998 to 15.5 hours in 2003. The pattern was the same for teens and children.

Statistics Canada. The Daily. March 31, 2005 <http://www.statcan.ca/Daily/English/050331/d050331b.htm>.

The young are spending more of their leisure time doing things other than watching television. For example, Internet use among households with children under 18 continued to grow, from 41% in 1999 to 73% in 2003.

Statistics Canada. The Daily. March 31, 2005 <http://www.statcan.ca/Daily/English/050331/d050331b.htm>.

Young people live in a social and physical environment that makes it easy to be sedentary and inconvenient to be active.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

Strategies to increase the amount of physical activity for boys and girls will need to be different, because girls tend to prefer different types of physical activity and pursue it for different reasons than do boys.

Canadian Fitness and Lifestyle Research Institute. Canadian Community health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

According to the 2000/01 Canadian Community Health Survey (CCHS), 56% of Canadian youth aged 12–19 were physically inactive. As many as 82% of youth may not have been active enough to meet international guidelines for optimal growth and development.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Children are physically active until age nine. At that age, their activity level starts to decrease.

Nova Scotia Department of Health. Behind the Stories: Health Issues in Nova Scotia. 27 July 2005 <http://www.phac-aspc.gc.ca/pau-uap/paguide/ child_youth/pdf/YthTeachersGuideEnFinal.pdf>.

A main concern regarding obesity in children is that obese children tend to become obese adults, facing an increased risk of diabetes, heart disease, orthopedic problems and many other chronic diseases. In fact, 40% of children already have at least one risk factor for heart disease-reduced fitness due to an inactive lifestyle.

Active Living Alliance. Physical Activity Benefits and Children. 5 July 2005 <http://www.edu.pe.ca/activeliving/children%20benefits.htm>.

An increasing number of children are obese, and if no intervention is made, 80% of them will stay overweight as adults. This can put them at risk for many medical problems, including diabetes, high blood pressure, high cholesterol, and sleep apnea. Obesity can also adversely affect their self-esteem.

Weight Loss and Management Guide for Children (Feb. 5, 2003). Weight Loss Guide. 11 July 2005 <http://www.keepkidshealthy.com>.

Children need 30 minutes of physical activity every day to improve fitness and health levels. About 90% of Canadian children participate less than that.

Health Canada (2002). Family Guide. 5 July 2005 <http://www.phac-aspc.gc.ca/pau-uap/paguide/child_youth/pdf/KidsFamguideEnFINAL.pdf>.

Over half of Canadian teenagers are sedentary, accumulating the equivalent of less than one hour of walking a day (3+METS). Furthermore, only 18% are accumulating enough daily activity to meet the international guidelines for optimal growth and development.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Half of Canada's children aged 6–17 years reportedly take physical education classes three or more days a week at school and 17% have daily physical education.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

More active parents are more likely to report that their child takes physical education classes at least three days a week.

Canadian Fitness and Lifestyle Research Institute. Canadian Community Health Survey, 2000/01. 5 July 2005 <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002_ns.html>.

Researchers found that the exclusion of children with physical disabilities by classmates limits their involvement in many typical childhood experiences, including active recreation and physical activity.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

Physical and social barriers to physical activity can decrease a child with disability's fitness levels, cardio respiratory endurance and increase interpersonal isolation.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

It is estimated that only one-third of children and youth are active enough for health benefits.

Nova Scotia Sport and Recreation Commission (2001). Towards Physically Active Children and Youth in Nova Scotia.

Health Benefits

Physical activity helps kids grow up healthy

More than half of Canadian children are not active enough for optimal growth and development. Therefore, they are not as healthy as they could be.

CPS Advisory Committee (2002). Healthy Active Living for Children and Youth.

Physical activity protects against heart disease, stroke, hypertension, type 2 diabetes, colon cancer, breast cancer, osteoporosis, obesity, depression, anxiety, and stress.

Walker, Sally, and Ronald Colman. "The Cost of Physical Inactivity in Halifax Regional Municipality." GPI Atlantic. 27 July 2005 <http://www.gpiatlantic.org/publications/summaries/inactivity-hrmsumm.pdf>.

Regular physical activity protects against obesity and assists weight control, fosters development of healthy muscles, bones and joints, increases strength and endurance, improves behavioural development of children and adolescents, and helps maintain function and preserve independence in older adults.

Walker, Sally, and Ronald Colman. "The Cost of Physical Inactivity in Halifax Regional Municipality." GPI Atlantic. 27 July 2005 <http://www.gpiatlantic.org/publications/summaries/inactivity-hrmsumm.pdf>.

Students who participate in interscholastic sports are less likely to be regular and heavy smokers, drug users, and are more likely to stay in school, have good conduct, and high academic achievement.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov /HealthyYouth/physicalactivity/promoting_health/index.htm>.

Studies have found participation in physical activity increases adolescents' self-esteem and reduces anxiety and stress.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov /HealthyYouth/physicalactivity/promoting_health/index.htm>.

Opportunities and motivation to be physically active begin at home.

Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

Young people who engage in bursts of intense activity have lower levels of LDL cholesterol, the type that can lead to artery-clogging deposits in adults.

Craig, Dr. Susan B. Heart Smart. 27 July 2005 <http://www.rsar.nevadanet.com/HealthSource/news/ateenager.html>.

Children should engage in more vigorous activity on at least three days per week, where heart rate and breathing rate are increased even more.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Exercise had traditionally been prescribed as a treatment for children suffering from chronic diseases such as asthma, cystic fibrosis, and insulin-dependent diabetes, to reduce both morbidity and mortality.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Regular physical activity is essential to the mental and physical health of each child and adolescent.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Children with the lowest physical activity/ fitness levels and highest percentage of body fat are most likely to develop other risk factors for cardiovascular disease, including elevated blood pressure and serum cholesterol levels. However, youngsters' lipoprotein profiles can be improved with physical activity. Also, weight loss and a lowering in blood pressure can occur in children with physical activity.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Recent studies have shown that early signs of chronic disease and associated risk factors such as elevated cholesterol and hypertension can now be detected in children. Several studies have documented that the presence of chronic disease risk factors in children is associated with low aerobic fitness and low levels of physical activity.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Even moderate amounts of physical activity prevents delays in the development of high blood pressure and helps reduce hypertension in some adolescents.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Teenage female athletes are less likely to use marijuana, cocaine, or "other" illicit drugs. They are also less likely to be suicidal, less likely to smoke, and more likely to have a positive body image than non-athletes.

(March 2001).The Women's Sports Foundation Report: Health Risks and the Teen Athlete.

Researchers from Penn State say exercise may be more important than calcium consumption for young women to ensure proper bone health as they get older. They studied 81 young women, aged 12 to 16, beginning in 1990. When the girls reached 18, the researchers found no relationship between calcium consumption and bone mineral density. However, there was a strong link between physical activity and bone mineral density (BMD). The researchers found that consistent activity, rather than fitness or exercise intensity, was the best predictor of healthy levels of BMD.

(August 2000). Pediatrics Fitness Bulletin 23.8: 2.

Physical activity can be an opportunity for children with physical disabilities to socialize with able-bodied children. Given their lack of play experience these children may perceive greater gains than their classmates from physical activity.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

Physical activity improves strength and endurance, and helps build and maintain healthy bones, muscles and joints. It can also contribute to weight control, lean muscles, and reduce fat, anxiety and stress. Youth who participate in sports also tend to have higher self-esteem.

MassMoves. Physical Activity for all Ages. 14 Jun. 2005 <http://www.mass.gov/dph/fch/massmoves/activity.htm>.

Walking is ranked as the top physical activity among youth aged 12–19 years (58%) followed in popularity by bicycling (45%), jogging or running (43%), swimming (43%), basketball (42%), home exercise (33%), and social dancing (32%). Approximately one-quarter of youth reported participation in gardening (26%), in-line skating (26%), volleyball (26%), weight training (25%), and bowling (21%).

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor 23. Jun. 2005 <http://www.cflri.ca/cflri.html>.

Girls are more likely than boys to report participation in walking, swimming, social dancing, volleyball, and exercise classes. However, boys are more likely than girls to report bicycling, jogging or running, weight training, downhill skiing, golf, fishing, tennis, gardening, and team sports, including basketball, baseball or softball, and hockey.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor 23. Jun. 2005 <http://www.cflri.ca/cflri.html>.

Adolescents, aged 12–14, are more likely than those aged 15–19 to report bicycling, swimming, basketball, in-line skating, volleyball, baseball or softball, and ice skating, whereas older youth are more likely than younger youth to report participation in home exercise and weight training.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor 23. Jun. 2005 <http://www.cflri.ca/cflri.html>.

Although the drop-off in participation rates of activities among older adolescents appears for both girls and boys, the decline is most apparent for older female adolescents.

Canadian Fitness and Lifestyle Research Institute. 2003 Physical Activity Monitor 23. Jun. 2005 <http://www.cflri.ca/cflri.html>.

Children and adolescents should be permitted and encouraged to participate in enjoyable physical activities that total at least 60 minutes per day. Most of these activities should be of moderate intensity so that the heart rate and breathing rate are increased.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Families should find physical activities that can be enjoyed together while de-emphasizing sedentary behaviors such as watching television.

Pivarnik, James M., and Karin A. Pfeiffer (2002). The Importance of Physical Activity for Children and Adolescents. Michigan Fitness Foundation.

Regular physical activity improves strength, builds lean muscle, and decreases body fat in teenagers. It can also build stronger bones to last a lifetime.

CDC (Nov. 17 1999). Physical Activity and Health At-A-Glance. 4 July 2005 <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>.

Nearly half of young people aged 12–21 are not vigorously active on a regular basis.

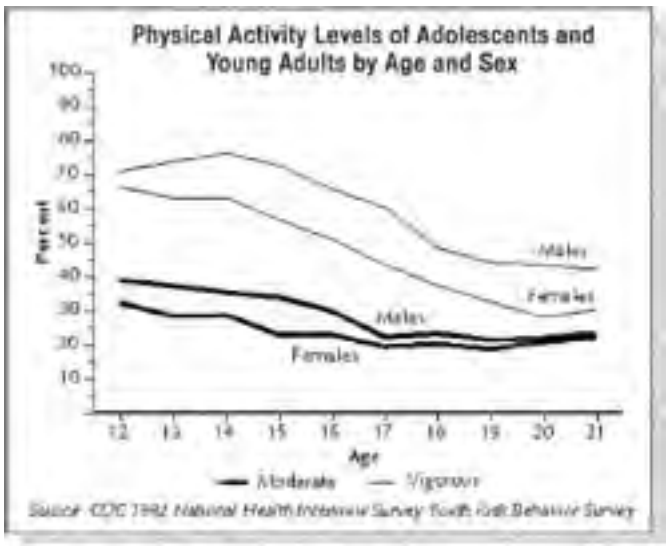
CDC (Nov. 17 1999). Physical Activity and Health At-A-Glance. 4 July 2005 <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>.

Physical activity declines dramatically with age during adolescence.

CDC (Nov. 17 1999). Physical Activity and Health At-A-Glance. 4 July 2005 <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>.

Female adolescents are much less physically active than male adolescents.

CDC (Nov. 17 1999). Physical Activity and Health At-A-Glance. 4 July 2005 <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>.



CDC (Nov. 17 1999). Physical Activity and Health At-A-Glance. 4 July 2005 <http://www.cdc.gov/nccdphp/sgr/ataglan.htm>.

Once physical education becomes an optional subject, enrolment in physical education tends to decrease significantly with the decrease more noticeable for adolescent females than males.

Canadian Association of Health, Physical Education, Recreation and Dance. Facts. September 29, 2005 <http://www.cahperd.ca/eng/advocacy/facts/facts_stats.cfm>.

At the high-school level, athletic participation in the educational setting enhances academic participation.

Canadian Association of Health, Physical Education, Recreation and Dance. Facts. September 29, 2005 <http://www.cahperd.ca/eng/advocacy/facts/facts_stats.cfm>.

Only 57% of the Canadian schools identified meet provincial requirements for allotted time devoted to physical education.

Canadian Association of Health, Physical Education, Recreation and Dance. Facts. September 29, 2005 <http://www.cahperd.ca/eng/advocacy/facts/facts_stats.cfm>.

Half of Canada's children aged 6–17 years reportedly take physical education classes three or more days a week at school. Only 17% reported receiving daily physical education.

Canadian Association of Health, Physical Education, Recreation and Dance. Facts. September 29, 2005 <http://www.cahperd.ca/eng/advocacy/facts/facts_stats.cfm>.

Appropriate forms of sport and physical activity can play a significant role to prevent as well as help cure many of the world's leading non-communicable diseases.

United Nations (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals.

Physical inactivity is estimated to directly cause 1.9 million deaths globally.

United Nations (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals.

Physical activity is critical for the holistic development of young people, but one-third of adolescents are insufficiently active.

United Nations (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals.

Physical activity contributes to healthy bones, efficient heart and lung function, and improved motor skills and cognitive function.

United Nations (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals.

Stress

Many youth experience stress at school, at home, or at work. However, by participating in some form of physical activity, exercise will have a positive effect on their stress and also calm their mind and relax their body.

Ripley, Jacqui. Stress Busting Fitness Tips. 22 Jun. 2005 <http://www.ivillage.co.uk/dietandfitness/mndbodsprt/stressmgmt/articles/0,,272_167370,00.html>.

Children who are regularly active are less susceptible to stress, perform as well or better academically, exhibit positive attitudes about school, and are less aggressive and play better with other children.

(2003). The Canadian Association for Health, Physical Education and Recreation.

A Statistics Canada survey found that in 1996 and 1997, almost 7%, or about 44,000, of 12 to 3 year olds reported that they had seriously considered suicide in the preceding 12 months.

Statistics Canada. National Longitudinal Survey of Children and Youth. 29 Jun. 2005 <http://www.statcan.ca >.

Suicide is the second leading cause of death in 15 to 24 year olds, second only to accidents.

Canadian Mental Health Association. 29 September 2005 <http://www.cmha./bins>.

Canada's youth suicide rate is the third highest in the industrialized world.

Canadian Mental Health Association. 29 September 2005 <http://www.cmha./bins>.

While today's young women continue to be better adjusted at school than young men, to attain higher levels of school achievement and to be more likely to aspire to and to participate in post-secondary education, they also show evidence of higher levels of stress.

Public Health Agency of Canada. 30 September 2005 <http://www.phac-aspc.gc.ca/dca-dea/publications/hbsc_11_e.html>.

Female athletes have a more positive body image and experience higher states of psychological well-being than females who do not play sports. A study found that not only do girls who participate in sports have higher levels of self-esteem, they also have lower levels of depression.

The Feministy Majority Foundation (1995). Empowering Women in Sports 4.3. Oct. 2005 <http://www.feminist.org/research/sports/sports6.html>.

Healthy Body Weight

Physical activity leads to a healthy body weight

In the past 30 years, the rate of childhood obesity has more than tripled, leading to a dramatic increase in the number of children with type 2 diabetes.

Mayo Clinic: Special to CNN (January 26, 2005). Keeping Kids Active: Ideas for Parents. 5 July 2005 <http://edition.cnn.com/HEALTH/library/FL/00030.html>.

Children who watch more than five hours of television a day are eight times more likely to be obese than are children who watch less than two hours of television a day.

Mayo Clinic: Special to CNN (January 26, 2005). Keeping Kids Active: Ideas for Parents. 5 July 2005 <http://edition.cnn.com/HEALTH/library/FL/00030.html>.

Thirty-two percent of Nova Scotians aged 2 to 17 are overweight or obese.

Nova Scotia Health Promotion (July 6 2005). New Information on Overweight and Obesity Rates Released. 27 July 2005 <http://www.gov.ns.ca/news/details.asp?id=20050706004>.

Twenty-six percent of Canadian youth aged 2 to 17 are obese.

Nova Scotia Health Promotion (July 6 2005). New Information on Overweight and Obesity Rates Released. 27 July 2005 <http://www.gov.ns.ca/news/details.asp?id=20050706004>.

