



active
healthy
kids
CANADA

DROPPING THE BALL
CANADA'S REPORT CARD ON PHYSICAL ACTIVITY
FOR CHILDREN AND YOUTH

2005

Acknowledgements

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| | |
|---------------------------|---|
| Michelle Brownrigg | Active Healthy Kids Canada |
| Oded Bar-Or | McMaster University |
| Rick Bell | University of Victoria |
| Jean Côté | Queen's University |
| Cora Craig | Canadian Fitness and Lifestyle Research Institute |
| Allan Fein | University of Toronto |
| Graham Fishburne | University of Alberta |
| Larry Frank | University of British Columbia |
| Lise Gauvin | University of Montreal |
| Peter Katzmarzyk | Queen's University |
| Bruce Kidd | University of Toronto |
| Robert Malina | Tarleton State University |
| Thomas McKenzie | San Diego State University |
| Stephanie Plante | University of Windsor |
| Ron Plotnikoff | University of Alberta |
| Thomas Rowland | Baystate Medical Centre |
| James Sallis | San Diego State University |
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| Doug Willms | University of New Brunswick |

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Finding answers. For life.



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Introduction:

Canada's Overall Grade: **D**

The first annual Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth provides a snapshot of the state of our nation regarding physical activity behaviours and opportunities for children and youth where they live, learn, and play. The picture is not good, and the impact on the health of our kids is clear.

Canada is dropping the ball when it comes to ensuring that our children and youth are active enough each day to ensure optimal growth and development. Less than half of our kids are expending the energy required to maintain a healthy weight, and to develop healthy hearts, lungs, muscles and bones.

If we also consider the positive social and emotional development that can be experienced in physical activity pursuits, it is clear that we are compromising the overall healthy development of our next generations.

That is why Active Healthy Kids Canada has taken the lead in developing an annual report card to provide an ongoing comprehensive measurement of how we as a country are collectively demonstrating our responsibility in providing physical activity opportunities for children and youth.

We will identify gaps in information, policy and practice and share knowledge to look at concrete solutions and actions.

The knowledge and insight gained from each annual Report Card will be used to help influence building better programs, creating better messages and developing better policies.

What we know

- Growing evidence demonstrates alarming increases in childhood obesity, and emerging forecasts predict dramatic increases in type 2 diabetes and risk factors for various other chronic diseases.
- In many of the categories, girls and children of lower income families are particularly vulnerable.
- Canada's kids need to move more and sit less. Daily physical activity is declining and time in front of televisions and computers is increasing.
- Physical activity opportunities in homes, schools and communities are inadequate and inequitable. Policies and programs need to be better resourced and more effectively implemented to make that happen.

What we need to know

- Consistent national data on the amount and quality of physical activity opportunities for children and youth in homes, schools and communities.
- National data that tracks how we have built, or should build, our communities to support physical activity for children and youth.

- Accurate assessment of collective nation-wide government investment in physical activity strategies for children and youth, and an accurate assessment of the progress of strategies in place.
- Assessment of particular populations in relation to physical activity for children and youth, such as rural and aboriginal communities.

These are just a few examples where research and surveillance can be improved. There is much we need to learn in order to improve as a nation in providing physical activity opportunities for our kids.

We need more current and comprehensive data, and we need to connect to research in progress, to effectively assess and enhance our knowledge and ensure each annual Report Card tells us how we are doing, and how we can improve. Collectively, we must be held accountable for the level of inactivity among Canadian kids, and together we must work diligently to resolve this crisis.

Report Card Development Process

The first step in the development of this Report Card involved a National Physical Activity Symposium that engaged leading experts across various disciplines in relation to physical activity for children and youth.

Participants in the Symposium included a *Speaker* and a *Respondent* for each of the following categories of research:

| |
|---|
| Physical Activity/Inactivity |
| Speaker: Dr. Mark Tremblay, Statistics Canada |
| Respondent: Dr. Peter Katzmarzyk, Queen’s University |
| Health Implications of Physical Inactivity |
| Speaker: Dr. Oded Bar-Or, McMaster University |
| Respondent: Dr. Tom Rowland, Baystate Medical Centre |
| Familial/Environmental |
| Speaker: Dr. Jim Sallis, San Diego State University |
| Respondent: Dr. Ron Plotnikoff, University of Alberta |
| Education |
| Speaker: Dr. Thom McKenzie, San Diego State University |
| Respondent: Dr. Graham Fishburne, University of Alberta |
| Infrastructure of Communities |
| Speaker: Dr. Larry Frank, University of British Columbia |
| Respondent: Dr. Jean Côté, Queen’s University |
| Cultural/Socioeconomic |
| Speaker: Dr. Robert Malina, Tarleton State University |
| Respondent: Dr. Lise Gauvin, University of Montreal |
| Government Policy |
| Speaker: Dr. Bruce Kidd, University of Toronto |
| Respondent: Dr. Rick Bell, University of Victoria |

For each of the seven categories, the *Speaker* reviewed the evidence base and proposed a number of relevant indicators. The *Respondent* followed the *Speaker*, furthering the knowledge base and providing additional opinions and suggestions regarding the indicators. Subsequently, a facilitated discussion led by Cora Craig from the Canadian Fitness and Lifestyle Research Institute, engaged input from all participants, which led to the development of a working list of proposed indicators.

Additional discussions and revisions of these proposed indicators were undertaken following the Symposium. These involved an examination of available data as well as consideration of the methods and resources for gathering that data.

The original categories of research that were discussed at the Symposium were refined to effectively present the data in the Report Card format, which is presented in the following pages.

The National Physical Activity Symposium served as a starting point for the development of the first annual Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth, as well as providing guidance to the development of future annual versions of the Report Card and future areas of study. The Symposium Proceedings can be accessed at www.activehealthykids.ca.

For many of the indicators identified at the Symposium, comprehensive national data for proper assessment does not exist. In some cases, where more deliberation is required to further clarify those indicators, they have not been included in the 2005 Report Card and will be revisited in the planning of future versions of the Report Card.

However, others have been included in the 2005 Report Card with a mark of “INC” for incomplete, as we have a clear sense of what needs to be assessed, but the data is simply not available at this time. These areas have been included at this time as it is clear from existing literature that the indicator is influential in supporting physical activity for children and youth, but the lack of data does not allow for an accurate letter grading.

The other grade assignments reflected in this Report Card are based on data that currently exists, and the data sources consulted are detailed in the following section.

The categories and indicators that are included in the 2005 Report card include the following:

| Category | Indicators |
|------------------------------|---|
| Physical Activity/Inactivity | <ul style="list-style-type: none"> ▪ Activity Levels ▪ “Screen Time” ▪ Sport Participation |
| Family | <ul style="list-style-type: none"> ▪ Family Physical Activity ▪ Ensuring Kids are Active |
| Community Environment | <ul style="list-style-type: none"> ▪ Access to and Quality of Programs ▪ Community Infrastructure |

| | |
|--------|---|
| School | <ul style="list-style-type: none">▪ Daily Physical Education▪ Trained Personnel▪ School-based Physical Activity Opportunities |
| Policy | <ul style="list-style-type: none">▪ Federal Strategies and Investments▪ Provincial/Territorial/Municipal Strategies and Investments |
| Health | <ul style="list-style-type: none">▪ Overweight/Obesity▪ Chronic Disease Risk Factors |

These indicators are further described in the following pages. Where possible, an assessment of disparities in relation to gender and socioeconomic status were part of the grade assignment process.

The 2005 Report Card is only the beginning. Further refinement of indicators and data gathering methodology will occur with subsequent annual versions of the Report Card, involving input from various issue experts and stakeholders.

Research Methodology & Data Sources

The information on the following pages is based upon analyses of information gathered from multiple cycles of the National Longitudinal Survey on Children and Youth, the most current results of the Health Behaviour of School Children Survey and Canadian Community Health Survey, surveys from the Canadian Fitness and Lifestyle Research Institute, and select research studies and data in the category areas.

While some of the data reflected provincial/territorial breakdowns, the Report Card does not present the findings with this detail, as the overall assessment of the categories is applicable nation-wide.

National Longitudinal Survey on Children and Youth (NLSCY)

The NLSCY is a multi-purpose survey that provides a national database on the characteristics and life experiences of Canadian children as they grow from infancy to young adults. It is used to support evidence-based policy and provide a means for researchers to conduct research on children's development.

The survey began in 1994/95 with a nationally representative sample of children aged 0 to 11. Data were collected thereafter at two-year intervals, following the original cohort of children and their families. The survey also includes a cross-sectional component, as a new sample of children aged 0 and 1 is drawn at each cycle. One of the important features of the NLSCY (and most other surveys conducted by Statistics Canada) is that children and youth from the smaller provinces are over-sampled, such that it is possible to achieve accurate statistics at the provincial level. Design weights were developed to enable the estimation of statistics at the national and provincial levels for all children and youth in the first four cycles of the survey. In the fifth cycle, weights were calculated only for children aged 0 to 5.

The 2005 Report Card uses data for children from the fourth cycle of the NLSCY, conducted in 1999/2000. This cycle was chosen as it is the most recent cycle which allows for an

examination of inter-provincial trends in measures pertaining to children aged 8 to 17. The analyses also report the trends over the five cycles for childhood body mass index (BMI), overweight and obesity, across the five cycles, for children aged 8 to 11.

Canadian Community Health Survey (CCHS)

The CCHS is a Statistics Canada survey that seeks to provide regular and timely cross-sectional estimates of health determinants, health status and health system utilization for 136 health regions across the country.

The CCHS began collection in September 2000. Each two-year collection cycle is comprised of two distinct surveys: a health region-level survey in the first year with a total sample of 130,000 and a provincial-level survey in the second year with a total sample of 30,000. Sample sizes in any particular month or year may increase due to provincial or health region-level sample buy-ins. Both computer-assisted personal and telephone interviews are used.

The target population of the CCHS includes household residents in all provinces and territories; with the principal exclusion of populations on Indian Reserves, Crown lands, Canadian Forces Bases, residents of institutions, and some remote areas. There is one randomly selected respondent per household, although planned oversampling of youths will result in a second member of certain households being interviewed. For the first collection cycle only those 12 years of age and over are eligible for selection, although it is expected that in future cycles child-specific content will be included.

Health Behaviour in School-Aged Children Survey (HBSC)

The HBSC is an on-going effort in which children and youth aged 11, 13 and 15 years take part in a cross-sectional survey approximately every four years (1983/84, 1985/86, 1989/90, 1993/94, 1997/98, 2001/02). The latest survey included data from 35 countries (Currie and Roberts, 2004). The HBSC is co-ordinated by the World Health Organization Regional Office for Europe and data collection in each country is funded at the national level. The Canadian component of the HBSC is funded by Health Canada's Division of Childhood and Adolescence.

Canadian Fitness and Lifestyle Research Institute (CFLRI)

Physical Activity Benchmarks / Monitoring Program

The CFLRI Physical Activity Benchmarks / Monitoring Program is a joint venture of the Canadian Fitness and Lifestyle Research Institute, Fitness/Active Living Unit of Health Canada, and the Interprovincial Sport and Recreation Council.

Physical Activity Monitor

The Physical Activity Monitor is part of the benchmarks/monitoring program. It is an annual telephone survey that tracks changes in physical activity patterns, factors influencing participation, and life circumstances in Canada. As such, it tracks outcome indicators of the efforts to increase physical activity among Canadians.

To date, seven waves of the Physical Activity Monitor have been completed:

- 1995 Physical Activity Monitor
- 1997 Physical Activity Monitor
- 1998 Physical Activity Monitor (*focus on communication strategies*)
- 1999 Physical Activity Monitor (*focus on community sport and recreation*)
- 2000 Physical Activity Monitor (*focus on children and schools*)
- 2001 Physical Activity Monitor (*focus on workplace physical activity*)
- 2002 Physical Activity Monitor (*focus on trend information or monitoring changes in benchmark indicators as well as monitoring the joint governmental goal of reducing physical inactivity by 10% or 6 percentage points by 2003*)

This Report Card accesses data from the 2000 Physical Activity Monitor. It also draws upon the 2001 Capacity Study - *Increasing Physical Activity: Encouraging Physical Activity Through School*, and the 2000 Capacity Study - *Increasing Physical Activity: Enhancing Municipal Opportunities*.