Department of Education is an important partner, because young people spend much of their time in schools. Recent initiatives undertaken include: the creation of one sport animator's position in each participating school board, funding for school boards to provide increased access to healthy eating and physical activity, new support for breakfast programs, implementation of the provincial school food and nutrition policy in the 2005–06 school year, and an additional public health nutritionist per district health authority.

Nova Scotia Health Promotion (July 6 2005). New Information on Overweight and Obesity Rates Released. 27 July 2005 <http://www.gov.ns.ca/news/details.asp?id=20050706004>.

Through the Active Kids, Healthy Kids strategy, thousands of children and youth have been exposed to new opportunities for physical activity in their schools and communities.
Nova Scotia Health Promotion (July 6 2005). New Information on Overweight and Obesity Rates Released. 27 July 2005 <http://www.gov.ns.ca/news/details.asp?id=20050706004>.

Physical inactivity has been shown to be a significant predictor and cause of obesity in children, independent of nutritional habits.

Pivarnik, James. "The Importance of Physical Activity For Children and Youth." Michigan Governor's Council on Physical Fitness, Health and Sports. 27 July 2005 <http://www.mdch.state.mi.us/pha/vipf/KidText.htm>.

A Harvard study showed that being overweight during adolescence was a greater predictor of chronic disease development than being overweight as an adult.

Pivarnik, James. "The Importance of Physical Activity For Children and Youth." Michigan Governor's Council on Physical Fitness, Health and Sports. 27 July 2005 <http://www.mdch.state.mi.us/pha/vipf/KidText.htm>.

Forty to 90% of overweight children become obese adults who are at high risk of developing heart disease and diabetes.

Pivarnik, James. "The Importance of Physical Activity For Children and Youth." Michigan Governor's Council on Physical Fitness, Health and Sports. 27 July 2005 <http://www.mdch.state.mi.us/pha/vipf/KidText.htm>.

Obese parents increased the risk that their children would also become obese.

Canadian Broadcasting Corporation (April 8 2005). Halifax Heavy on Obesity Scale. 13 July 2005 <http://novascotia.cbc.ca/regional/servlet/View?filename=ns-obesity-hfx2--50408>.

The percentage of young people in the United States who are overweight has doubled since 1980.

Promoting Better Health for Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

In North America, 15.3% of 6 to 11 year olds and 15.5% of 12 to 19 year olds are considered to be overweight.

Children's Health and Wellness. 27 July 2005 <http://www.drpaul.com/illnesses/overweight.html>.

Youth Smoking

Research has shown that students who participate in interscholastic sports are less likely to be regular and heavy smokers. Students who play at least one sport are 40% less likely to be regular smokers and 50% less likely to be heavy smokers.

All Sports Coach. Facts on Sports and Smoke-Free Youth. 29 Jun. 2005 <http://www.allsportscoach.com/smokefree-youth.html>.

Research found that in 2002, fewer than 3% of youths in Grades 5 to 9, or an estimated 54 ,000 youths, reported that they were current smokers. This compares with 7% in the same grade levels eight years earlier.

Health Canada Tobacco Control Program (Jun. 14 2004). Youth Smoking and Health Risks. 5 July 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

At the current rate of youth smoking, more than 65,000 Nova Scotia children and teens alive today will become regular smokers. Of these, 15,000 will be killed by their addiction in middle age, each losing about 22 years of nonsmoker life expectancy.

Colman, Ronald. "The Cost of Tobacco in Nova Scotia." Cape Breton Cancer Symposium.

Price elasticity studies show that every 10% increase in the price of cigarettes will reduce smoking among Nova Scotia teenagers by 7%.

Colman, Ronald. "The Cost of Tobacco in Nova Scotia." Cape Breton Cancer Symposium.

Active adolescents are less likely to smoke cigarettes than their sedentary counterparts.

Aaron *et al* (1995). "Physical activity and the initiation of high-risk health behaviours in adolescents." Medicine and Science in Sports Exercises 27:1639–1645.

In 2000, smoking prevalence in Canada for 15-year-olds and older was at 30%. In 2001 and 2002, the rate for the same age group was 25%. In 2003, the rate dropped to 22%.

Health Canada. Canadian Tobacco Use Monitoring Survey (CTUMS), Annual 1999–2003.

The smoking rate for teenagers 15 to 19 has gone down from 20% in 2002 to 18% in 2003.

Health Canada. Canadian Tobacco Use Monitoring Survey (CTUMS), Annual 1999–2003.

Nineteen percent of Nova Scotian children and youth between the ages of 0–17 are exposed to ETS in their home.

Health Canada. Canadian Tobacco Use Monitoring Survey (CTUMS), Annual 1999–2003.

American students who participate in interscholastic sports are less likely to be regular and heavy smokers. Students who play at least one sport are 40% less likely to be regular smokers and 50% less likely to be heavy smokers. Regular and heavy smoking decreases substantially with an increase in the number of sports played.

Escobedo L. G., S. E. Marcus, D. Holtzman, and G. A. Giovino (1993). "Sports participation, age at smoking initiation, and the risk of smoking among US high school students." JAMA 269: 1391–1395. 29 September 2005 <http://www.cdc.gov/tobacco/research_data/youth/ythsprt1.htm>.

The smoking rate for teens aged 15–19 has gone down from 25% in 2000 to 18% in 2003.

Canadian Cancer Society. Nova Scotia Smoking Prevelence 1999–2003. 19 July 2005 <http://www.cancer.ca>.

The likelihood that children will never smoke is directly related to the amount of physical activity; more than 80% of Canadians between the ages of 10 and 24 who are active have never smoked.

Active Healthy Kids Canada. Trends in Physical Activity Among Children. 28 July 2005 <http://www.activehealthykids.ca/Ophea/ActiveHealthyKids/facts.cfm>.

In 1994, 13.2% of youth admitted to smoking in the past 30 days, while in 2002 only 8.0% had smoked.

Health Canada Tobacco Control Program (Jun. 14, 2004). Youth Smoking and Health Risks. 5 July 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Between 1994 and 2002, the rate of smoking among Canadian youths in Grades 5 to 9 declined by more than half, according to new data from the Youth Smoking Survey.

Statistics Canada. "Youth Smoking Survey." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Almost six out of every ten of the young people who smoked in 2002 indicated that they did so on a daily basis.

Health Canada Tobacco Control Program (Jun. 14, 2004). Youth Smoking and Health Risks. 5 July 2005 <http://wwwhttp://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Historically, young adults aged 20–24 have had the highest rates of smoking as compared with rates for all other age groups in the Canadian population. In 2003, this trend continued: the prevalence of smoking for those aged 20-24 was 30% as compared with 21% for the entire population aged 15 and over. An estimated 21% of young adults were daily smokers, and the remaining 9% were occasional smokers.

Health Canada. Smoking in Canada: Young Adults. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

Almost all persons who have ever smoked had their first cigarette sometime in their teens, and at least half of all smokers have tried smoking by age 15.

Health Canada. Youth Smoking in Canada: Canadian Tobacco Use Monitoring Survey 2000. 30 September 2004. <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2000/2000youth_e.html>.

Nova Scotia's youth smoking rate for 15-19 year-olds is 25 percent.

Nova Scotia Department of Health (2001). A Comprehensive Tobacco Strategy for Nova Scotia.

In 2003, daily smokers aged 20-24 averaged 12.7 cigarettes per day, somewhat less than the 15.9 cigarettes per day averaged by all daily smokers aged 15 and over. Males aged 20-24 smoked more (14.0 cigarettes per day) than did females (11.2 cigarettes per day).

Health Canada. Smoking in Canada: Young Adults. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

Young adults shared the overall decreasing trend in smoking over time. In 1985, the smoking rate for 20- to 24-year-olds was 43%—13 percentage points higher than in 2003 and eight percentage points higher than in 1999.

Health Canada. Smoking in Canada: Young Adults. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

About 25% of smokers aged 20-24 had their first cigarette before their teens, and 66% had smoked their first cigarette by age 15.

Health Canada. Smoking in Canada: Young Adults. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

British Columbia (20%), Alberta (30%) and Ontario (30%) have the lowest average smoking rates for young adults aged 20–24. The national average is 30%.

Health Canada. Smoking in Canada: Young Adults. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

Among daily smokers aged 15–24, the average number of cigarettes smoked daily was 13.4. The self-reported number of cigarettes smoked rose with age, from 11.5 cigarettes per day at ages 15–17 to 14.0 at ages 23–24.

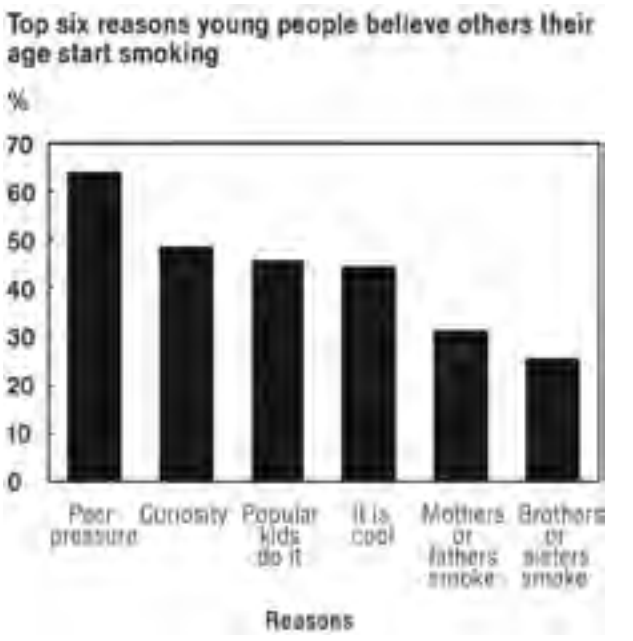
Health Canada. Youth Smoking in Canada: Canadian Tobacco Use Monitoring Survey 2000. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2000/2000youth_e.html>.

According to a survey conducted in 2002, the top six reasons that youth started to smoke are: peer pressure (64%), curiosity, popular kids do it, it is cool, mothers or fathers smoke, or brothers or sisters smoke.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

In 2002, one in five women in Canada aged 15 and older (20%) was a current smoker, smoking either daily or on an occasional (non-daily) basis. This proportion represents a major reduction from 1985, when 32% of women smoked.

Health Canada. Women and Smoking in Canada. Canadian Tobacco Use Monitoring Survey 2002. <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2002/2002_women_e.html>.



Health Canada Tobacco Control Program (Jun. 14, 2004). Youth Smoking and Health Risks. 5 July 2005 <http:www.statcan.ca/Daily/English/040614/d040614b.htm>.

Second-hand smoke has devastating effects on children such as low birth weight, increased risk of SIDS, middle-ear infections and respiratory illness.

Physicians for a Smoke-Free Canada. Cigarette Smoke and Kids Health. 22 Jun. 2005 <http://www.smoke-free.ca/Second-Hand-Smoke/health_kids.htm>.

Children who reported that they smoked in a 1996/97 Statistics Canada survey were much more likely to report physically aggressive behaviours than those who did not. They were also much more likely to report difficult relations with parents, attaching low importance to school marks, skipping school, and more frequent participation in risky behaviours such as stealing and fighting.

Statistics Canada. National Longitudinal Survey of Children and Youth. <http://www.statcan.ca>.

In 2001, regular smoking occurred in 21% of homes in Canada with children under the age of 12. This represents just over 800,000 children who were regularly exposed to the hazards of second-hand tobacco smoke in their homes. This is a significant improvement from 1996/97, when regular smoking occurred in 33% of homes with young children.

Health Canada (30 September 2005). Smoking in Canada: Young Adults. <http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc/fs-if/2003/2003-youn-jeun_e.html>.

Smoking is a habit that almost always begins in youth—usually before age 16. If a child graduates from high school without ever smoking regularly, he or she will probably never will.

National Research Center for Women and Families. Smoking and Girls: A Deadly Mix.

Second-hand smoke (which is sometimes called environmental tobacco smoke or ETS) contains toxic substances, over 40 of which cause cancer. ETS is associated with: Sudden Infant Death Syndrome (SIDS), acute middle-ear infections (otitis media), cancers and leukemias in childhood, slower growth, upper respiratory tract infections (colds and sore throats), unfavorable cholesterol levels, and initiation of arteriosclerosis (heart disease).

Physicians for a Smoke-Free Canada. Cigarette Smoke and Kids Health. 22 Jun. 2005 <http://www.smoke-free.ca/Second-Hand-Smoke/health_kids.htm>.

In 2002, according to the Youth Smoking Survey, 25% of youth, in grades 5 through 9, reported ever trying any tobacco product, compared to 42% in 1994. Smoking cigarettes (23% in 2002, 40% in 1994) was the most common form of trying tobacco. Smoking prevalence amongst males and females was generally the same in 2002.

Health Canada. Summary of Results of the 2002 Youth Smoking Survey. 30 September 2005 <http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/survey-sondage-2002/intro_e.html>.

A new Surgeon General's report entitled Women and Smoking states that there has been a 600% increase in women's death rates from lung cancer since 1950, and that those deaths are a direct result of a smoking addiction that starts in childhood.

National Research Center for Women and Families. Smoking and Girls: A Deadly Mix.

Girls are smoking slightly more than boys, and young people are still ignoring the warnings on cigarette packages about the hazards to their health. In addition, the majority of Grade 7 to 9 smokers had tried either marijuana or alcohol.

Statistics Canada (14 June 2004). "Youth Smoking Survey." The Daily. 7 June 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

In 2002, just under 3% of youths in Grades 5 to 9, or an estimated 54,000 youths, reported that they were current smokers. That is, they smoked cigarettes in the past 30 days and have smoked more than 100 cigarettes in their lifetime. This compares with 7% in the same grade levels eight years earlier.

Statistics Canada (14 June 2004). "Youth Smoking Survey." The Daily. 7 June 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Since 1994, the rate of current smoking has declined by about the same amount for both boys and girls. But the rate among girls continues to be slightly higher than boys in terms of both current and experimental smoking. More than one-half (56%) of current smokers in 2002 were girls, virtually the same proportion as in 1994.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

The Youth Smoking Survey found that in 2002, just under 3% of youths in Grades 5 to 9 reported that they were current smokers, about 54,000 kids. This compares with 7% in the same grade levels in 1994.

CTV (2004). Survey Finds Fewer Young Canadian Kids Smoking. <http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20040614/smoking040614/Entertainment?s_name=&no_ads=)>.

In 2002, smoking rates were down in all the provinces.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

The percentage of youth who reported receiving education on smoking-related health problems increased with grade, from 65% in grade 5 to 85% in grade 9.

Health Canada. 2002 Youth Smoking Survey. 30 September 2005. <http://www.hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/yss-etj-2002/chap8_e.html>.

Most smoking youth have parents who smoke.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Over two-thirds of current smokers reported that their father or mother smoked. In contrast, only about one-third of children who had never tried smoking reported that either parent smoked. In addition, parents were the usual source of cigarettes for 18% of current smokers.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

School performances are lower among smokers. Only 12% of current smokers rated themselves as doing better than average in school compared with their classmates, in contrast to 40% of students who never tried smoking.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

For those who were either currently smoking or had experimented with cigarettes, 92% had tried alcohol, compared with 40% of youth that had never smoked.

Statistics Canada. "Canadian Community Health Survey: A First Look." The Daily. 7 Jun. 2005 <http://www.statcan.ca/Daily/English/040614/d040614b.htm>.

Personal Development

Sport helps to improve youth's sense of worth

Forty-four percent of Canadians said that Olympic sport has a very positive influence on youth, with only 20% of Canadians stating the same for professional sport.

Canadian Centre for Ethics in Sport. National Survey Reveals That the Power of Community Sport Remains Unfulfilled. 18 July 2005 <http://www.cces.ca/pdfs/cces-MR-2002survey_E.pdf>.

Sports and physical activity programs can introduce young people to skills such as teamwork, self-discipline, sportsmanship, leadership, and socialization.

National Institute of Arthritis and Musculoskeletal and Skin Diseases. Childhood Sports Injuries and Their Prevention: A Guide for Parents with Ideas for Kids.

Physical activity can be an opportunity for children with physical disabilities to socialize with able-bodied children to integrated contexts.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

The vast majority of students indicated that physical activity greatly improved their self-confidence and view of self.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

By participating in physical activity, children with physical disabilities believe they are more similar to peers than they previously thought possible.

Taub, Diane E., and Kimberly R. Greer. "Physical activity as a normalizing experience for school-age children with physical disabilities: Implications for legitimation of social identity and enhancement of social ties." Journal of Sport and Social Issues 24.4: 395–414.

Kids who log in plenty of play and activity perform better at school, have better social skills, and have a heightened sense of self-esteem.

Alberta Community Government (2005). Active Living and the Family. 28 July 2005 < <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts146/index.asp>.

Physical activity is particularly good for the self-esteem of children with a disability.

Alberta Community Government. (2005.) Physical Activity, Self-Esteem, and Health. 28 July 2005 <http://www.cd.gov.ab.ca >.

In a well-designed sport program, children can develop self-confidence, become more autonomous, and develop feelings of self-worth.

Alberta Community Government (2005). Benefits of Sports. 28 July 2005 < <http://www.cd.gov.ab.ca >.

The lasting value of sport experiences lies in the application of the principles learned through participation to other areas.

Danish, S., and V. Nellen (1997). "New roles for sport psychologists: Teaching life skills through sport to at-risk youth." Quest 49: 100–113.

Participation in physical activity and recreation can provide positive benefits related to psychological health, physical health, family interactions, peer influence, academic performance, community development and other lifestyle behaviours.

Interprovincial Sport and Recreation Council (1996). Impact and Benefits of Physical Activity and Recreation on Canadian Youth-At-Risk.

Participation in recreation and regular physical activity improves self-esteem and self-concept in children, and also contributes to a reduction in depressive symptoms, stress, and anxiety.

McKay *et al* (1996). "The impact of recreation on youth in transition to adulthood: A focus on youth-at-risk." Youth in Transition: Perspective on Research and Policy. Toronto: Thompson Education Publishing Inc.

Sport helps emotionally disturbed adolescents become more confident, more expressive, more independent, and autonomous.

The Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

The development of physical skills and a basic level of competence in sport are important components of the educational process for students in elementary school.

Pangrazi, Robert. Developing a Quality Physical Education Program. Tempe, AZ: Arizona State University.

A recent survey by the Canadian Centre for Ethics in Sport (CCES) revealed that almost all Canadians (92%) believe that community-level sport can have a positive influence on the personal and moral development of youth. However, fewer than one in five Canadians feel very confident that this potential is currently being realized.

Decima Research (July 2002). 2002 Canadian Public Opinion Survey on Youth and Sport. Canadian Centre for Ethics in Sport. 17 Oct. 2005 <http://www.cces.ca/pdfs/CCES-RPT-2002Survey-E.pdf>.

More than eight in ten believe it is definitely, if not critically, important for community sports to actively promote positive values in youth. Only family is seen as more likely to have a positive impact on the development of Canada's youth.

Decima Research (July 2002). 2002 Canadian Public Opinion Survey on Youth and Sport. Canadian Centre for Ethics in Sport. 17 Oct. 2005 <http://www.cces.ca/pdfs/CCES-RPT-2002Survey-E.pdf>.

Community-level sports are seen to promote positive values in youth such as teamwork, commitment to a goal or purpose, hard work, striving for excellence, fair play, and respect for others.

Decima Research (July 2002). 2002 Canadian Public Opinion Survey on Youth and Sport. Canadian Centre for Ethics in Sport. 17 Oct. 2005 <http://www.cces.ca/pdfs/CCES-RPT-2002Survey-E.pdf>.

Participation in physical activity provides students with a variety of opportunities for increasing their self-esteem and developing positive interpersonal skills and attitudes, including practices of fair play and respect for others.

Ontario Government. Health and Physical Education. The Ontario Curriculum, Grades 1–8, 1998. <http://www.edu.gov.on.ca/eng/document/curricul/health/healthe.html#active>.

Sport teaches children how to take turns, share playing time, and the value of rules.
Ewing, Mart. "Promoting Social and Moral Development Through Sports." Institute for the Study of Youth Sports.

Sports are an important way to develop a child's self-esteem. They look to coaches and parents for positive reinforcement on their skills and abilities.
Ewing, Mart. "Promoting Social and Moral Development Through Sports." Institute for the Study of Youth Sports.

Children also use sports as a way to judge their abilities against their peers. However, because of outside factors beyond their control this is not always the best way to judge ones' abilities. Research has found that youth who played for coaches trained to use positive approach signed up to play baseball the next year compared with 75% of those who played for untrained adult coaches.
Ewing, Mart. "Promoting Social and Moral Development Through Sports." Institute for the Study of Youth Sports.

From an adult viewpoint, youth sports participation serves four broad purposes: It provides children with "fun" and instant gratification; it fulfills what social psychologists call the "affiliative" need — friendship, and a sense of belonging; it offers the near-term prospect of healthier minds and bodies through physical exercise; for the longer term, its cumulative benefits hold the promise of those favorable "outcomes" associated with youth development.
American Sports Data. 22 Jun. 2005 <http://www.americansportsdata.com/pr-recreation-leisure.asp>.

Sports and physical activity programs can introduce young people to skills such as teamwork, self-discipline, sportsmanship, leadership, and socialization.
Promoting Better Health For Young People Through Physical Activity and Sports. Center for Disease Control Report 2000. 27 July 2005 <http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/index.htm>.

Education

Sport helps to make the grade

Students who participated in high school sports, had, on average a 10% better academic achievement rate than the non-athletes.
MacIssac, Dale (2002). Athletes and Academics: Do They Mix? Sport PEI.

Athletic participation at the primary and the secondary levels may not make students "smarter," but it seems to make them more productive; i.e., more strongly motivated, better organized, and more effective in learning and performing tasks.
Kerr, G. "The Role of Sport in Preparing Youth for Adulthood." Youth in Transition: Perspectives on Research and Policy. Toronto: Thompson Educational Publishing Inc.

At the high-school level, athletic participation in the educational setting enhances academic participation. The academic performance of students is equal to or greater than that of non-athletes, and in general, athletic participation is positively associated with increased educational aspirations.
Kerr, G. "The Role of Sport in Preparing Youth for Adulthood." Youth in Transition: Perspectives on Research and Policy. Toronto: Thompson Educational Publishing Inc.

At the high-school level, athletic participation in the educational setting enhances academic participation.

Kidd, B (1999). "The economic case for physical education." Canadian Association for Physical Education Recreation and Dance Journal Winter: 4–10.

High-school athletes are more likely than non-athletes to aspire to be leaders in their communities as adults.

The Feministy Majority Foundation (1995). Empowering Women in Sports. The Empowering Women Series, No. 4. 3 Oct. 2005. <http://www.feminist.org/research/sports/sports6.html>.

High-school girls and boys who participate in sports have higher grades than non-athletes.

The Feministy Majority Foundation (1995). Empowering Women in Sports. The Empowering Women Series, No. 4. 3 Oct. 2005. <http://www.feminist.org/research/sports/sports6.html>.

High-school athletes tend to have a higher grade point average (GPA) than nonathletes.

The Sport Journal. A Comparison of Academic Athletic Eligibility in Interscholastic Sports in American High Schools. 3 Oct. 2005 <http://www.thesportjournal.org/2001Journal/Vol4-No2/athletic-eligibility.asp>.

The Institute for Athletics and Education reports that high school girls who play sports are 80% less likely to be involved in an unwanted pregnancy, 92% are less likely to be involved with drugs, and three times more likely to graduate from high school.

Institute for Athletics and Education (1993).

Physical activity and school sport provides many benefits for children, including better health and quality of life, psychological well-being, improved behaviour and ability to lern, higher scholastic performance, good health habits, and an appreciation of physical activity and sport.

Canadian Heritage (2002). The Canadian Sport Policy.

Through its effects on mental health, physical activity may help increase students' capacity for learning.

MassMoves. Physical Activity for all Ages. 22 Jun. 2005 <http://www.mass.gov/dph/fch/massmoves/activity.htm>.

Canada scores dismally—an overall grade of D, nothing higher than C+, and two Fs—in a report card that gauged several indicators of physical fitness in children, from after-school sports to federal investment.

Brean, Joseph (2005). "Canadian kids get failing grade for physical activity". The Windsor Star.

The average Canadian child plays on an organized sports team but does not play pick-up games with friends. Instead, he or she watches between two and four hours of television each day, possibly while snacking, and uses the computer for at least three hours on Saturday.

Brean, Joseph (2005). "Canadian kids get failing grade for physical activity". The Windsor Star.

From 1974 to 2000, the percentage of overweight 6- to 11-year-olds more than tripled. Among 9- to 13-year-olds, only 39% take part in exercise each week.

Brean, Joseph (May 2005). "At 13, Canadian girls glued to computer addicts." The Gazette.

Over half (51%) of Canadian children aged 5–17 rely solely on inactive modes of transportation to travel to and from school.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2001. 29 Jun. 2005 <http://www.cflri.ca>.

Only 25 % of Nova Scotian students aged 5–17 years walk or bike to school every day.

Province of Nova Scotia (2002). Active Kids Healthy Kids.

Only 15% of Nova Scotia high-school students take physical education.

Province of Nova Scotia (2002). Active Kids Healthy Kids.

Many children and youth are bused to school and often physical education class is the only physical activity a child will receive.

Statistics Canada. "Average hours per week of television viewing, by province, and age/sex groups." The Daily. 5 July 2005 <http://www.statcan.ca/Daily/English/031121/d031121a.htm>.

Michigan High School Athletic Association studies have shown that students participating in team sports generally perform better academically than those not involved in extracurricular activities.

Willard, Tom. "Grade rule for sports eased." The Daily Tribune. 28 Jun. 2005 <http://www.dailytribune.com/stories/092104/loc_grades20001.shtml>.

Nova Scotia parents report that 65% of children usually do homework for part of the time between the end of classes and dinner, and 77% also reportedly engage in other sedentary activities, such as reading, watching television, or playing computer or video games.

Canadian Fitness and Lifestyle Research Institute (2002). Physical Activity Monitor 2001. <http://www.cflri.ca>.

Only 29% of Michigan high school students reported having daily physical education classes. Physical education in Michigan parallels the striking national trend for reduced participation. Nationally, 29% of adolescents in grades 9–12 participated in daily physical education in 1999, compared with 42% in 1991.

Michigan Governor's Council on Physical Education, Health and Sports (July 2002). The Importance of Physical Activity for Children and Adolescents.

Education Facts

Half of Canada's children aged 6–17 years reportedly take physical education classes three or more days a week at school. Only 17% reported receiving daily physical education.

Canadian Fitness and Lifestyle Research Institute (2002). 2002 Physical Activity Monitor. CFLRI. <http://www.cflri.ca>.

The majority of Canadian schools do not meet the national standard of 150 minutes per week of Physical Education and very few qualified Physical Education teaching specialists are employed at Canadian schools.

CAHPERD. An F for Daily Physical Education: Summary of Issue. 3 Oct. 2005 http://wwwhttp://www.cahperd.ca/eng/advocacy/issue_summary.cfm?id=9

One in six teens (aged 16 to 19 years) from low-income families is neither employed nor in school, compared to only one teen in 25 from middle-and high income families.

Ross, David, Roberts, Paul and Scott, Katherine (2000). "Family Income and Child Well-Being." ISUMA 1(2). 17 Oct. 2005. <http://www.isuma.net/v01n02/index_e.shtml>.

Gym classes mostly involve standing still. A study found that the typical 30-40 minute gym class contains only about six minutes of real physical activity.

Picard, Andre (26 July 2002). "Gym classes mostly involve standing still, study says." Globe and Mail.

Half of children aged 5-12 years reportedly receive physical education classes 1-2 days each week. A further 29% participate 3-4 days a week, and about 1 in 5 children this age receive daily physical education. Very few children in this age group receive no physical education at all. In contrast, 1 in 5 adolescents aged 13-17 years reportedly receive no physical education at all at school. Another 29% participate 1-2 days a week, 26% take classes 3-4 days a week, while 1 in four receive daily physical education. Yet disturbingly, parents of adolescents are more likely than parents of younger children to believe that their children get enough physical activity through physical education provided at school.

Canadian Fitness and Lifestyle Research Institute. Physical Activity Monitor 2002. <http://www.cflri.ca/cflri/pa/surveys/2002survey/2002survey.html>.

According to physical education specialists, during critical developmental years at the elementary level it is vital for developing the skills, knowledge, attitude and health benefits for an active, healthy lifestyle.

Mandigo, J., Thompson, L. P., Spence, J. C., Melnychuk, N., Schwartz, M., Causgrove Dunn, J., & Marshall, D (2003). "A descriptive profile of physical education teachers and related program characteristics in Alberta." Alberta Journal of Educational Research 50: 87–102.

The Centers for Disease Control and Prevention reports that in 2003, only 28% of high-school students nationwide attended a daily PE class, but 38% watched television for three hours or more each school night.

Fly, Colin (January 25, 2005). "Childhood obesity up, phys ed classes down." Associated Press.

Only 57% of Canadian schools meet the provincial requirements for allotted time devoted to physical education.

CAHPERD. Time to Move. <http://www.cahperd.ca/eng/advocacy/tools/documents/timetomoveBW.pdf>.

Only 39% of Canadian schools report having a physical education specialist.

CAHPERD. Time to Move. <http://www.cahperd.ca/eng/advocacy/tools/documents/timetomoveBW.pdf>.

In 87% of Canadian cases, the equipment and facilities for physical education programs are rated as being inadequate.

CAHPERD. Time to Move. <http://www.cahperd.ca/eng/advocacy/tools/documents/timetomoveBW.pdf>.

Sixteen point seven percent of elementary schools exempt students from required physical education courses for one or more of the following reasons: high physical competency test scores, participation in other school activities, participation in community sports activities, and participation in community service activities.

National Center for Chronic Disease Prevention and Health Promotion. Healthy Youth. 2000 Facts Sheets. <http://www.cdc.gov/HealthyYouth/shpps/factsheets/pe.htm>.

Twenty-five point three percent of middle/ junior high schools and 40% of senior high schools exempt students from required physical education courses for one or more of the following reasons: high physical competency test scores, participation in other school activities, participation in community sports activities, participation in community service activities, enrollment in other school courses, participation in school sports, and participation in vocational training.

National Center for Chronic Disease Prevention and Health Promotion. Healthy Youth. 2000 Facts Sheets. <http://www.cdc.gov/HealthyYouth/shpps/factsheets/pe.htm>.

At-Risk Youth

Sport provides youth an alternative to destructive behaviour

Programs in inner city sectors often suffer because of limited financial resources lack of awareness, limited program choices, and a lack of coaches and volunteers. As a result, many youth find themselves in at risk situations instead of being involved in healthy, positive opportunities.

Saskatoon Sport Council. Saskatoon Sports Council's Youth At-Risk Sport Programming. <http://www.saskatoonsportscouncil.ca/youth.html>.

Children who were unsupervised during the after-school hours—the primary target population for after-school programs—were found to be more delinquent at all times, not only after school.

Denise C., Gary D. Gottfredson, and Stephanie A. Weisman (2001). "Timing of Delinquent Behavior and It's Implications for After-School Programs." Criminology and Public Policy 1.1.

The acknowledged salience of sports for many young people (especially males) has meant that provision of sporting opportunities has become an important element in many urban regeneration projects, largely aimed at reducing youth crime (in some case studies part of a "community safety" programme).

Coalter, F., M. Allison, and F. Taylor. The Role of Sport in Regenerating Deprived Areas. The Scottish Executive Central Research Unit 2000. <http://wwwhttp://www.sportdevelopment.org.uk/regeneration2000.pdf>.

Sport has been shown to improve emotional and cognitive skills including self-esteem and problem solving. These improvements can impact directly on behavioural risk factors and, as such sport may be useful intervention strategy in reducing antisocial behaviour.