Specific data used from these sources has been identified in the section for each indicator. Any additional research accessed for an indicator is specifically referenced within the section, with a complete list of those additional references included at the end of the document.

Category: Physical Activity/Inactivity

The assessment of physical activity and inactivity among children and youth in Canada involved examination of the three indicators identified below. These included daily physical activity levels, time spent in inactive “screen time” pursuits - particularly television viewing and computer use, and participation in both organized and unorganized sport.

Indicator: Activity Levels

Grade: **D**

This indicator examined the levels of daily physical activity among Canada’s children and youth.

Rationale for Grade

Analysis of data from the CCHS, the CFLRI Physical Activity Monitor, and the HBSC indicate that less than half of Canadian children and youth are physically active on a daily basis to a degree of energy expenditure that meets the guidelines for healthy growth and development.

While guidelines and measures in the data do vary, the trends are consistent. To put it simply – most Canadian kids are not moderately (e.g. walking) or vigorously (running, climbing, swimming) active for thirty minutes to one hour each day. *Canada’s Physical Activity Guides for Children and Youth* actually recommend working toward ninety *additional* minutes of moderate to vigorous activity for children and youth, each day (www.healthcanada.ca/paguide).

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To put it simply – most
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moderately or vigorously
active for thirty minutes to
one hour each day.”

While international comparisons indicate activity levels in Canada rank relatively high in comparison to other nations, the fact that average total daily energy expenditure in Canada is still low simply reflects that this is an international issue of concern.

Gender disparities were also factored into the derivation of the grade. A significant gender gap exists, with girls consistently reporting less daily physical activity ranging from a 10-15% differential depending on the source.

Indicator: “Screen Time”

Grade: C-

This indicator examined the use of computers and the time spent watching television among Canadian children and youth.

Rationale for Grade

The grade assignment for this category is based on an examination of data in relation to the inactive leisure time pursuits of television watching and computer use from the NLSCY, the CCHS, and the HBSC.

The previous section outlined the fact that daily physical activity levels among children and youth in Canada are low. The data in this section reflects inactivity time as reflected in self-reported “screen time”.

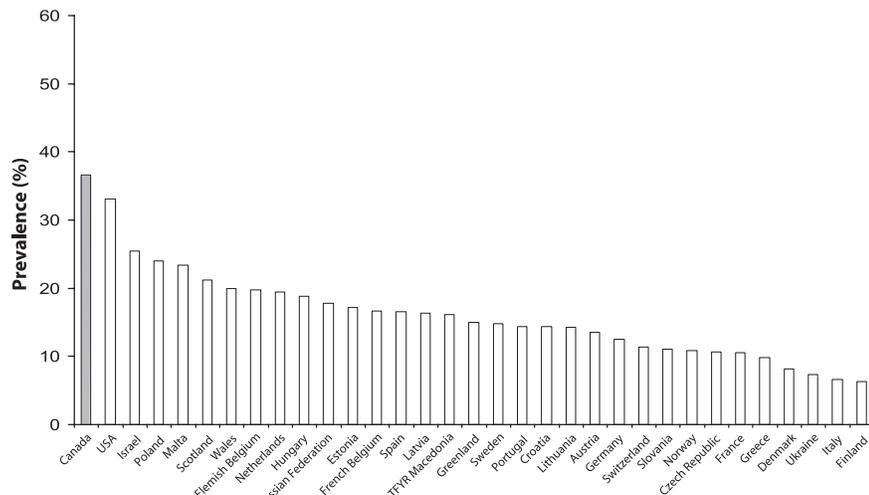


Figure 16. Prevalence of 13-year-old girls who use computers for 3 or more hours per day during the weekend in the 2001/2002 Health Behaviour in School-Aged Children Survey. Adapted from Todd et al. (2004).

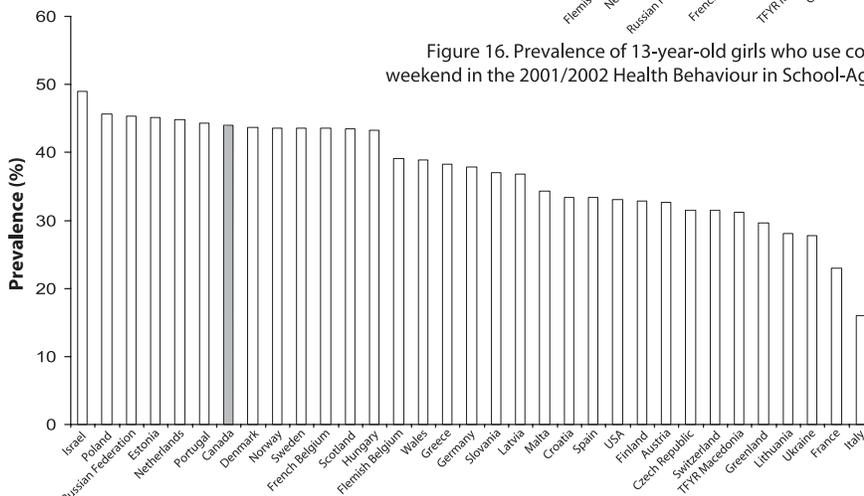


Figure 15. Prevalence of 13-year-old boys who use computers for 3 or more hours per day during the weekend in the 2001/2002 Health Behaviour in School-Aged Children Survey. Adapted from Todd et al. (2004).

Half of Canada's children and youth are spending two to four hours per day watching television. Research findings suggest that children who watch television more than 2 hours per day are more likely to be overweight and obese (Tremblay and Willms, 2003). It seems that watching television not only displaces more active pursuits, it is also a time when children are eating less healthy foods and being exposed to unhealthy food advertisements.