Morris, Lessa, Jo Sallybanks, Katie Willis, and Toni Makkai (2003). "Sport, Physical Activity and Antisocial behaviour in Youth." Trends and Issues. Australian Institute of Criminology. <http://www.ausport.gov.au/isp/AICTIPaper249.pdf>.

Two key aspects of sport and physical activity are that they reduce boredom in youth and decrease the amount of unsupervised leisure time.

Morris, Lessa, Jo Sallybanks, Katie Willis, and Toni Makkai (2003). "Sport, Physical Activity and Antisocial behaviour in Youth." Trends and Issues. Australian Institute of Criminology. <http://www.ausport.gov.au/isp/AICTIPaper249.pdf>.

Some youth are drawn into criminal behaviour out of boredom and lack of something positive to do. Recreation and leisure activities such as sports, music, clubs, theatre, and teen centres not only keep kids busy, they provide youth with a wealth of skills, positive social interactions, and meaningful activities.

Public Legal Education and Information Service of New Brunswick. Preventing Youth Crime. 3 Oct. 2005. <http://www.legal-info-legale.nb.ca/showpub.asp?id=74&langid=1>.

If you tell a person about the virtues of positive leisure time activities, he may become well informed. But if you teach him how to participate in such activities, he will be able to reap the benefits of that participation: relaxation, skill development, meeting challenges, and discovering the joy of successful teamwork.

Alston, Martha Arnold (March 2000). "Using recreation to prevent violence and drug abuse." Parks and Recreation. <http://www.highbeam.com/library>.

It is important to offer leisure education to our citizens while they are young. Such instruction has been proven to prevent young people's involvement in negative leisure activities.

Alston, Martha Arnold (March 2000). "Using recreation to prevent violence and drug abuse." Parks and Recreation. <http://www.highbeam.com/library>.

Sport can have an "indirect effect" by providing challenge and adventure, as well as give meaning and purpose to young people's lives.

Coalter, F., M. Allison, and F. Taylor. The Role of Sport in Regenerating Deprived Areas. The Scottish Executive Central Research Unit 2000. <http://wwwhttp://www.sportdevelopment.org.uk/regeneration2000.pdf>.

The acknowledged salience of sports for many young people (especially males) has meant that provision of sporting opportunities has become an important element in many urban regeneration projects, largely aimed at reducing youth crime.

Coalter, F., M. Allison, and F. Taylor. The Role of Sport in Regenerating Deprived Areas. The Scottish Executive Central Research Unit 2000. <http://wwwhttp://www.sportdevelopment.org.uk/regeneration2000.pdf>.

Sport delivered in a sound ethical framework can engender self-respect, esteem, confidence and leadership qualities—the presumption being that these supposed socio-psychological outcome of participating in sport can contribute to the reduction in the propensity of individuals (mostly young males) to commit criminal acts.

Coalter, F., M. Allison, and F. Taylor. The Role of Sport in Regenerating Deprived Areas. The Scottish Executive Central Research Unit 2000. <http://wwwhttp://www.sportdevelopment.org.uk/regeneration2000.pdf>.

Outreach approaches, credible leadeship, "bottom-up" approaches and non-traditional, local, provision appear to have the best chance of success with the most marginal at-risk groups.

Coalter, F., M. Allison, and F. Taylor. The Role of Sport in Regenerating Deprived Areas. The Scottish Executive Central Research Unit 2000. <http://wwwhttp://www.sportdevelopment.org.uk/regeneration2000.pdf>.

The recreation facilities and parks available to young adults can deter negative social behaviour such as vandalism.

Alberta Government. Ministry of Community Development. RecFacts 609: Parks and Open Spaces are Healthy Spaces. 2 Oct. 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts609/index.asp>.

The Edmonton Police Activity League is a juvenile crime prevention program that relies heavily on sport, recreation, and social activities to encourage harmony among students and to create a positive bond between police and high-risk youth.

Alberta Government. Ministry of Community Development. RecFacts 611: Benefits of Sport. 2 Oct. 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts611/index.asp>.

Male students involved with athletics have significantly fewer encounters with the police.

Kerr, G (1996). "The role of sport in preparing youth for adulthood." Youth in Transition: Perspectives on Research and Policy. Toronto: Thompson Educational Publishing Inc.

Research shows that strategies involving physical activity and recreation appear particularly promising in minimizing or removing risk factors at all stages of the continuum.

Canadian Parks and Recreation Association (1996). Impact and Benefits of Physical Activity and Recreation on Canadian Youth-at-Risk. Lifestyle Information Network. 12 Oct. 2005 <http://www.lin.ca/lin/resource/html/impact.htm>.

One of the characteristics of a resilient child—a young person who is trying to protect themselves against delinquency, aggression, criminal offending, and violence—is someone who participates in both school and extracurricular activities.

Canadian Parks and Recreation Association (1996). Impact and Benefits of Physical Activity and Recreation on Canadian Youth-at-Risk. Lifestyle Information Network. 12 Oct. 2005 <http://www.lin.ca/lin/resource/html/impact.htm>.

Peterborough Petes hockey cards with anti-crime messages have been successful in combating local youth crime, says Terry McLaren, chief of the Peterborough Lakefield Community Police Service. "This is a preventative mechanism that is working […] Along with other preventative measures, the cards have helped us to reduce overall youth crime statistics by 25% between 2001 and 2002," McLaren says.

Peaceful Communities (28 February 2003). Peterborough Petes Team Up with Local Police to Help Prevent Youth Crime. 12 Oct. 2005 <http://www.peacefulcommunities.ca/2003/February/feb28.htm>.

The most effective way to prevent crime is to ensure healthier children, stronger families, better schools, and more cohesive communities.

Economic Analysis Committee (March 1996). "Safety and Savings: Crime Prevention Through Social Development." National Crime Prevention Council Canada. 17 Oct. 2005 <http://www.phac-aspc.gc.ca/ncfv-cnivf/familyviolence/pdfs/safety&savings.pdf>.

Crime went down by 60% in two Lansing, Michigan, neighborhoods after police, local schools, and social services agencies opened a neighborhood centre and launched an extensive youth development program.

Economic Analysis Committee (March 1996). "Safety and Savings: Crime Prevention Through Social Development." National Crime Prevention Council Canada. 17 Oct. 2005 <http://www.phac-aspc.gc.ca/ncfv-cnivf/familyviolence/pdfs/safety&savings.pdf>.

In Fort Myers, Florida, a "Success through Academic and Recreational Sport" (STARS) support program was responsible for reducing the juvenile crime rate by more than 30%.

Economic Analysis Committee (March 1996). "Safety and Savings: Crime Prevention Through Social Development." National Crime Prevention Council Canada. 17 Oct. 2005 <http://www.phac-aspc.gc.ca/ncfv-cnivf/familyviolence/pdfs/safety&savings.pdf>.

In Ottawa, the Participation and Learn Skills community project offered young people a range of activities. An evaluation concluded that the savings in reduced vandalism, police time, and fire costs greatly exceeded the program's cost even in the short term.

Economic Analysis Committee (March 1996). "Safety and Savings: Crime Prevention Through Social Development." National Crime Prevention Council Canada. 17 Oct. 2005 <http://www.phac-aspc.gc.ca/ncfv-cnivf/familyviolence/pdfs/safety&savings.pdf>.

Recreation/physical activity can assist youth-at-risk by:

- **Provincial positive role models**
- **Teaching teamwork and social skills**
- **Promoting self-confidence**
- **Teaching leadership and life skills**
- **Fostering family support and promoting the wellness of youth**
- **Promoting positive morals and values**
- **Providing a sense of community**
- **Providing a sense of belonging**
- **Providing an opportunity for racial integration**
- **Enhancing cultural awareness**
- **Reducing risk factors for disease**
- **Giving youth something constructive to do**
- **Providing a means of releasing stress**

Effects of exercise programs for at-risk youth:

- **Reduced substance abuse behaviour and increased abstinence**
- **Reduced symptomatology and emotionally disturbed behaviour**
- **Increased self-esteem and self-concept**
- **Increased feeling of well being**
- **Increased emotional stability**
- **Increased school attendance**
- **Increased academic/vocational training performance**
- **Increased positive parental relationships**
- **Increased responsibility**
- **Increased level of life skills**
- **Decreased depression**
- **Decreased anxiety**
- **Decreased perception of stress**

Alberta Community Development (2005). RecFacts 403: Impacts and Benefits of Physical Activity—Youth At Risk. 6 July 2005. <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts403/index.asp>.

The Vancouver Police Basketball Association continues its relationship with a local program called "Night Hoops." This program identifies youth-at-risk and provides them with an opportunity to play basketball in a safe environment in the evening at local Vancouver community centres. Playing basketball provides an alternative to drugs and gangs that some youth might otherwise get involved with. The Night Hoops organization provides coaches, referees, gym time, uniforms, and a schedule of games throughout the season, which culminates in a league championship game.

Vancouver Police Department (2005). Working with School and Community. 17 Oct. 2005 <http://www.city.vancouver.bc.ca/police/Sports/Basketball/schoolandcommunity.htm>.

In 1999, Night Hoops branched off from Basketball BC to create a separate non-profit organization called the Night Hoops Basketball Society. It receives financial support from the BC Ministry of Children and Families, and other non-profit organizations.

Don Fennell (3 February 2005). "Night Hoops Comes to Town." The Richmond Review. 17 Oct. 2005 <http://www.yourlibrary.ca/community/richmondreview/archive/RR20050203/sport.html>.

Sports is being used as a vehicle to help reach at-risk youth in Richmond. And if Night Hoops, which is two weeks old in Richmond, proves as popular as in Vancouver, organizers believe they'll have made some positive inroads.

Don Fennell (3 February 2005). "Night Hoops Comes to Town." The Richmond Review. 17 Oct. 2005 <http://www.yourlibrary.ca/community/richmondreview/archive/RR20050203/sport.html>.

Youth that enjoy full and active lives are much less likely to turn to self-destructive behaviour such as drug abuse and suicide.

Parks and Recreation Federation of Ontario. The benefits of parks and recreation. 1992.

The provision of meaningful and involving activities for our young people deters negative social behaviour such as vandalism and petty crime.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Recreation/adventure activities help build confidence and self-esteem in youth. When they feel good about themselves, they operate more effectively and productively in our communities, families, and school.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Recreation is the strongest contributing factor to creating strong and supportive families, which in turn nurture productive and involved children and youth. The dysfunctional family, on the other hand, presents unfair challenges to the child—generating many demands for costly alternative support services.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Recreation activities can act as an outlet for violence.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

In Northern Manitoba there was a 17.4% reduction in crime by communities participating in the community sports program, and on average a 10.6% increase where communities were without the program.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

A review of studies focusing on the therapeutic potential of the Outward Bound process indicates that such a program may increase the delinquent's self-esteem, while reducing the likelihood of further contact with the juvenile justice system during the first year after the program.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

After-school activity programs help prevent youth involvement in crime, substance abuse, and other unproductive activities.

Burkeen E. W. Jr. and M. A. Alston (March 2001). "Using recreation to prevent violence and drug abuse." Parks and Recreation.

Participation in physical activity and recreation can provide positive benefits related to psychological health, physical health, familial interactions, peer influence, academic performance, community development and other lifestyle behaviours.

Canadian Parks/Recreation Association (1996). "Impact and benefits of physical activity and recreation on Canadian youth-at-risk." Lifestyle Information Network. 12 Oct. 2005 <http://www.lin.ca/lin/resources/html/impact.htm>.

Researchers found that youth face many limits to participation in the current system of physical activity and recreation in Canada today. Any one or a combination of the following constraints…we found to lead to disinterest in, or outright barriers to becoming involved in activities that can enhance self-esteem or otherwise provide some alternative to partaking in risky behaviour are: lack of money, transportation, and information; program structure; sport focus; adult program focus; class and racial discrimination; lack of family/parental support; and gender bias.

Canadian Parks/Recreation Association (1996). "Impact and benefits of physical activity and recreation on Canadian youth-at-risk." Lifestyle Information Network. 12 Oct. 2005 <http://www.lin.ca/lin/resources/html/impact.htm>.

The total number of children living in poverty rose from 1.016 million to 1.338 million in Canada and from 36,000 to 40,000 in Nova Scotia (1989–1998)

Canada Council on Social Development (May 1999). Income and Child Well-Being: A New Perspective on the Poverty Debate.

Evaluations done in Canada, the US, Europe, and other countries demonstrate that certain social interventions work, are cost-effective, and provide additional social benefits. Researchers now conclude that social interventions can yield positive, measurable benefits within three years, with reductions in crime of 25% to 50% within ten years.

Canadian Council on Social Development. "When kids flourish, crime doesn't." Children and Youth: Crime Prevention Through Social Development. 17 Oct. 2005 <http://www.ccsd.ca/cpsd/ccsd/>.

One study found that it cost tax-payers seven times more to achieve a 10% reduction in crime through incarceration, rather than through social development…Additionally, there are other positive impacts achieved from social development projects, including a reduction in human suffering and an increase in the social contribution of at-risk individuals.

Canadian Council on Social Development. "Social Interventions." Children and Youth: Crime Prevention Through Social Development. 17 Oct. 2005 <http://www.ccsd.ca/cpsd/ccsd/interventions.htm>.

There are numerous examples of recreation centres that have substantially altered the crime rate in their neighbourhoods. The link is so well-known that police have often become involved in recreation projects. In Ottawa, for example, police convinced City Hall to continue funding for a local community centre by showing that calls to police in that area had dropped by 60% since the centre opened.

Canadian Council on Social Development (2002). "Social Intervention: Recreation." Children and Youth: Crime Prevention Through Social Development. 17 Oct. 2005 <http://www.ccsd.ca/cpsd/ccsd/i_recreation.htm>.

Integrating recreation into school and job-readiness programs can be a particularly effective way to provide youth with alternatives…

Canadian Council on Social Development (2002). "Social Intervention: Recreation." Children and Youth: Crime Prevention Through Social Development. 17 Oct. 2005 <http://www.ccsd.ca/cpsd/ccsd/i_recreation.htm>.

At-Risk Youth Facts

More than one-quarter of low-income children live in problem neighbourhoods—where there is drug use, excessive drinking, or youth unrest—compared to one-tenth of children in high-income families.

Ross, David, Paul Roberts, and Katherine Scott (2000). "Family Income and Child Well-Being." ISUMA 1.2. 17 Oct. 2005 <http://www.isuma.net/v01n02/index_e.shtml>.

Children in low-income families are twice as likely to be in the top 10% in terms of frequency of delinquent behaviours, compared to children in modest-income families, and they are nearly three times as likely to have high delinquency scores as children in high-income families.

Ross, David, Paul Roberts, and Katherine Scott (2000). "Family Income and Child Well-Being." ISUMA 1.2. 17 Oct. 2005 <http://www.isuma.net/v01n02/index_e.shtml>.

There were 35,547 teen pregnancies (under 20 years of age) in Canada in 2002.

Statistics Canada (Oct. 27, 2004). "Pregnancy." The Daily. 19 July 2005 <http://www.statcan.ca>.

Between 1974 and 2001, the annual rate [of pregnancy] for teenage women under the age of 20 fell from 45.5 pregnancies for every 1,000 women in this age group to 30.6.

Statistics Canada (Oct. 27, 2004). "Pregnancy." The Daily. 19 July 2005 <http://www.statcan.ca>.

About 78,000 youth aged 12 to 17 were charged with a *Criminal Code* offence last year [2003], while a further 101,000 were cleared by means other than laying a formal charge. Combined, this represents a 4% decline in the overall youth crime rate—a 6% drop in youths charged and a 2% drop in youths cleared by other means. The youth crime rate had generally been increasing between 1999 and 2003.

Statistics Canada (21 July 2002). "Crime Statistics 2004." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050721/d050721a.htm>.

Except for an increase in 2003, the crime rate [overall] has generally been falling since 1991 when it peaked.

Statistics Canada (21 July 2002). "Crime Statistics 2004." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050721/d050721a.htm>.