In addition, Canadian children and youth rank among the highest in the world for computer use. Nearly half our kids spend three or more hours on the computer per weekend day alone. While data at this time cannot be assessed to determine a full breakdown of the various sedentary pursuits that may dominate the leisure time of children and youth, nor can it be analyzed to provide an aggregate of "screen-time", the evidence demonstrates cause for concern, and demonstrates a significant imbalance between self-reported active and sedentary behaviours.

Gender and income differences in relation to screen-related sedentary time are worth noting. Males report higher screen time use (television and computer use), but when same-sex comparisons are made across countries, Canadian females rank higher for computer use. Children of lower income families report higher television time. Data that was examined for the 2005 Report Card in relation to computer use does not reflect income differentials, but this should be examined in future.

Indicator: Sport Participation

Grade: **C+**

This indicator looked at participation levels in both organized and unorganized sport among Canadian children and youth.

Rationale for Grade

Analysis of data from the NLSCY reflects some interesting perspectives in relation to sport participation among Canadian kids.

On average, 60-80% of children and youth in Canada are participating in organized sport programs as well as unorganized sport activities. It is important to note that research has demonstrated participation in unorganized sports is significantly related to childhood overweight and obesity, although this relationship was not demonstrated for organized sport participation (Tremblay and Willms, 2003). Specifically, participation in unorganized sport has been shown to have a protective effect in relation to overweight and obesity prevalence, while organized sport does not reflect this relationship.

Gender and income disparities regarding sport participation are responsible for this indicator not receiving a higher grade. The charts below reflect that while boys and girls have equal participation rates in organized sports, boys tend to be more active in unorganized sports.

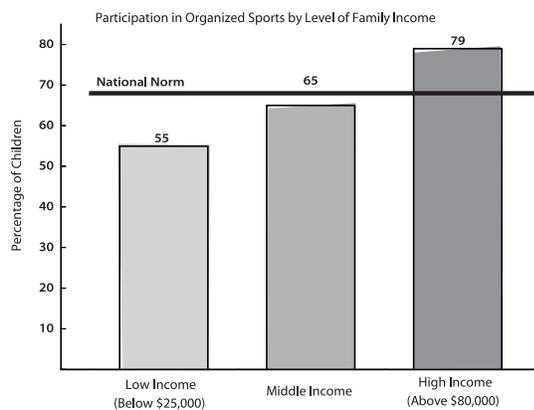
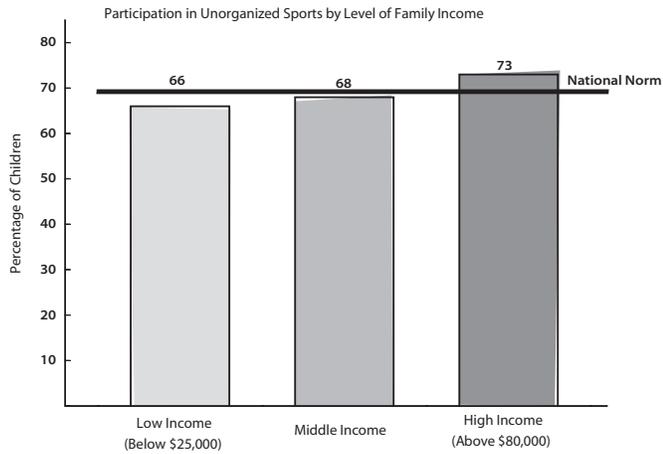
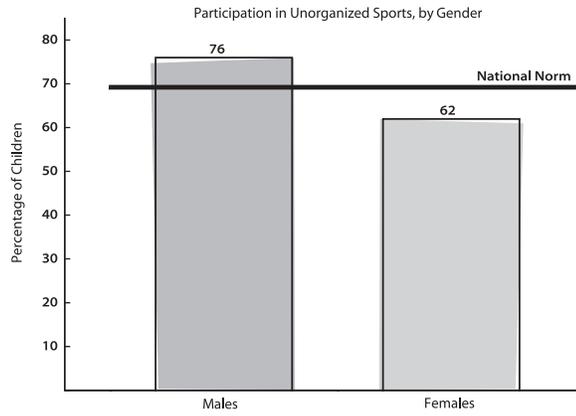
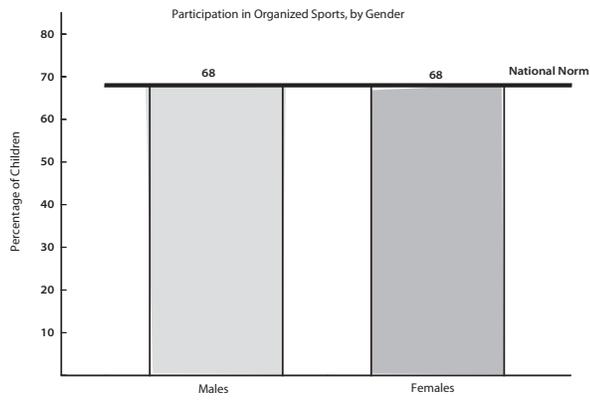
Income level plays an important role in children's sport participation. Only about 55% of low income children participated regularly in organized sports, compared with 65% of middle income, and 79% of high income children. Although the gap is not as significant for unorganized sports, there is also an income disparity here which requires further examination.

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Participation in unorganized sport has been shown to have a protective effect in relation to overweight and obesity prevalence, while organized sport does not reflect this relationship.

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Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth



Commentary and Future Considerations

It should be noted that even though this assessment already reflects a poor grade, limitations to the current guidelines and datasets may actually suggest even greater cause for concern. Physical activity guidelines to date are based on self-report studies of *leisure-time physical activity* only, and are also based on averages over time (week, month, year) to derive an assessment of daily activity levels.

Therefore, current data may not be an actual reflection of daily physical activity or a reflection of *habitual activity*, the activity that is part of “day-to-day” living. Some select studies (e.g. Morgan and Pangrazi, 2003; Campagna et al, 2002) have begun to examine habitual activity levels using measurement tools such as pedometers, heart rate monitors and accelerometers, but currently these are reflective of particular populations and regions, and cannot provide a perspective that is national in scope.