The approximate cost of detaining a young offender is $100,000 per year.

Community Safety and Crime Prevention Council. "Preventing Youth Crime." 17 Oct. 2005 <http://www.preventingcrime.net/community/visiblyvaluing/Preventing_Youth_Crime.pdf>.

Historically, the East has had lower crime rates [overall] than the West. However, crime rates in all of the Atlantic provinces have increased in recent years and rates are now generally higher than in Quebec and Ontario.

Statistics Canada (26 May 2003). "The State: Crime in Canada". Canada E-book. 18 Oct. 2005. 19 Oct. 2005. <http://142.206.72.67/04/04b/04b_001_e.htm>. <http://142.206.72.67/04/04b/04b_002_e.htm>.

The rate of violent crime among youth fell by 2%. Over the past decade, this rate has remained fairly stable, except for a large increase in 2000. Most categories of youth violent crime declined, including a 30% decrease in the youth homicide rate and a 2% drop in robbery.

Statistics Canada (21 July 2002). "Crime Statistics 2004." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050721/d050721a.htm>.

National youth crime statistics showed that, in 2002, the overall youth charge rate (that is, the number of youths charged per 1,000 population) was 39.6, of whom 17.3 were charged for property crimes, 12.9 for other Criminal Code offences, and 9.3 for violent crimes. Between 1992 and 2002, the youth charge rates dropped for overall crime (32.6%) and property crime (52.2%).

Toronto Police (2004). 2004 Environmental Scan: Summary of Highlights. 18 Oct. 2005 <http://www.torontopolice.on.ca/publications/reports/2004envscansummary.pdf?op=modload&name=News&file=article&sid=1034>.

In 2002, for the first time in seven years and despite a strong economy and years of federal surpluses, the average child poverty rate for Canada increased from 14.9% in 1989 to 15.6%.

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

Male youths have a charge rate about three times that of female youths. Changes in the charge rate differed between males and females over the past five years. While male youths had decreased for their charge rates under property crime and overall crime, female youths had increased for the same charge rates.

Toronto Police (2004). 2004 Environmental Scan: Summary of Highlights. 18 Oct. 2005 <http://www.torontopolice.on.ca/publications/reports/2004envscansummary.pdf?op=modload&name=News&file=article&sid=1034>.

The participation of youth females in crimes increased and the gender gap has narrowed, but the proportion of young females of total youths charged remained low.

Toronto Police (2004). 2004 Environmental Scan: Summary of Highlights. 18 Oct. 2005 <http://www.torontopolice.on.ca/publications/reports/2004envscansummary.pdf?op=modload&name=News&file=article&sid=1034>.

The overall rate of youth crime—measured by the number of youth charged by police—decreased steadily from 1992 to 1999. There were slight increases in 2000 and 2001 before the youth crime rate dropped to less than 4,000 per 100,000 youths aged 12 to 17 in 2002.

Statistics Canada. "The State: Youth Crime". 26 May 2003. Canada e-book. 18 Oct. 2005. 19 Oct. 2005. <http://142.206.72.67/04/04b/04b_001_e.htm <http://142.206.72.67/04/04b/04b_002b_e.htm>.

In Canada, approximately one in six Canadian children and one in five Nova Scotia children experienced poverty.

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

Children most vulnerable to poverty live with lone-parent mothers. Nova Scotia children living in a family headed by a female lone parent were less likely to be poor in 2002 (56.1%) than their counterparts were in 1989 (63.3%). Even so, children living in a female lone-parent family remain much more vulnerable than children in two-parent families, as they are 5.7 times more likely to experience poverty.

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

Over 50% of new immigrant children experience poverty—being new immigrants more than doubles the likelihood they will experience poverty.

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

The number of poor children in Nova Scotia rose from 36,000 in 1989 to 40,000 in 1998.

Raven, Pauline, and Joanna LaTulippe-Rochon. Nova Scotia Child Poverty Report Card 2000. May 2005 <http://www3.ns.sympatico.ca/raven.avhcape/documents/Full_Download.doc>.

In 2002, Nova Scotia's child poverty rate of 18.1% was the fifth worst among Canadian provinces.

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

When parents work for minimum/low wage and/or in part-time employment, there is little opportunity to attain an economic status that protects children from poverty.

Raven, Pauline, and Joanna LaTulippe-Rochon. Nova Scotia Child Poverty Report Card 2000. May 2005 <http://www3.ns.sympatico.ca/raven.avhcape/documents/Full_Download.doc>.

We have seen that almost one in five Nova Scotia children live well below the low-income cutoff with income gaps for their families averaging about $7,000/year before taxes ($583/month). These economic conditions severely limit a parent's ability to cover the fundamental costs of providing shelter and food,

Canadian Centre for Policy Alternatives Nova Scotia (November 2004). The Nova Scotia Child Poverty Report Card 2004: 1989–2002.

Poor children are 1.9 times more likely to be living in neighbourhoods with lots of problems such as fighting, drug dealing and vandalism, than are children in middle-income families, and 2.4 times more likely than are children in high-income families.

Canadian Council on Social Development (2000). "The Canadian Fact Book on Poverty 2000". Canadian Council on Social Development. 17 Oct. 2005 <http://www.ccsd.ca/pubs/2000/fbpov00/1-intro.htm>.

Poor children are 1.4 times more likely to engage in aggressive behaviour than are children in middle-income families or higher-income families.

Canadian Council on Social Development (2000). "The Canadian Fact Book on Poverty 2000". Canadian Council on Social Development. 17 Oct. 2005 <http://www.ccsd.ca/pubs/2000/fbpov00/1-intro.htm>.

The low-income rate among families of two people or more edged up slightly in 2002 after five consecutive years of declines.

Statistics Canada (20 May 2004). "Family Income." The Daily. <http://www.statcan.ca/Daily/English/040520/d040520b.htm>.

Poor children are 1.3 times less likely to participate in organized sports than are children from middle-income families and 2.8 times less likely than are children from high-income families. Almost three-quarters (72%) of poor children do not participate compared to only one-quarter of children from high-income families.

Canadian Council on Social Development (2000). "The Canadian Fact Book on Poverty 2000". Canadian Council on Social Development. 17 Oct. 2005 <http://www.ccsd.ca/pubs/2000/fbpov00/1-intro.htm>.

Poor children are less likely to have nutritious food, annual visits to the doctor, and participate in extra-curricular activities.

Raven, Pauline, and Joanna LaTulippe-Rochon. Nova Scotia Child Poverty Report Card 2000. May 2005 <http://www3.ns.sympatico.ca/raven.avhcape/documents/Full_Download.doc>.

On average, the after-tax income for the estimated 500,000 single-parent families headed by women declined from $32,500 in 2001 to $30,800 in 2002 mainly because of a drop in their market income from $27,300 to $25,600.

Statistics Canada (20 May 2004). "Family Income." The Daily. <http://www.statcan.ca/Daily/English/040520/d040520b.htm>.

Although the change is not significant, based on after-tax income, the low-income rate among children under the age of 18 declined for the sixth consecutive year in 2002.

Statistics Canada (20 May 2004). "Family Income." The Daily. <http://www.statcan.ca/Daily/English/040520/d040520b.htm>.

Less than 10% of youths who reported stealing in the last 12 months did so more than three times.

Statistics Canada (6 July 1999). "National longitudinal survey of children and youth: transition into adolescence 1996/97." The Daily.

The proportion of children living in low-income families has been declining since 1996, when it peaked at 16.7%. This decline follows overall improvements in the Canadian economy during the late 1990s.

Statistics Canada (20 May 2004). "Family Income." The Daily. <http://www.statcan.ca/Daily/English/040520/d040520b.htm>.

In Nova Scotia, 38,000 children live in families where incomes are sufficiently low to create severe difficulties.

Canadian Centre for Policy Alternatives (24 November 2003). "Slow progress wins Nova Scotia a failing grade in the fight against child poverty among Canadian provinces". 17 Oct. 2005 <http://www.policyalternatives.ca/index.cfm?act=news&do=Article&call=973&pA=BB736455>.

Many physical activity and recreation leaders have little knowledge of, or are not concerned about, the physical activity and recreation interests of youth-at-risk.

Canadian Parks and Recreation Association (31 December 1994). Canadian Youth: Does Activity Reduce Risk?

More than 190,000 youth between 15 and 24 years of age are not working or in school.

Canadian Parks and Recreation Association (31 December 1994). Canadian Youth: Does Activity Reduce Risk?.

The youth court caseload has been falling gradually since 1991/92, primarily due to the steady drop in the number of cases involving crimes against property.

Statistics Canada (25 June 2005). "Youth Court Statistics." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050624/d050624c.htm>.

Five offences accounted for just over one-half of the total caseload in youth court: theft, failure to comply with a disposition under either the new YCJA or the old *Young Offenders Act*; common assault; breaking and entering; possession of stolen property.

Statistics Canada (25 June 2005). "Youth Court Statistics." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050624/d050624c.htm>.

Over one-half of the cases before youth courts involved older teenagers, those aged 16 and 17. Youth aged under 15 were involved in one-fifth of cases, while younger adolescents aged 12 to 14 accounted for about one-quarter.

Statistics Canada (25 June 2005). "Youth Court Statistics." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/050624/d050624c.htm>.

Homelessness is a significant problem among Aboriginal youth who appear to be over represented in the homeless population. Gay and lesbian youth are also at risk of ending up on the street because their families often reject them. Like Aboriginal youth, they avoid using shelters because they fear discrimination.

Service Canada (16 February 2005). "Canadian youth: Who they are and what they do?. youth.gc.ca. 17 Oct. 2005 <http://www.youth.gc.ca/yoaux.jsp?&lang=en&flash=1&ta=1&auxpageid=846>.

The high-school dropout rate among 20-year-olds declined by one-third in the 1990s, falling from 16% in 1991 to 11% in 2001.

Service Canada (16 February 2005). "Canadian youth: Who they are and what they do?. youth.gc.ca. 17 Oct. 2005 <http://www.youth.gc.ca/yoaux.jsp?&lang=en&flash=1&ta=1&auxpageid=846>.

Nova Scotia, New Brunswick, Saskatchewan, and Ontario had lower dropout rates relative to the entire country, and higher rates were seen in British Columbia, Alberta, Quebec, and Manitoba.

Service Canada (2005). "Canadian Youth: Who they are and what they do?" youth.gc.ca. 17 Oct. 2005. <http://www.youth.gc.ca/yoaux.jsp?&lang=en&flash=1&ta=1&auxpageid=846>.

The majority of youth have, at some time, attempted to balance work and school.

Service Canada (2005). "Canadian Youth: Who they are and what they do?" youth.gc.ca. 17 Oct. 2005. <http://www.youth.gc.ca/yoaux.jsp?&lang=en&flash=1&ta=1&auxpageid=846>.

Canada's high school dropout rate—the proportion of 20-year-olds that has not completed high school and is not working towards its completion—fell sharply throughout the 1990s, according to data from the Youth in Transition Survey.

Statistics Canada (23 January 2002). "Youth in Transition Survey." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/020123/d020123a.htm>.

Compared with graduates, dropouts were less engaged in school, both academically and socially. They were less likely to have had close friends who pursued further education past high school, and were more likely to have engaged in such behaviours as skipping class, drinking alcohol regularly and using drugs frequently.

Statistics Canada (23 January 2002). "Youth in Transition Survey." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/020123/d020123a.htm>.

The 2004 national youth crime rate decreased by 4% to 7,041 youth charged and youth cleared otherwise per 100,000 population.

Saskatchewan Justice (July 2005). "Fact Sheet: Crime Statistics in Canada 2004."

Thirty-two percent of young people aged 18 to 20 who were no longer in high school were working full-time in December 1999, and another 41% were working part-time. Just over 26% did not have a job.

Statistics Canada (23 January 2002). "Youth in Transition Survey." The Daily. 17 Oct. 2005 <http://www.statcan.ca/Daily/English/020123/d020123a.htm>.

The prevalence of any alcohol use decreased from 57% in 1998 to 52% in 2002.

Department of Health and Dalhousie University (2002). Nova Scotia Student Drug Use 2002. 17 Oct. 2005 http://www.gov.ns.ca/health/downloads/2002_NSDrugHighlights.pdf>.

Cannabis ranks as the second substance most commonly used by adolescent students in Nova Scotia.

Department of Health and Dalhousie University (2002). Nova Scotia Student Drug Use 2002. 17 Oct. 2005 http://www.gov.ns.ca/health/downloads/2002_NSDrugHighlights.pdf>.

From 1991 to 1998, there were marked increased in the prevalence o f use of many substances. From 1998 to 2002, there were decreased in the prevalence of use of alcohol, cigarettes, LSD and inhalants, and no change relative to the use of the remaining substances.

Department of Health and Dalhousie University (2002). Nova Scotia Student Drug Use 2002. 17 Oct. 2005 http://www.gov.ns.ca/health/downloads/2002_NSDrugHighlights.pdf>.

Nearly 40% of children in low-income families demonstrate high levels of indirect aggression, compared to 25 to 29% of children in families whose incomes are $30,000 or higher.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

In total, the number of pregnancies among 15-to-19-year-olds declined from 61,242 in 1974 to 38,600 in 2000.

SIECCAN (2004). "Adolescent sexual and reproductive health in Canada: A report card in 2004." The Journal of Human Sexuality 13.2. 17 Oct. 2005 <http://www.sexualityandu.ca/eng/teachers/YSH/pregnancy.cfm>.

For 15-to-19-year-olds, six provinces had teen pregnancy rates below the national average of 38.3: Newfoundland and Labrador (28.5), Prince Edward Island (30.4), Nova Scotia (31.5), New Brunswick (33.4), Ontario (34.1), and British Columbia (35.5).

SIECCAN (2004). "Adolescent sexual and reproductive health in Canada: A report card in 2004." The Journal of Human Sexuality 13.2. 17 Oct. 2005 <http://www.sexualityandu.ca/eng/teachers/YSH/pregnancy.cfm>.

Teens who become pregnant are more likely to drop out of school, making it less likely that they'll find jobs.

Teen Pregnancy Prevention. Teen Pregnancy Hurts the Business Community's "Bottom Line." 28 July 2005 <http://wwwhttp://www.teenpregnancy.org /whycare/sowhat.asp>.

A 1990 study showed that almost one-half of all teenage mothers and over three-quarters of unmarried teen mothers began receiving welfare within five years of the birth of their first child.

National Campaign to Prevent Teen Pregnancy (1997). Whatever Happened to Childhood? The Problem of Teen Pregnancy in the United States. Washington, DC.

Despite the recently declining teen pregnancy rates, 34% of teenage girls get pregnant at least once before they reach age 20, resulting in more than 820,000 teen pregnancies a year.

National Campaign to Prevent Teen Pregnancy (2004). Factsheet: How is the 34% Statistic Calculated? Washington, DC.

Major factors associated with youth crime are: history of conduct disorder, school/ employment problems, antisocial peer associations, substance abuse, poor use of leisure time, dysfunctional personality/ behaviour traits, antisocial attitudes and values, problematic parenting, problems in family of origin (conflict, financial, substance abuse, criminal activity), community/neighbourhood problems…low availability of medical and mental health services, and inadequate educational services.

Canadian Psychological Association (1998). "Position Paper: Responses to Youth Crime." Canadian Psychological Association. 17 Oct. 2005 <http://www.cpa.ca/documents/Youth_Crime.pdf>.

In 2002, there were more than 58,400 police officers and 20,700 civilian personnel delivering police services in Canada, an increase of 3% over the previous year.

Statistics Canada (26 May 2003). "The State: To Serve and Protect." Canada E-book. 19 Oct. 2005. <http://142.206.72.67/04/04b/04b_001_e.htm>.

Many of the problems, which face at-risk youth are due to the fact that they have not developed a responsible, and health enhancing life-style.

Collingwood, T. R. Providing Physical Fitness Programs to At-Risk Youth.

Public spending on police services also saw growth. Police expenditures were $6.8 billion in 2000/01—6% more than in the previous year. About 56% of spending went to municipal policing, while provincial and federal law enforcement received 23% and 21%, respectively.