A more accurate future assessment of this indicator will require the development of research and surveillance mechanisms that will allow for the examination of total daily energy expenditure, or related measures such as total frequency or volume of activity, of Canadian children and youth per capita. In addition, consistency in the guidelines or “cut-points” at which activity levels are measured will allow for more accurate trend data over time.

The examination of screen-related leisure time pursuits is only part of the picture in relation to the overall inactive time among children and youth. If we consider the amount of time spent in desks, cars, buses, movie theatres, as well as time playing video games, it is likely that our overall assessment of the balance between activity and inactivity among Canadian children and youth is even more dire than is reflected.

Future assessment for this indicator needs to include a more detailed examination of inactive leisure time activities that are both screen and non-screen related. Considering the increasing use of computers for communication among children and youth (chat rooms, instant messaging, etc.), computer time should be closely monitored. Comprehensive data on video game playing is also not available despite its rapid growth as a source of inactive entertainment.

The data for sport participation only tracks prevalence and does not get into measures of quality or an assessment of how physically active children and youth actually are when participating in sport. Future assessments should attempt to make stronger links between physical activity levels in relation to sport participation. What is clear is that to improve the grade in this indicator it is necessary to ensure that sport participation experiences are more equitably offered and encouraged across income levels.

Category: Family

The assessment of family influences that facilitate or inhibit physical activity participation among children and youth examined two indicators. These included family physical activities, where parents and children engage in active pursuits together, and parental behaviours in relation to ensuring that children and youth are active.

Indicator: Family Physical Activity

Grade: **D**

This indicator assessed the proportion of Canadian parents who regularly engage in physical activity pursuits with their children.

Rationale for Grade

The 2000 CFLRI Physical Activity Monitor indicates that on average only 43% of parents are regularly active with their children. Again, the numbers are relatively consistent between mothers and fathers, and between male and female children, but it is worth noting the difference across age range and parental activity level.

Once children reach age 5, the number of parents who are active with their kids drops by 25% and then a further 30% once children reach age 13. While an increase of peer-related physical activity in place of family physical activity is expected in the teen years, the dramatic drop at age 5 is concerning. In addition, it is evident that parents who are inactive themselves are also less likely to be active with their children.

Indicator: Ensuring Kids are Active

Grade: **C-**

While there are a number of measures that have been discussed and can be considered in terms of how parents can ensure their children are physically active, assessment of this indicator involved examination of two parental behaviours based on the data available at this time.

The first looks at a potential role modeling effect, specifically the relationship between parental activity levels and the physical activity levels of their children. The second examines parental support in arranging or providing transportation for their children to physical activity opportunities.

Rationale for Grade

Published research that analyzed the 2001 CCHS data (Carrière, 2003) yielded an assessment of the relationship between parental physical activity levels and the corresponding physical activity levels of children.

Examination of the 2000 CFLRI Physical Activity Monitor involved an assessment of the proportion of parents who arrange or provide transportation for their children to participate in physical activity.

The percentage of children and youth who are active increases if a parent in the household is also active. For example, approximately 45% of Canadian boys with inactive parents are active – prevalence increases to nearly 70% if there is an active parent in the home.

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Once children reach age 5, the number of parents who are active with their kids drops by 25%.
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The finding for girls is similar, although lower, with approximately 30% being active if parents are inactive, and approximately 50% if parents are active (Carrière, 2003).

On average, 60% of parents take their children to physical activity opportunities as a means of ensuring they are active. The numbers are consistent between mothers and fathers as well as for male and female children, but there is a disparity in relation to income as lower income families report a response closer to 50%.

Commentary and Future Considerations

The data regarding family influences that facilitate or inhibit physical activity for children and youth is somewhat limited in that it is not as current or as comprehensive as it should be to fully assess this category. In future, measures that allow for a more thorough understanding of the impact of parental role-modelling of activity, parental behaviours that support engagement in physical activity, and parental engagement in physical activities with children are needed.

Category: Community Environment

The communities that surround children and youth can be key contributors to physical activity participation, but current data in this category does not allow for a full assessment of the “walkability” or “playability” of Canadian communities.

While we have some measures of sport and recreation program offerings, at present we don’t have an accurate assessment of the overall quality of delivery. Perception of community support and safety may also have an influence on both community programs and unstructured physical activity in the community.

While published research has demonstrated that the design of a community, and its transportation, recreation and commercial infrastructure is important in that it can either facilitate or inhibit active living, at present there is no national data to provide an assessment of how we are doing as a nation in this regard.

The indicators below include a measure of access to community programming, and some commentary on community infrastructure, but this category requires new data to provide a meaningful assessment of the community environment in future Report Cards.

Indicator: Access to and Quality of Community Programs

Grade: **C**

This indicator involved an examination of programs and policies that facilitate access to physical activity opportunities for children and youth in community recreation settings.

Rationale for Grade

The 2000 CFLRI Survey of Canadian Municipalities examined program offerings extended to children and youth in Canadian municipalities. While 97% report offering programs targeted at children and youth, only 54% report program subsidies for low income families, although 81% indicate discounted fee structure for children, but these are not clearly defined.



The design of a community, and its transportation, recreation and commercial infrastructure is important in that it can either facilitate or inhibit active living.



Community agencies such as the YMCA and Boys and Girls Clubs of Canada also have policies to ensure low income families have access to programming, and annual tracking is conducted to determine the numbers of children and youth engaged in physical activity programs. While these agencies provide valuable programming to children and youth across Canada, facilities are not in every community and therefore this data is limited to the scope of service provided.

Indicator: Community Infrastructure

Grade: **INC**

As noted above, this indicator examines the ways in which communities are designed and built to support or inhibit physical activity.

Rationale for Grade

The grade of “Incomplete” has been assigned to this indicator as at this time we do not have national data that can effectively assess the key measures of community infrastructure that support physical activity participation in our communities. Nonetheless, it has been included in the 2005 Report Card based on the growing evidence of the importance of urban planning and community design in supporting physical activity.

Opportunities to increase physical activity of residents by making walking or cycling viable alternatives to motorized transportation, and by providing access to local retail establishments and community parks and facilities hold considerable promise for increased physical activity levels among Canadian children and youth. As such it was felt that this indicator should be part of this Report Card as an opportunity to outline what needs to be measured moving forward.

Commentary and Future Considerations

Tracking reports of sport and recreation offerings and participation in communities, many of which are volunteer driven, is difficult. Future Report Cards need to engage the support of national and provincial sport organizations, municipal recreation providers, and community agencies that offer recreation and sport programs, in developing research tools that better assess both the scope and quality of delivery of community-based physical activity programming. Indicators that examine program design and quality of instruction/coaching to assess how these meet the needs of children and youth are additional areas for future research.

With respect to the community environment, there are data that are currently accessible, but need to be gathered and analyzed, to provide an assessment of this indicator in future Report Cards. The following areas are recommended measures for future assessment.

Density and Land Use Mix

Broadly defined, density and land use mix are both measures of proximity between origins and destinations. Higher densities and greater variation in land use types brings non-residential uses within closer reach of individuals in residential areas.

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While 97% report offering programs targeted at children and youth, only 54% report program subsidies for low income families.”

Residential density captures the relationship between number of housing units and residential land area while commercial density examines the number of commercial establishments per commercial land area. Floor Space Ratio is a measure of commercial density that captures whether commercial properties are built up to the street front or if they setback from streets behind surface parking -significant parking areas reduce walkability and encourage automobile use

Land use mix is an indicator of proximity to a diversity of desired destinations. Measures in this area examine the presence of residential, retail, entertainment, institutional (e.g. school), and park space in communities. As it pertains to physical activity for children and youth data would include the proximity and access to play areas and the proximity between home to school, which would facilitate the ability to walk or cycle to those destinations.

Connectivity

Connectivity is a measure of route directness or the difference between the straight line distance and the distance following the road network. A higher number of intersections is associated with smaller blocks, more direct routes, and shorter distances between destinations. It is also associated with an increase in route choice to select safer or more attractive streets. Research indicates that increased density, land use mix, and connectivity make communities more walkable and therefore contributes to increased physical activity.

Density, connectivity and land use mix are supplemented by urban design features that make walking or cycling more attractive. Such features include the continuity of sidewalks, the buffer between the sidewalk and the road, intersections with signal lights, bicycle lanes and shared pathways, all of which promote physical activity through safe and connected community design.

Category: School

The assessment of indicators in the school category involved an examination of three indicators, although many others can be and need to be explored in the future. The indicators below look at current levels of daily physical education in schools, policies in place to employ trained physical educators in schools, and overall physical activity opportunities in the school environment. All data were derived from the CFLRI 2001 Capacity Study- Increasing Physical Activity: Encouraging Physical Activity Through School and the CFLRI 2000 Physical Activity Monitor.

Indicator: Daily Physical Education

Grade: F

This indicator examined the proportion of Canadian elementary and secondary schools that are providing daily physical education opportunities for students.

Rationale for Grade

Only 14% of elementary schools report providing 150 minutes of physical education for students weekly, representing an average of 30 minutes of daily physical education. Only 4% of secondary schools provide 225 minutes of physical education for students weekly, representing an average of 45 minutes of daily physical education.

While these numbers are low, they may actually present an inflated view of what is happening in Canadian schools as these are self-reported measures of what is offered in schools and do not necessarily reflect actual student participation. Despite a 1998 Gallup Poll that indicated 74% of the Canadian population is in favour of instituting 30 minutes of daily physical education in schools, there has not been evidence of progress in this regard.

Indicator: Trained Personnel

Grade: **D-**

This indicator involved an assessment of the proportion of schools that have a formal policy to employ physical educators with a post-secondary degree in the subject area.

Rationale for Grade

Only 42% of elementary school and 53% of secondary schools in Canada have a formal policy in place to hire trained physical educators to deliver physical education programming. Research indicates that trained personnel are more prepared and have more confidence to deliver physical education programming than generalist teachers (Thompson et al, 2001).

Indicator: School-based Physical Activity Opportunities

Grade: **INC**

This indicator looked at the opportunities for moderate to vigorous physical activity within scheduled class time as well as in extracurricular programs and recess.

Rationale for Grade

The areas examined in relation to physical activity opportunities in school included the opportunity for students to be moderately to vigorously active for at least 50% of physical education class, physical activity opportunities at recess, opportunities through intramural and interschool programs and school outings, as well as an assessment of formal policies or informal practices that support active transportation (walking and cycling) to and from school.

This indicator receives a grade of Incomplete because the self-report data completed by school administrators does not provide data that measures what is actually delivered and experienced by students.

Commentary and Future Considerations

Additional considerations to the data above include the fact that only 39% of elementary schools report that they never cancel physical education classes or recess as a disciplinary measure. Parents feel that extracurricular activities only meet the needs of 62% of children.

Schools remain the best environment to consistently engage nearly all of Canadian kids. Physical education and physical activity opportunities in the school environment are critical to ensuring increased opportunities to be active, to develop physical skills and to develop a positive attitude toward physical activity. Yet physical education is the one subject area where our kids can graduate from school with a decline in physical activity levels.

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A 1998 Gallup poll reported
that 74% of Canadians
favour instituting
30 minutes of daily
physical education
in schools, yet only 14%
of elementary and 4% of
secondary schools provide
daily physical education.”

Future research needs to more accurately (objectively) assess the scope and quality of physical activity opportunities in schools. Future Report Card data gathering processes need to foster connections with national and provincial surveillance mechanisms in development for the school environment so we can better assess, and work more effectively to improve, this important area.

Category: Policy

Policy that supports and facilitates physical activity opportunities for children and youth is an area that cuts across all other categories and involves all levels of government. Indicators of supportive policy include effective legislation, financial investment and coordinated implementation.

The 2005 Report Card only begins to scratch the surface of this important category, and additional future research is needed. The indicators examined at this time include an assessment of government strategies and investments at the Federal level, as well as consideration of Provincial/Territorial and Municipal government strategies and investments.