Statistics Canada (26 May 2003). "The State: To Serve and Protect." Canada E-book. 19 Oct. 2005. <http://142.206.72.67/04/04b/04b_001_e.htm>.

If personal and physical costs are included, such as for the pain and suffering of victims or lost productivity, the cost of crime in Canada is estimated to be $46 billion per year.

Public Safety and Emergency Preparedness Canada (2004). "The Need for Crime Prevention." 19 Oct. 2005 <http://www.prevention.gc.ca/en/aboutus/need.html>.

Greater degrees of truancy, dropping out of school, drug abuse, and childhood depression are found among children who regularly come home to an empty house.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Children in low-income families are over two-and-a-half times more likely to have basic health problems that interfere with daily functioning than children from high-income families.

Justice Spending

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Justice Spending	9,998	10,199	10,636	10,550	11,141
Police	5,856	5,989	6,210	6,394	6,801
Courts [1]	859	907	955	997	1,039
Legal aid plans [2]	536	455	494	487	512
Adult corrections	1,969	2,077	2,200	2,365	2,454
Prosecutions [1]	265	271	278	307	335
Youth corrections [3]	513	199	498		

.. : not available for a specific period of time.

1. In order to allow annual comparisons, court expenditures for 1997-1998 and 1999-2000 are estimated, based on the average between the repor
   estimated in similar manner.
2. These expen
3. Youth corrections costs are estimates. The figures likely underestimate total costs.

Source: Statistics Canada, Catalogue no. 85-002-X, Vol. 22, No. 11.
Last modified: April 1, 2003

Statistics Canada (1 April 2003). "Justice Spending." Statistics Canada. 19 Oct. 2005 <http://www40.statcan.ca/l01/cst01/legal13.htm>.

Canada Health Network (2004). "Are poor people less likely to be healthy than rich?" Public Health Agency Canada. 19 Oct. 2005 <http://www.canadian-health-network.ca/servlet/ContentServer?cid=1005632&pagename=CHN-RCS%2FCHNResource%2FFAQCHNResourceTemplate&c=CHNResource&lang=En&repGroupTopic=Children+KS>.

Science News reports on a study of 4,932 middle-class eight graders attending public schools which indicates that the children at higher risk of substance abuse were the 28.6% who spent the most unsupervised time after school.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

There is a recognition that many of the at-risk youth problems, such as mental health, substance abuse or delinquency, are developmental and lifestyle problems.

Collingwood, T. R. Providing Physical Fitness Programs to At-Risk Youth.

Female athletes in a United States nationwide survey were less than half as likely to get pregnant as female non-athletes (5% and 11% respectively).

Women's Sports Foundation. Research Report: Sport and Teen Pregnancies. 27 June 2005 <http://www.womenssportsfoundation.org/cgi-bin/iowa/index.html>.

Three quarters of children in low-income families rarely participate in organized sports.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Research shows that female athletes had sex less often than non-athletes and 87% of female and 85% of male athletes reported using contraceptives, which was considerably higher than non-athletes.

Women's Sports Foundation. Research Report: Sport and Teen Pregnancies. 27 June 2005 <http://www.womenssportsfoundation.org/cgi-bin/iowa/index.html>.

Children in low-income families are nearly three-times as likely to have higher delinquency rates than children in high-income families.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

High-income families are more likely to consider their children to be in good health.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

One in six teens from low-income families is neither employed nor in school, compared to only one teen in 25 from middle- and high-income families.

Ross, David P., and Paul Roberts (August 2, 2001). "Income and child well-being: A new perspective on the poverty debate." Canadian Council on Social Development. 15 July 2005 <http://www.ccsd.ca/pubs/inckids/outcomes.htm>.

Participation rates increased with education and family income. Participation was twice as high for Canadians with a family income of more than $80,000, compared with those having a family income of less than $20,000.

Statistics Canada (16 May 2005). Sport Participation in Canada by Statistics Canada for Sport Canada 1994. 5 July 2005 <http://www.pch.gc.ca/progs/sc/pubs/status_e.cfm>.

Benefits of Sport: Economy

Sport Pays Off

Globally, the sports sector is valued at $36 billion ($US) and is predicted to expand by 3 to 5% per year. Included in the sports sector are the manufacture of sporting goods; sport-related services; and infrastructure development and sport events, which include supplementary effects from spectators, vendors and the media.

Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals. United Nations.

In Canada, it is estimated that physical activity increases productivity by the equivalent of $513 ($CAN) per worker per year, resulting from reduced absenteeism, turnover, and injury, as well as an increase in productivity. Therefore, sports have significant economic benefits for businesses, communities, and nations.

Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals. United Nations.

Sports add economic development by providing a cheap method of improving employability, especially among young people. Youth learn important skills for the workplace, such as teamwork, leadership, discipline, and the value of effort.

Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals. United Nations.

A physically active population is a healthier population, improving the productivity of the work-force and increasing economic output.

Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals. United Nations.

Sport and physical activity also provide one of the most cost-effective forms of preventive medicine, with the potential to cut health-care costs dramatically.

Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace (2003). Sport for Development and Peace: Towards Achieving the Millennium Development Goals. United Nations.

Sport impacts the economy, creating jobs and providing work for thousands of Canadians in manufacturing, retail, and service industries.

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

The sport sector makes an often overlooked contribution to the Canadian economy, with annual household spending on sport totaling $15.8 billion, or about 1.2% of Canada's GDP.

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

The sport sector also employs over 260,000 Canadians or about 2% of the jobs in Canada.

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

Two point two percent of consumer spending goes to sport (comparable to spending on sport in other developed countries, which typically ranges from 1.5% to 3.0%).

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

Household expenditures on sport average $1,963—more than annual family spending on health care ($1,588) and household furnishings and equipment ($1,751).

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

Two-thirds of Canadian parents indicate that local private facilities and programs are available for physical activity. Forty percent believe that the local private facilities and programs meet their children's physical activity needs well or very well, 23% believe that these needs are met somewhat well, and the remaining 38% report that these facilities do not meet their children's needs very well or at all. The majority of children (62%) reportedly do not use private of facilities and programs very often or at all.

Canadian Fitness and Lifestyle Research Institute (2002). Physical Activity Monitor 2001. 22 June 2005 <http://www.cflri.ca>.

Halifax will be the host of 2009 World Senior Canoe Championships, 2008 IIHF World Hockey Championships, and 2006 Juno Awards. The combined revenue for the 2004 events is estimated to be $35 million.

Crown Corporation (2005). Business Plans for the Fiscal Year 2005-2006. 18 July 2005 < http://www.tradecentrelimited.com/documents/1/Business_Plan_2005.pdf>.

Local parks and outdoor spaces in which children can do physical activity are available to most Canadians (92%). Sixty-one percent of parents indicate that these types of facilities meet their children's needs either well or very well, a further 23% report that they meet their needs somewhat, and 16% believe that they do not meet their needs very well or at all. Forty percent of children reportedly use parks and outdoor spaces often or very often, 30% use them somewhat often, and 30% do not use them very often or at all.

Canadian Fitness and Lifestyle Research Institute (2002). Physical Activity Monitor 2001. 22 June 2005 <http://www.cflri.ca>.

Recreation and park services act as a catalyst for tourism.

Alberta Community Development (2005). Economic Benefits of Recreation. 12 June 2005 < http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts610/index.asp>.

Parks and recreation amenities are determining factors when non-residents and business consider relocating.

Alberta Community Development (2005). Parks and Green Spaces are Healthy Spaces. 12 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts611/index.asp>.

Volunteering in Canada contributes more to the economy than mines, forestry and communications—around $12 billion a year.

Alberta Community Development (2005). Benefits of Sport. 12 June 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts611/index.asp>.

The value of public lands adjacent to the Icefield Parkway in Alberta increased 32% due to the parkway.

Go For Green (2000). Economic Benefits of Trails: Part 1. 18 May 2005 <http://www.goforgreen.ca/resources/pdf/trailmonitor1.pdf>.

The Provincial Trails System in New Brunswick is expected to increase property taxes by $100,000 annually, by increasing the value of adjacent land.

Go For Green (2000). Economic Benefits of Trails: Part 1. 18 May 2005 <http://www.goforgreen.ca/resources/pdf/trailmonitor1.pdf>.

The Welland Canal Parkway expects to bring in $218 million annually.

Go For Green (2000). Economic Benefits of Trails: Part 1. 18 May 2005 <http://www.goforgreen.ca/resources/pdf/trailmonitor1.pdf>.

Local Quebecois spent between $17 and $20 million while visiting "la Route Verte," a cycling path.

Go For Green (2000). Economic Benefits of Trails: Part 1. 18 May 2005 <http://www.goforgreen.ca/resources/pdf/trailmonitor1.pdf>.

Parks and open spaces increase property value of adjacent lands.

Mitsui, D. R (7 June 1999). FCM Annual Conference: The Benefits of Recreation and Parks Services our Community.

Small investments in recreation, parks, sports and arts/culture often yield large economic returns.

Mitsui, D. R (7 June 1999). FCM Annual Conference: The Benefits of Recreation and Parks Services our Community.

Over $27 billion worth of economic activity [in North America] occurs because of snowmobiling, with the majority of the money generated by tourism-related activities.

Alberta Snowmobilers Association (6 October 2005). "Snowmobiling is a $27 billion dollar business."

Snowmobiling is estimated to have a $6 billion impact annually in Canada, and a $20 billion in the United States.

Gardner Pinfold Consulting Economists Ltd. (May 2005). An Economic Impact Assessment of Snowmobiling and Snowmobile Tourism in Nova Scotia. Snowmobilers Association of Nova Scotia.

Current estimates for the province of Nova Scotia show that in-province spending on snowmobiling exceeds $21.5 million annually, with non-resident tourism expenditures adding another $800,000 annually.

Gardner Pinfold Consulting Economists Ltd. (May 2005). An Economic Impact Assessment of Snowmobiling and Snowmobile Tourism in Nova Scotia. Snowmobilers Association of Nova Scotia.

Current total economic impact for snowmobiling and snowmobile tourism is an approximated 106 full-time-equivalent jobs, with a total impact exceeding $36 million, annually.

Gardner Pinfold Consulting Economists Ltd. (May 2005). An Economic Impact Assessment of Snowmobiling and Snowmobile Tourism in Nova Scotia. Snowmobilers Association of Nova Scotia.

Snowmobilers spend upwards of $5,000 per year on their activity, including expenditures on tourism.

Gardner Pinfold Consulting Economists Ltd. (May 2005). An Economic Impact Assessment of Snowmobiling and Snowmobile Tourism in Nova Scotia. Snowmobilers Association of Nova Scotia.

To date, the trail permit program administered by SANS [Snowmobilers Association of Nova Scotia] has raised over $1.5 million.

Gardner Pinfold Consulting Economists Ltd. (May 2005). An Economic Impact Assessment of Snowmobiling and Snowmobile Tourism in Nova Scotia. Snowmobilers Association of Nova Scotia.

A recent study funded by several Canadian federal and provincial boating agencies has estimated the national impact of boating [power and sailboat cruising] at $11.5 billion. The breakdown includes $4.6 billion directly spent by boaters, $3.9 billion indirectly spent on goods and services to supply boaters, and induced earnings generated by the spending of boating industry employees of $3.0 billion.

The Economic Planning Group (2003). Economic Impact Analysis of Outdoor Recreation on British Columbia's Central Coast, North Coast and Queen Charlotte Islands/Haida Gwaii. Outdoor Recreation Council of British Columbia.

The overall impact [of boating] on Canada's gross domestic product (GDP) was estimated at $7.1 billion, providing 84,000 full-time equivalent jobs and $2.6 billion in wages and salaries.

The Economic Planning Group (2003). Economic Impact Analysis of Outdoor Recreation on British Columbia's Central Coast, North Coast and Queen Charlotte Islands/Haida Gwaii. Outdoor Recreation Council of British Columbia.

Congestion costs in Ontario are projected to reach $6.4 billion annually by the year 2001.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa: Ont.

Sailing generated $138 million in direct and indirect revenues in British Columbia. Sailing provided employment for nearly 1,600 persons in the province and contributed $72 million to GDP.

The Economic Planning Group (2003). Economic Impact Analysis of Outdoor Recreation on British Columbia's Central Coast, North Coast and Queen Charlotte Islands/Haida Gwaii. Outdoor Recreation Council of British Columbia.

It is estimated [that self-guided outdoor recreation activities] contribute approximately $55 million to the provincial economy.

The Economic Planning Group (2003). Economic Impact Analysis of Outdoor Recreation on British Columbia's Central Coast, North Coast and Queen Charlotte Islands/Haida Gwaii. Outdoor Recreation Council of British Columbia.

The Canadian Curling Association estimates that there are approximately 1,200 curling facilities in Canada in 1998, each worth about $1 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

A roadway can carry 7 to 12 times as many people per metre of lane per-hour by bicycle compared to an automobile. Paths for pedestrians can handle 20 times the volume per hour than that for cars in mixed traffic.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa: Ont.

The updated report from Coopers & Lybrand Consulting shows that in 1994, provincial parks made a $420 million contribution to the provincial economy, which is a $17 million increase from 1993. In addition, parks generated approximately 5,400 jobs directly and another 4,100 indirectly. By the year 2002, the expanded parks system could account for almost 14,000 jobs and contribute more than $600 million to the economy.

Economic Benefits of Parks. 9 November 2005 <http://www.bcen.bc.ca/bcerart/Vol7/economic.htm>.

When companies choose to set up business or relocate, the availability of recreation, parks, and open space is high on the priority list for site selection.

Sefton, J. M., and W. K. Mummery (1995). "Benefits of recreation research update Love and Crompton". State College. PA: Venture Publishing, Inc.

Recreation and parks have a significant influence on people's preferred living locations.

Love and Crompton (1993), as cited in Sefton, J. M., and W. K. Mummery (1995). "Benefits of recreation research update Love and Crompton". State College. PA: Venture Publishing, Inc.

During the 1990s more than $6 billion in public funds was spent on construction of sports stadiums and arenas. Almost $4 billion has already been allocated toward new facilities scheduled to open by the end of 2004.

Federal Reserve Bank of Kansas City (2005). Economic Review: What are the Benefits of Hosting a Major League Sports Franchise? 20 July 2005 <http://www.findarticles.com/p/articles/mi_qa3699/is_200101/ai_n8942029>.

800,000 people use hiking trails [in Ontario].

Ministry of Health Promotion (2005). Ontario Trails Strategy. Ontario Government.

Volunteer Contribution

Approximately 253,000 Nova Scotians volunteered in 2000. Volunteers gave 186 hours each throughout the year. In total Nova Scotians volunteered 47.2 million hours in 2000.

Giving and Volunteering (2005). Volunteering in Canada. 19 July 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/2000_CA_volunteering_in_canada.pdf>.

Volunteers spent 15.5 million hours on sports activities, worth $155 million.

Benefits of Sport. Recreation A Changing Society's Economic Giant. July 2000 <http://www.sasksport.sk.ca/bene.html>.

In Canada in the year 2000, 6.5 million people volunteered through a charitable or non-profit organization.

Giving and Volunteering (2005). Volunteering in Canada. 19 July 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/2000_CA_volunteering_in_canada.pdf>.

Volunteers spent an average of 162 hours each during the year. In total, Canadians gave 1.05 billion hours throughout the year. This is equivalent to 549,000 jobs—roughly equal to the employed labour force of Manitoba.

Giving and Volunteering (2005). Volunteering in Canada. 19 July 2005 <http://www.givingandvolunteering.ca/pdf/factsheets/2000_CA_volunteering_in_canada.pdf>.

Sport/recreation organizations make up the largest component of the voluntary sector (21%, or 34,000 organizations), with the largest number of volunteer positions (28%, or 5.3 million volunteer positions) performing the greatest amount of volunteer hours (23%, or 460 million).

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

The sport/recreation sector has only 131,000 paid employees, or 6.4% of all paid staff, to support such a large component of the social economy. This amounts to one paid staff for every 40 volunteer positions. Almost three-quarters (73.5%) of sport/recreation organizations have no paid staff.

Sport Matters Group (2005). Investing in Canada: Leveraging the Economic and Social Capital of Sport and Physical Activity. 2005 Pre-Budget Consultation Brief to the Standing Committee on Finance.

Sport Pays

Attendees at sporting events in Canada total 11,324,000, or 45.4% of the adult population.

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

The biggest spenders participate in sport in more than one way:

- **volunteers spent the most, an average of $3,367, since they were most frequently multi-participants (as active participants; attendees; or both, as well as volunteers).**
- **$1,357 spent, on average, by active participants (who were not also volunteers or attendees).**
- **$1,162 spent, on average, by attendees (who were not also volunteers or active participants).**

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

The vast majority of active participants, volunteers and attendees all rate sport as an important source of skills gains that they can apply *away* from sport. The most important skill gains are transferable skills which can be put to good use in every kind of workplace and at every level of responsibility in an organization.

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

Almost 90% of active participants believe that sport has some positive impact on their personal skills. More than 50% of active participants believe that sport is very important to their personal skills development; almost 90% believe that it has some positive impact.

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

Skills are vital to the nation's economic performance. If investment in skills development is not maintained, the skills that underpin the economy will decline, leading to skills gap and shortages that cause lost productivity and performance.

Bloom, Michael, Michael Grant, and Doug Watt (2005). Strengthening Canada: The Socio-Economic benefits of Sport Participation in Canada. The Conference Board of Canada. Canada.

An estimate of the economic impact of sport in Canada per sector of activity is outlined in Table 2. Overall, the impact of the sport and recreation sector on Gross Domestic Product (GDP) is $8.9 billion, or 1.1% of the Canadian GDP, and related employment is 262,325, or 2.0% of the total jobs in Canada.

Table 2
Impact of Sport in Canada, 1994–95

	GDP ($ millions)	
Coaches, referees and athletes	1,552	58,919
Sporting goods industry		
Manufacturing, wholesale and retail	2,975	59,122
Sport and recreation service industry		
Professional sport clubs	476	19,071
Sport and recreation clubs	1,306	67,033
Live sport spectacles	132	4,644
Use of recreation facilities	820	28,897
Other sport related services	416	20,416
Total	**3,150**	**140,061**
National sport organizations	53	331
Government		
Federal	263	1,634
Provincial	161	950
Municipal	704	1,307
Total	**1,128**	**3,891**
Total Sport	**8,858**	**262,325**
Total economy	**781,786**	**13,399,000**
Sport share (%)	**1.1**	**2.0**

Statistics Canada, November 1998.
"Sport in Canada: Everybody's Business" (1998). Economics of Sports. 20 July 2005 <http://www.parl.gc.ca/InfoComDoc/36/1/CHER/Studies/Reports/sinsrp05-e.htm>.

In Saskatchewan, sports and recreation have an impact of over $700 million annually.

Canadian Fitness Lifestyles Research Institute. Benefits of Sport. July 2000 < http://www.sasksport.sk.ca/bene.html>.

Spend $1; get $22 in value returned.

Edmonton Sport Council Report (2000). The Economic Significance of Amateur Sport and Active Recreation in Edmonton in 2000.

Total economic activity in Ontario by snowmobilers in the 1996/1997 season was over $900 million.

Go For Green. Economic Benefits of Trails Part 1. May 2005 <http://www.goforgreen.ca/ resources/pdf/trailmonitor1.pdf>.

A study conducted in 1988 estimated that Canadian corporations expend $1.2 billion in donations, sports-related advertising, and sponsorship of amateur sport events.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Sport contributes roughly $4 billion in tourism expenditures.

SOAR International and The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

The total impact (direct and indirect) of the National Hockey League, in terms of GDP, is estimated to be $437.6 million per year.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

For people in the broadcast industry, sport overpowers all other programming in providing an incentive for viewers to subscribe to cable and satellite television.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Trained coaches have an impact on the economy directly through delivery of sport programs, and indirectly by helping Canadians acquire the necessary skills for a lifetime of healthy, physical activity.

Craig, C (1998). "Coaching in Canada". Coaches Report 5(2): 18–24.

Statistics Canada has estimated that in 1995, professional sport clubs and the retailing of live sport spectacles had a total GDP (direct and indirect) value of $608 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Sport has an $8.9 billion contribution to GDP (direct and indirect), an economic weight greater than aircraft, wood, logging, and forestry industries.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

According to the Canadian Hockey League, the direct and indirect economic impact of its activities is estimated at $135 million annually.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

With its 47 franchises, the Canadian Hockey League had an attendance of 4.5 million spectators during the 1997/1998 season.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1997, the Canadian Football League turned a profit of over $4 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In the goods and services industries associated with physical activity, each dollar of the Gross Domestic Product (GDP) created directly generates $1.60 in GDP.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

The GDP in Canada for goods and services related to physical activity was estimated at $5.6 billion in 1986.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Sport and Tourism

Sport contributes roughly $4 billion in tourism expenditures.

Titus, J. (Summer 2000) "Dragons and Dollars." Amateur Sport Update.

Most studies indicate that sport tourists are going to be between the ages of 18 and 44, male, and relatively affluent.

Gibson, Heather J. (1999). "Sport tourism: The rules of the game." Parks and Recreation 34: 36–45.

A notable group of men and women late in adulthood also choose sport tourism activities.

Gibson, Heather J. (1999). "Sport tourism: The rules of the game." Parks and Recreation 34: 36–45.

Often the reason for sports tourist activities cites is for health and fitness and for love of the sport.

Gibson, Heather J. (1999). "Sport tourism: The rules of the game." Parks and Recreation 34: 36–45.

Sport activity is involved in 26% of all person trips taken by Canadians, 34% of American person-trips to Canada and 38% of international person-trips to Canada.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In the Eastern Townships alone, tourism revenues amounted to $6,390,281, of which $4,280,055 was generated by the events themselves.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1996, 88,000 rounds of golf were played by tourists, adding $10 million to the local economy. However, golf activity has declined by 2% for the 2004 season.

Nova Scotia Department of Tourism (2005). Tourism Insight. 20 July 2005 <http://www.gov.ns.ca/dtc/pubs/insights/AbsPage.aspx?ID=1191&siteid=1&lang=1>.

The 2004 IIHF World Women's Hockey Championship held at the Halifax Metro Centre brought in over $5 million to the Nova Scotia economy and the Halifax Regional Municipality.

Events Halifax. 2004 IIHF World Women's Hockey Championship. 28 June 2005 <http://www.eventshalifax.com/index.cfm?main=events&mid=1&action=view&EventID=520>.

The financial success of the 2004 IIHF World Women's Hockey Championship event ensured that Hockey Nova Scotia Legacy fund was able to advance the development of amateur hockey in Nova Scotia.

Events Halifax. 2004 IIHF World Women's Hockey Championship. 28 June 2005 <http://www.eventshalifax.com/index.cfm?main=events&mid=1&action=view&EventID=520>.

Tourism revenues in Nova Scotia reached $1.31 billion in 2004, climbing 3% over 2003. This revenue supported 33,900 jobs and generated provincial and municipal taxes of $122 million.

Sport in Canada: Everybody's Business (1998). Economics of Sports. 20 July 2005 <http://www.parl.gc.ca/InfoComDoc/36/1/CHER/Studies/Reports/sinsrp05-e.htm>.

Spending by tourists in Nova Scotia benefits almost all sectors of the Nova Scotia economy.

Sport in Canada: Everybody's Business (1998). Economics of Sports. 20 July 2005 <http://www.parl.gc.ca/InfoComDoc/36/1/CHER/Studies/Reports/sinsrp05-e.htm>.

There was a 3.3 percentage drop in total arts and entertainment spending in November [2004] due to the NHL lockout.

Canadian Broadcasting Corporation News and Statistics Canada (2005). The NHL lockout—By the Numbers. 19 July 2005 <http://www.cbc.ca/news/background/nhl/>.

At least $20 million is estimated to be the monthly cost to Canada's GDP of the NHL lockout.

Canadian Broadcasting Corporation News and Statistics Canada (2005). The NHL lockout—By the Numbers. 19 July 2005 <http://www.cbc.ca/news/background/nhl/>.

The spectator sports industry, which includes professional and semi-professional sports clubs, teams. and horse racing, reported operating revenues of $2.1 billion up slightly from $1.9 billion the previous year.

Statistics Canada (2004). "Arts, entertainment and recreation services." The Daily. 21 July 2005 <http://www.statcan.ca/Daily/English/040430/ d040430c.htm>.

Salaries and wages account for a 43% total operating expenses for the spectator sports sector.

Statistics Canada (2004). "Arts, entertainment and recreation services." The Daily. 21 July 2005 <http://www.statcan.ca/Daily/English/040430/ d040430c.htm>.

At least $20 million is estimated to be the monthly cost to Canada's GDP of the NHL lockout.

Canadian Broadcasting Corporation News and Statistics Canada (2005). The NHL lockout—By the Numbers. 19 July 2005 <http://www.cbc.ca/news/background/nhl/>.

Weather helped the establishments in the golf industry realize operating revenues of $1.9 billion, up from 2001's figures of $1.8 billion.

Statistics Canada (2004). "Arts, entertainment and recreation services." The Daily. 21 July 2005 <http://www.statcan.ca/Daily/English/040430/ d040430c.htm>.

The National Hockey League (NHL) has cost restaurants, hotels, hot dog vendors, sport bars, and even street performers a decline in revenue with its recent lockout.

Canadian Broadcasting Corporation News and Statistics Canada (2005). The NHL lockout—By the Numbers. 19 July 2005 <http://www.cbc.ca/news/background/nhl/>.

Healthy people save money

Chronic illnesses like cancer and cardiovascular disease cost Nova Scotia taxpayers more than $3 billion annually.

Legge, Lois (18 October 2002). "Chronic diseases cost NS $3b yearly." The Chronicle Herald.

Medical care costs for people with chronic diseases account for 42% of total direct medical care expenditures, or $39 billion a year in Canada.

Mirolla, Michael (2004). The Cost of Chronic Disease in Canada. The Chronic Disease Prevention Alliance of Canada.

Combining direct medical costs ($38.9 billion) and indirect productivity losses ($54.4 billion), total economic burden of seven types of chronic illnesses (cardiovascular disease, cancer, chronic respiratory ailments, diabetes, musculoskeletal disorders, diseases of the nervous system and sense organs, and mental illness), exceeds $93 billion a year.

Mirolla, Michael (2004). The Cost of Chronic Disease in Canada. The Chronic Disease Prevention Alliance of Canada.

Adding direct and indirect health care costs, the total economic burden of physical inactivity in Nova Scotia is estimated at $354 million annually.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 20 July 2005 <http://www.gpiatlantic.org/releases/pr_inactivity.shtml>.

If just 10% fewer Nova Scotians were physically inactive, the province could save an estimated $4.6 million every year in avoided hospital, drug, and physician cost, and $7.5 million in total healthcare spending. Added to an estimated $17 million in productivity gains, total annual economic savings to Nova Scotia would amount to $24.7 million.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 20 July 2005 <http://www.gpiatlantic.org/releases/pr_inactivity.shtml>.

Physically active people have better overall lifetime health than sedentary people, resulting in absolute cost savings versus deferred costs.

GPI Atlantic (2002). The Cost of Physical Inactivity in Nova Scotia. 20 July 2005 <http://www.gpiatlantic.org/releases/pr_inactivity.shtml>.

In total, about $2.1 billion was estimated to have been spent on health care that was directly attributed to physical inactivity.

Katzmarzyk, Peter T., Norman Gledhill, and Roy J. Shephard (2000). "The economic burden of physical inactivity in Canada." Canadian Medical Association Journal 163.11: 1435–40.

If 10% of Canadians became more physically active, the health-care system would save roughly $150 million dollars a year in the short term.

Couch Potatoes' burden weighs in at $3.1 billion. The Globe and Mail. 27 Nov. 2000.

Mental disorders account for over $5 billion in direct costs to the health-care system each year. Physical activity may help improve mental health and even prevent some mental health disorders by improving self-confidence, self-esteem, and other psychological variables.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Physical activity is clearly associated with fewer symptoms of anxiety and depression, is a proven antidote to stress, and has a positive effect on mood.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

For ischemic heart problems, each percentage point increase in the number of people that are physically active (i.e. from 24.1% to 25.1%) would reduce annual treatment costs by $10.3 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Cancer in Canada has an economic burden (of direct and indirect costs) of $13.1 million. Physical activity can reduce the risk of colon cancer by as much as 50%.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Musculoskeletal conditions including arthritis account for $15.3 billion in indirect costs to the Canadian economy annually to which is added $2.5 billion in health-care costs. Regular physical activity improves functioning and relieves symptoms among people with osteoarthritis and rheumatoid arthritis and, in many cases, the need for medication.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

The treatment cost for colon cancer is $255 million annually; each percentage point increase in the number of people who are physically active reduces the cost of treatment by $407,000.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

From 1981 to 1995, a 16% increase in the number of physically active Canadians resulted in a savings of $9 billion in reduced costs associated with health care, health insurance, sick leave, disability benefits and group life insurance.

Sports Quebec (1998). Brief Presented to the Sub-Committee on the Study of Sport in Canada of the House of Commons Standing Committee on Canadian Heritage.

Increasing physical activity levels in Canada amounts to a saving of $44 billion.

Canadian Fitness and Lifestyle Research Institute. Physical Activity and Lifestyles in Canada 1993–1995. July 2000 <http://www.cflri.ca>.

Diabetes resulted in over $1 billion in direct and indirect costs in Canada in 1993. Physical activity can reduce the risk of developing non-insulin-dependent diabetes by as much as 50%.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

If just 10% fewer residents of the Halifax Regional Municipality over the age of 12 were physically inactive, the rate of physical inactivity would be 43.2%. With this lower rate of physical inactivity, the province could save an estimated $1 million every year in avoided hospital, drug, and physician costs, and $1.65 million in total health-care spending.

O'Connor, Claire. Physical Activity Linked to Health—and the Economy.
19 July 2005 <ww2.heartandstrokefoundation.ca>.

Estimates from the current study suggest a savings of $150 million annually if the prevalence of physical inactivity were reduced by 10%—the national target for 2003.

Canadian Fitness and Lifestyle Research Institute (2000). The Research Files: Economic Costs of Physical Inactivity. 17 June 2005 <www.cflri.ca>.

The 1997 Physical Activity Benchmarks report that if all Canadians were active, savings to the health-care system for heart disease alone would be $776 million a year.

Canadian Fitness and Lifestyle Research Institute. Inactivity Major Health Risk for Most Canadians. May 2005 <http:// www.cflri.ca>.

Lifetime estimates of costs avoided could amount to $24.3 billion for inactive Canadians who become active, compared with $7.7 billion for Canadian smokers who stopped smoking.

Alberta Community Development. Economic Case for Physical Activity. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation /resources_links/recfacts/general_index/recfacts611/ index.asp>.

A total of $4.4 billion in health care costs have been avoided in Canada as a result of 8% of Canadians age 15 and older becoming physically active.

Alberta Community Development. Economic Case for Physical Activity. May 2005 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts611/ index.asp>.

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Canadian Fitness and Lifestyle Research Institute (2000). The Research Files: Economic Costs of Physical Inactivity. 17 June 2005 <www.cflri.ca>.

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Canadian Fitness and Lifestyle Research Institute (2000). Physical Activity and Lifestyles in Canada 1993–1995. 15 June 2005 <http://www.cflri.ca>.

The 1997 Physical Activity Benchmarks report that if all Canadians were active, savings to the health-care system for heart disease alone would be $776 million a year.

Canadian Fitness and Lifestyle Research Institute (1999). Inactivity Major Health Risk for Most Canadians. 17 July 2005 <http://www.cflri.ca>.

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Alberta Community Development (2005). Economic Case for Physical Activity 12 May 2005 <http://www.cd.gov.ab.ca/building_communities sport_recreation/resources_links/recfacts/general_index/recfacts611 index.asp>.