Indicator: Federal Strategies and Investments

Grade: **C-**

This indicator accessed available data to gauge the current level of Federal investment in physical activity for children and youth, as well as policies and strategies at the Federal level that have been established to support this end.

Rationale for Grade

While federal government dollars represent only one level of funding that can be accessed to support physical activity participation, it is noteworthy that federal public health funding currently accounts for only 2% of total health care resources (Health Canada, 2003) and funding for the Physical Activity Unit of Health Canada has decreased to a mere 25% of its budget in the early 1990s (Edwards, 2004).

Recent work by the Canadian Federation of Municipalities (2004) indicates that while US guidelines require a 10% allocation of transportation infrastructure spending to be directed to infrastructure development that facilitates walking and cycling, currently there is no existing policy in Canada that provides similar direction. Submissions to the Standing Committee on Finance by Go for Green and the Heart and Stroke Foundation of Canada in 2004 called for a 7% allocation to support active transportation. This figure was believed to be a reasonable target initially, given that in most major Canadian cities 7% of the population use active transportation.

Despite an increased focus on population health in the federal government with the establishment of the Public Health Agency of Canada, and the establishment of policies and strategies such as the Physical Activity and Sport Act (Bill C-2), the Pan-Canadian Healthy Living Strategy and the Joint Consortium on School Health, resources to support physical activity promotion for children and youth are currently lacking at this level of government and are dramatically deficient given the magnitude of the public health impact of childhood

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Federal public health funding currently accounts for only 2% of total health care resources and funding for the Physical Activity Unit of Health Canada has decreased to a mere 25% of its budget in the early 1990s.

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inactivity and obesity. Perhaps due to the lack of resources, federal policies and strategies have progressed slowly in their implementation, and outcome measures are not yet clearly in place.

Indicator: Provincial/Territorial/Municipal Strategies and Investments

Grade: **INC**

This indicator looks to assess the parallel Provincial/Territorial and Municipal government investments and strategies in place that support physical activity.

Rationale for Grade

In partnership with and in addition to the Federal government, Provincial/Territorial and Municipal governments across Canada have developed and begun to implement various strategies to increase physical activity. These include the Federal/Provincial/Territorial commitment to increase physical activity levels by 10% by the year 2010, as well as various Provincial/Territorial initiatives. Examples include Nova Scotia's "Active Kids, Healthy Kids", Manitoba's "Healthy Kids, Healthy Futures", Ontario's "Active 2010", "Saskatchewan in Motion", "Action Schools BC" and several others. In some provinces government investments have been supported by other partners, such as the work of the Chagnon Foundation in community-driven physical activity for children and youth in Quebec. Municipal examples include the physical activity strategies in the cities of Ottawa and Toronto. All are examples of good efforts to increase physical activity opportunities for children and youth.

This indicator receives a grade of "Incomplete", as at this time an overall assessment that would provide a national perspective on the investment in, and progress of these initiatives cannot be determined.

Commentary and Future Considerations

The array of policy indicators identified in the development goes well beyond what is able to be presented in the 2005 Report Card. Specifically, priority indicators for this area have been categorized in three clusters:

Capacity & Transparency of Policy Making Indicators

The capacity and transparency of policy-making cluster includes an examination of dollars invested in policy and initiatives that support physical activity, as well as public awareness of existing policies that support physical activity opportunities for children and youth.

Scope of Policy Development

This cluster involves a comparison of Canada's commitment to international obligations in relation to physical activity (e.g. World Health Organization, UNESCO Declaration of Children's Rights) and national initiatives implemented in relation to those commitments. It also involves an assessment of the adherence to the clauses in the Sport and Physical Activity Act, the mandate of the Public Health Agency of Canada and the Physical Activity Strategy developed by the Coalition for Active Living.

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While US guidelines require a 10% allocation of transportation infrastructure spending to be directed to infrastructure development that facilitates walking and cycling, currently there is no existing policy in Canada that provides similar direction.”

Effectiveness of Policy Implementation

This cluster will provide an evaluation of implementation progress of policies and strategies that promote physical activity for children and youth. It also includes policy watch mechanisms, such as those put in place by the Coalition for Active Living.

While these areas were explored in the process of producing the 2005 Report Card, data was not easily accessible and will be further explored in future Report Cards.

Category: Health

While it is difficult to ascertain long-term health implications and outcomes in relation to physical activity in our current population of children and youth, there is growing evidence to suggest cause for concern. Indicators in the health category examine the prevalence of overweight and obesity among Canada's children and youth as well as research in relation to the prevalence of chronic disease risk factors among children and youth.