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Alberta Community Development (2005). Economic Case for Physical Activity. 12 May 2005 <http://www.cd.gov.ab.ca/building_communities sport_recreation/resources_links/recfacts/general_index/recfacts611 index.asp>.

Employment and Productivity

Sport increases productivity and creates jobs

These seven chronic diseases [cardiovascular disease, cancer, chronic respiratory ailments, diabetes, musculoskeletal disorders, diseases of the nervous system and sense organs, and mental illness] account for 66% of productivity losses due to premature death, 65% of productivity losses due to disability, and more than half of the total economic burden of illnesses in Canada.

Mirolla, Michael (2004). The Cost of Chronic Disease in Canada. The Chronic Disease Prevention Alliance of Canada.

Roughly three-quarters of Canadian companies consider increased productivity and reduced absenteeism to be key benefits of a physical activity program. Other reported benefits of a physical activity program include reduced health care costs and insurance premiums (67%), followed by a reduced number of accidents (46%), reduced workers' compensation claims (45%), and lower turnover rates, or its role as an incentive to recruitment (40%).

Canadian Fitness and Leisure Recreation Institute. 2003 Physical Activity Monitor. 12 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

The majority of companies cite human resource related benefits as outcomes of a physical activity program at work: 86% of companies report improved employee health and wellness, 78% cite improved morale, 71% report better employee relations, 69% feel it demonstrates that they care about their employees, 62% state greater job satisfaction among employees; and 55% report improved corporate culture.

Canadian Fitness and Leisure Recreation Institute. 2003 Physical Activity Monitor. 12 July 2005 <http://www.cflri.ca/cflri/cflri.html>.

Corporate sponsored physical activity programs will decrease employee turnover, absenteeism industrial injuries, corporate medical costs, and increased productivity.

Saskatchewan Sport. Corporate Fitness Programs and Health Enhancement. July 2000 <http://www.sasksport.sk.ca/bene.html>.

From 1994–1995, coaches, referees, and athletes had a total impact on the economy of $1.6 billion, which represents one-fifth of the total economic impact of the sport and recreation sector.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1995, the wages and salaries paid in sport manufacturing industries came to $224 million, an increase of 6.6% since 1991.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Since 1990, the number of employees, wages and salaries, the value of shipments and the value added in the sport sector have all increased.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

One study of workplace fitness programs estimated that a company's potential savings could be about 1% of payroll. Exercise programs can produce economic benefits that outweigh immediate program cost.

Craig, C. (1998). "Coaching in Canada". Coaches Report 5.2: 18–24.

Between 1981 and 1995, the number of physically active Canadians increased by 16 percentage points. This improvement translates into a net benefit of $9 billion due to lower costs related to health care, health insurance, sick leave, disability coverage, group life insurance, and lost tax revenue.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Employees involved in a fitness program are more productive, absent less often, and less likely to have an accident. Employee turnover is decreased in firms providing fitness and health programs.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

A 1988 pilot project by the Saskatchewan Public Service Commission found that there was a return on investment of $1.82 for every $1 spent on employee wellness. This figure represented improved absenteeism only.

Parks and Recreation Federation of Ontario (1992). The Benefits of Parks and Recreation.

Active living can positively influence Canada's economic situation by increasing productivity throughout the lifespan and by decreasing ill health and dependency during the retirement years, thereby reducing social costs.

Canadian Fitness and Lifestyle Research Institute (1999). Golden Age Activity Gold for Society. 20 June 2005 http://www.cflri.ca/cflri/tips/96/LT96_04.html>.

Physical Activity can help concentration and decision making ability.

Alberta Community Development. Recreation Works for Employees. June 1999 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index recfacts606/ index.asp>.

Canada's workforce is aging. Benefit costs and absenteeism will likely escalate if older workers do not increase their physical activity levels. The Statistics Canada Labour Force Survey reported in 1997 that older workers (55–64) averaged 11 sick days whereas their younger counterparts averaged only five days.

Public Health Agency of Canada (8 January 2004). "Why Active Living At Work." Public Health Agency of Canada. 10 November 2005 <http://www.phac-aspc.gc.ca/pau-uap/fitness/work/why_e.html>.

Research suggests that there may be increased costs for organizations that have physically inactive employees. These costs include:

- **increased employee benefit costs;**
- **reduced productivity;**
- **decreased employee satisfaction;**
- **increased absenteeism;**
- **increased short- and long-term disability payments;**
- **increased levels of worker's compensation.**

Public Health Agency of Canada (8 January 2004). "Why Active Living At Work." Public Health Agency of Canada. 10 November 2005 <http://www.phac-aspc.gc.ca/pau-uap/fitness/work/why_e.html>.

Workers report that physical activity is a means by which they can reduce stress. Stress is playing an increasingly important role in workplace illness and sick days.

Public Health Agency of Canada (8 January 2004). "Why Active Living At Work." Public Health Agency of Canada. 10 November 2005 <http://www.phac-aspc.gc.ca/pau-uap/fitness/work/why_e.html>.

67% of companies do not have policies allowing extended lunch hours for employees to participate in physical activity or policies encouraging employee participating or organization of special physical activity events during work (57%). However, roughly one-third of employers allow these informally.

Cameron, Christine (2003). Increasing Physical Activity: Building Active Workplaces. Canadian Fitness and Lifestyle Research Institute.

Less than 10% [of companies] actually have formal policies regarding extended lunch hours for employees (3%) or policies encouraging employee involvement in special physical activity events during work (8%).

Cameron, Christine (2003). Increasing Physical Activity: Building Active Workplaces. Canadian Fitness and Lifestyle Research Institute.

People with low fitness levels may take twice as many days off work as their very fit counterparts.

Canadian Fitness and Leisure Recreation Institute. Benefits of Physical Activity. June 1999 <http://www.cflri.ca/cflri/tips/96/ LT96_11.html>.

In 1997, there was an estimated 10,500 employees in the sport manufacturing industries.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

The hosting of the 1988 Calgary Winter Olympics created 28,000 person years of employment.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In total, it is conservatively estimated that the 2010 Winter Olympic Games would generate a total of 77,000 person-years of extra employment with an incremental $2.6 billion in wages, salaries, and benefits. These effects will ramp up between 2004 and 2009, peak in 2010, and will be at a much lower but significant level in subsequent years.

Parks, Dave (17 January 2003). "Moneywise, the Olympics Make Good Sense." Vancouver Sun. Vancouver Board of Trade. 10 November 2005 <http://www.boardoftrade.com/vbot_page.asp?pageid=808>.

In Canada in 1995, there were about 58,919 people who reported their primary occupational activity as coach, referee or athlete.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

The 2010 Olympics will increase Vancouver's success rate in bidding for future conventions, and will increase the attendance at conventions over a number of years. With those effects included, the projected incremental impact of the 2010 Winter Olympic Games held in Vancouver rises to a total of 100,000 person-years of employment, and $3.4 billion in wages, salaries and benefits.

Parks, Dave (17 January 2003). "Moneywise, the Olympics Make Good Sense." Vancouver Sun. Vancouver Board of Trade. 10 November 2005 <http://www.boardoftrade.com/vbot_page.asp?pageid=808>.

The National Hockey League estimates that the six professional hockey clubs generate 8,689 full-time and part-time jobs in Canada, as well as 3,039 indirect jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

National sport organizations generate approximately 10,000 jobs representing 2,000 full-time equivalent jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

The Recreation Facility Association of British Columbia estimates that there are more than 5,000 people working in recreation facilities.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

From 1994–1995, the sport and recreation sector created 262, 325 jobs, or 2.0% of the total jobs in Canada.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Statistics Canada has estimated that in 1995, the professional sport clubs and the retailing of live sport accounted for 23,715 jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1995, there were 8,693 manufacturing workers employed in sporting goods production.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1994, the wholesaling of sporting goods accounted for a total of 2,164 direct jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1994, the retailing of sportswear and sporting and athletic equipment accounted for 36,477 direct jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Since 1991, employment in the sporting goods production sector has increased at an average annual rate of 5.2%.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

A 1991 study shows that the Toronto Blue Jays and the SkyDome provide 2,700 direct and 500 indirect jobs.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Each job created in the goods and services industries associated with physical activity, each job generates 1.4 jobs.

Parks and Recreation Federation of Canada (1992). The Benefits of Parks and Recreation.

The 2010 Halifax Commonwealth Games Bid Committee estimates 7,000 jobs measured as person-years of employment.

Trade Centre Limited. Business Plan 2004. 27 June 2005 <http://www.tradecentrelimited.com/documents/1/Business_Plan_2004.pdf>.

In 1998, Statistics Canada estimated that the economic impact of sports and physical activity was $8.9 billion, or 1.1% of the Canadian gross domestic product. The sports and physical activity sector generates 262,325 jobs in Canada.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1998, 3 million (12%) of Canadians participated in competitions or tournaments. One point seven million (7%) were amateur sport coaches, 0.9 (4%) were amateur sport officials, and 1.7 million (7%) were amateur sport administrators or volunteers.

Sport Canada–Sport Facts. How Many Canadians Participate in Sport? 19 July 2005 <http://www.pch.gc.ca/progs/sc/info-fact/part_e.cfm>.

Consumer Spending

Spend $1; get $22 in value returned.

The Economic Significance of Amateur Sport and Active Recreation in Edmonton in 2000. Edmonton Sport Council Report.

A national survey, with 5,937 respondents aged 15 and over, told the federal government that Canadians want money spent on entry-level sport programs and participation projects rather than high-performance sport:

- **96% believe that participation in sport maintains good health;**
- **91% say physical education should be mandatory to Grade 12;**
- **82% say money must be spent on developing participation in amateur sport;**
- **81% say the performance of elite athletes gives them pride in being Canadian;**
- **76% believe participation in sport reduces crime;**

• 75% believe participation in sport reduces health costs;
• 74% think the government should increase funding to build and renovate sport facilities;
• 63% think participation in sport reduces the number of school dropouts;
• 51% say the performance of elite athletes inspires them to regular participation in sport.

Ministry of Canadian Heritage and The Globe and Mail (April 28 2001). Survey.

In the developing world, and among many in development agencies, there is a reluctance to acknowledge the contribution physical education and sports can make to economic and social development.

Kidd, B. (1999) The Economic Case for Physical Education.

In 1994, the wholesaling of sporting goods had a value added (GDP) of $612.7 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

It costs an average of $7,000 per year to own and operate a car, but only $150 to own and operate a bike.

National Workplace Active Living Committee (1996). Walk and Roll Revival: A Guide to Active Transportation To, From and At the Workplace. Ottawa, Ont.

In 1990, 8.8 million people jogged at least twice a week, up from 8.1 million in 1987. Nearly $12 million was spent on athletic footwear in 1990.

Rivers, Trails and Conservation Assistance–National Parks Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

The organized competitive amateur sport-delivery system is estimated to spend a total of $3 billion on membership fees, facility rental, equipment, travel, coach, and instruction fees.
Fitness and Amateur Sport (1992). The Report of the Minister's Task Force on Federal Sport Policy.

Industry Canada indicates that in 1997, the wholesale value of the global sports-equipment market is estimated at $90 billion, excluding footwear and clothing.

Walton, D. (1998)."Canada's sporting-goods industry is healthier than it has ever been." The Daily News.

The global sports-equipment industry is estimated to grow by up to 10% a year over the next decade.

Walton, D. (1998)."Canada's sporting-goods industry is healthier than it has ever been." The Daily News.

Canada accounts for about 3% of the global sports-equipment manufacturing industry.

Walton, D. (1998)."Canada's sporting-goods industry is healthier than it has ever been." The Daily News.

Ottawa predicts domestic manufacturers could export $600 million this year, up from $579.1 million in 1997.

Walton, D. (1998)."Canada's sporting-goods industry is healthier than it has ever been." The Daily News.

Between 1990 and 1997, the value of shipments in the sport manufacturing industry has increased at an annual rate of 10.9%, reaching $1,131 million in 1997.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1995, the value of shipments in the sport manufacturing industry totaled $626.9 million.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1996, Canadian families spent $7,827 million on sporting goods and services.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In 1996, Canadian families spent $2,289 million on active sportswear and footwear, up 28% from 1992.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

In Quebec, from 1982 to 1990, spending on physical activities increased 85% in current dollars.

Sports Quebec (1998). Brief Presented to the Subcommittee on the Study of Sport in Canada of the House of Commons Standing Committee on Canadian Heritage.

Every year Quebecers spend nearly half a billion dollars on goods and services related to downhill skiing, tennis, hockey and cross country skiing alone.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

Ontarians are thought to spend $3 billion each year on goods and services related to recreational, physical, and sports activities.

The Standing Committee on Canadian Heritage and the Sub-Committee on the Study of Sport in Canada (1998). Sport in Canada: Leadership, Partnership and Accountability—Everybody's Business. Ottawa, Ont: Public Works and Government Services Canada.

People spend more money on leisure and recreation than the US Government spends on national defence or housing construction.

Rivers, Trails and Conservation Assistance–National Parks Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

A survey of expenditures associated with recreational use of the St. Croix River (Maine and New Brunswick) found that anglers spent more than all other recreationists combined, spending over six times as much per day as canoeists and over four times as much as general vacationers.

Rivers, Trails and Conservation Assistance–National Parks Service (1995). Economic Impacts of Protecting Rivers, Trails and Greenway Corridors.

The average Alberta family spends $2,136 on sport-related events and equipment every year. This adds $1.32 billion annually to the economy.

Alberta Community Development. Benefits of Sport. June 1999 <http://www.cd.gov.ab.ca/building_communities/sport_recreation/resources_links/recfacts/general_index/recfacts611/ index.asp>.

Sporting Events

The 2010 Halifax Commonwealth Games Bid Committee estimates 7,000 jobs measured as person-years of employment.

Trade Centre Limited. Business Plan 2004. 27 June 2005 <http://www.tradecentrelimited.com/documents/1/Business_Plan_2004.pdf>.

The Nova Scotia Sport and Recreation Commission conducted a survey on the economic impact of six summer and six winter events held last year in Nova Scotia. The summer events generated 12.8 million in direct expenditures while the winter events generated 30.1 million.

Nova Scotia Sport and Recreation Commission (2001).

The world track-and-field championships held in Edmonton in 2001 resulted in improvements to several Edmonton athletic facilities, contributions of sports equipment to area clubs, a donation of lumber to build homes for the poor, and an estimated $387 million in economic benefit to the Alberta economy.

(August 14, 2001)."Games ticket sales exceed goal." The Globe and Mail: A7.

The Manulife Halifax Dragon Boat Festival 2005 raised over $120,000 for the Nova Scotia Amateur Sport Fund.

Sport Nova Scotia (2005). "Nova Scotia sporting community receives over $48,800 in amateur sport funding." 20 October, 2005 <http://www.sportnovascotia.ca/contents/mediaroom/sportfund_05.htm>.

In Nova Scotia, the Events Halifax economic impact study concluded that summer events created an average of $72.86 per day, per person, and winter events $109.99 per day per person.

(2001). Economic Impact Analysis—Sporting and Cultural Events.

Sport Participation

(see Community Section for more Facts and Figures on Sport Participation)

Six in ten (61%) Canadians report having had their children involved in community sport.

Canadian Centre for Sports Ethics (2002). National Survey Reveals That the Power of Community Sport Remains Unfulfilled. <http://www.cces.ca/pdfs/CCES-MR-2002Survey-E.pdf>.

Our findings indicate that when a child or youth holds a positive attitude toward physical activity, perceives that significant others believe he or she should participate in physical activity, and feels that he or she has the requisite ability to participate, that individual will form a strong intention.

Mummery W. K., J. C. Spence, and J. H. Hudec (2000). "Understanding physical activity intention in Canadian school children and youth: An application of the theory of planned behaviour." Research Quarterly for Exercise and Sport 71.2: 116–124.

Evidence shows that rates of participation in recreational activities are lower for children in low-income families and higher for children in high-income families.

Canadian Council and Social Development (March 27, 2001.) The Progress of Canada's Children.