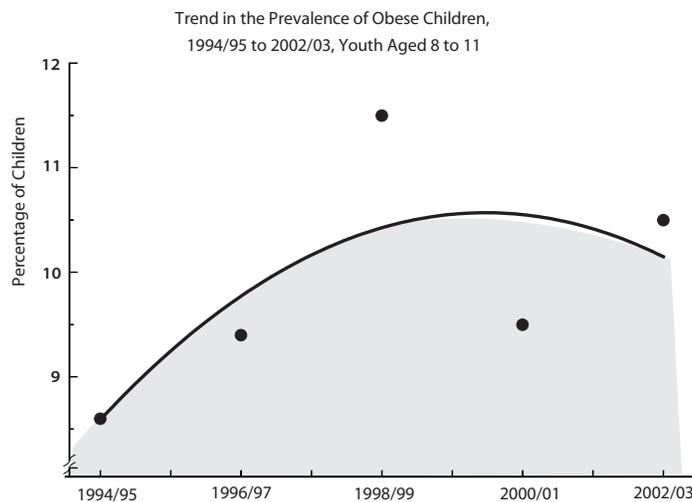
Indicator: Overweight/Obesity

Grade: **F**

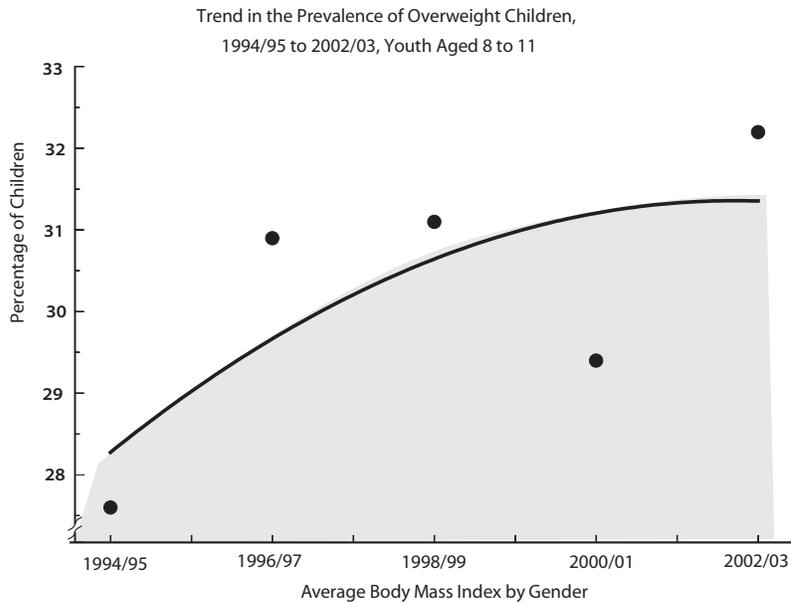
This indicator examined prevalence and trends of overweight and obesity among Canadian children and youth.

Rationale for Grade

Examination of data from the NLSCY and the HBSC using Body Mass Index measures indicates increasing trends in childhood overweight and obesity. NLSCY results suggest that both overweight and obesity prevalence increased over the past decade but there is some indication that it may be leveling off. Even if this is the case, these findings show that about one in three children are overweight, and one in ten are obese.



The prevalence of overweight males is greater than that of females, 31% compared to 23%. Also, children from high income families are less likely to be overweight than those from low and middle income families. International comparisons from the HBSC indicate Canadian children ranked 5th among the 34 countries in the HBSC for the overall prevalence of overweight and obesity. Taken together, these data do not reflect a positive outlook for Canada's children and youth.



Indicator: Chronic Disease Risk Factors

Grade: **INC**

This indicator looks at the prevalence of risk factors associated with chronic disease among Canada's children and youth, such as heart disease and type 2 diabetes.

Rationale for Grade

The grade for this indicator is "Incomplete" at this time since we do not have nation-wide assessments of the prevalence of chronic disease risk factors such as insulin resistance (risk for type 2 diabetes) or high blood pressure (risk for heart disease).

However, recent research based on the Québec Child and Adolescent Health and Social Survey of 3589 youth aged 9, 13, 16 years indicates there were population-wide elevations in systolic blood pressure compared with previously established North American reference populations (Paradis et al, 2004).

Additionally, the same survey showed a strong relationship between excess weight and impaired insulin levels that are detectable early in life and may have adverse long-term implications (Lambert et al, 2004). Furthermore, the study found that insulin resistance syndrome is highly prevalent in youth as young as 9 years of age and is related to obesity (Lambert et al, 2004).

Commentary and Future Considerations

Data reflecting overweight and obesity are determined using Body Mass Index. The Body Mass Index [weight (kg) / height (m²)] is a commonly used index of overweight and obesity among both children and adults. Among adults, a BMI of ≥ 25 kg/m² is indicative of overweight while a BMI of ≥ 30 kg/m² is indicative of obesity. Given that BMI changes appreciably with age, age-specific thresholds are required for the classification of overweight and obesity among children and adolescents. Traditionally, age- and sex-specific 85th and 95th percentiles of reference data have been used for this purpose. More recently, the International Obesity Task Force (IOTF) of the World Health Organization endorsed

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Both overweight and obesity prevalence increased over the past decade... about one in three children are overweight, and one in ten are obese.”

the development of overweight and obesity thresholds that are statistically tied to the adult cut-offs of 25 kg/m² and 30 kg/m². These thresholds have been developed by Cole and colleagues (2000) and are recommended for international comparisons of overweight and obesity prevalence (IOTF, 2004).

Continued analysis of the trends in overweight and obesity is necessary to effectively assess any improvement or deterioration in this health measure.

In addition, further research and surveillance should be developed to explore the link between overweight and obesity and chronic disease risk factors among children and youth, as well as the prevalence of these risk factors among children and youth.

Next Steps: Working Together to Improve the Grade

While the evidence has been mounting for some time, this overall assessment makes it abundantly clear that when it comes to keeping our kids physically active, Canada is dropping the ball.

The responsibility to do better for our kids rests with all of us- parents to policymakers, and all the support systems that lie in between. We must move from awareness to action, and provide our kids with the physical activity opportunities they deserve and require.

The 2005 Report Card is part of a process to work collectively on improving the physical activity opportunities for children and youth in Canada, and to provide an ongoing annual assessment of how we are doing in meeting this end.

This Report Card will be followed-up in the fall of 2005 with the engagement of key stakeholders from a variety of sectors in a Leadership Roundtable series. Three roundtable sessions will be conducted to inform, engage and motivate sectors in developing a National Plan of Action to foster physical activity among children and youth. The series will include the following issue stakeholders:

- Policy Makers and Researchers
- Politicians, Senior Public Servants, Corporate Leaders, Non-Profit Leaders
- Media, Communications Agencies & Consultants

Participants for the three sessions are different in order to address the core research and policy questions, the political implications and communications needed in the Plan of Action.

The Plan of Action will also build on existing initiatives to further inform, and more importantly improve the grade, of future report cards.

The Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth serves as both a monitoring and public education tool in our strategy to provide "The Power to Move Kids™".

Each annual Report Card will evolve with enhancements in methods and measurements. We will work with others to both access research in progress, and to influence the development of new research that will inform the various category areas.

Active Healthy Kids Canada is dedicated to advocating the importance of high quality, accessible, and enjoyable physical activity experiences for all children and youth, and is committed to working with partners in all sectors in a collaborative effort to increase the number and quality of physical activity opportunities for Canadian children and youth.

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The Power to Move Kids™

1185 Eglinton Avenue East, Suite 501, Toronto, Ontario M3C 3C6
Toll Free: 1-888-446-7432

www.activehealthykids.ca