



School Health Action,
Planning & Evaluation System

**Combined Report
for Ottawa
High Schools
Surveyed
December 2005**



cancer care
ontario

action cancer
ontario

Your Confidential Report

This School Health Action, Planning and Evaluation System (SHAPES) report presents the findings of a survey conducted by Ottawa Public Health (OPH) and the Population Health Research Group (PHR), University of Waterloo. We are pleased to provide this report of results for 19 schools surveyed within the City of Ottawa and thank you for your participation in December 2005.

This project was funded by the Ontario Ministry of Health and Long-Term Care and Cancer Care Ontario. Information presented in this report represents the results from data collected at 19 schools. The results may not reflect the entire City of Ottawa.

This survey provides information on smoking and physical activity which will assist community partners (educators, students and public health professionals) to plan and target initiatives to prevent tobacco use and to increase physical activity levels in schools. The results of this survey will also assist in the evaluation of the *exposé* Smoke-Free Youth Project by providing information on youth smoking behaviour and attitudes. The *exposé* Smoke-Free Youth Project was initiated in the fall of 2002 and is a student led campaign that includes a mass media contest, cessation for youth, promotion and enforcement of Ontario's Tobacco Control Act, curriculum support, youth mobilization and school and community development.

Ottawa Public Health representatives will be distributing this combined report to school and community partners. Any results that are published or otherwise disseminated by Ottawa Public Health or the researchers will maintain the anonymity of schools. We do encourage you to partner with your local public health unit and community organizations to take action on the findings reported here.

If the number of students responding is small enough that it might be possible to identify individual student responses, findings are not reported. Please note that approximately half of the students surveyed completed each of the two questionnaires (Smoking Behaviours, Physical Activity), with core items included on both versions. Also, please note that in some cases, table columns or rows and charts may not add to 100% due to rounding.

For more information on this report, or the research project associated with it, please contact your Ottawa Public Health representative, or:

Jessica Reid
Project Manager
Population Health Research Group
University of Waterloo
(519) 888-4567 ext. 6553
shapeson@healthy.uwaterloo.ca

Lynda Zimmerman
Program Planning and Evaluation Officer
Education and Research Unit
Ottawa Public Health
(613) 580 2424 ext. 23492
lynda.zimmerman@ottawa.ca

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Part A:

**Smoking
within the
Schools
Surveyed**

The Issue

Smoking is a School Issue

- Students who take up smoking show a decrease in academic achievement and motivation.¹
- Smoking is associated with an increased risk of dropping out of high school; smoking is more predictive of dropping out than marijuana use or alcohol use.²
- Starting smoking at an early age is predictive of a number of other risk behaviours; these include carrying a gun or other weapon at school, fighting, and drug use.³

Smoking is an Adolescent Issue

- 85 percent of current smokers start smoking by the age of 19.⁴
- The average age at which students smoke their first whole cigarette is 11.⁵
- What starts as a bid for *independence* quickly becomes *dependence* on tobacco. Only 5% of students who smoke think that they will be smoking in 5 years - 5 years later, 80% of them smoke heavily.⁶

"Today's teenager is tomorrow's potential regular customer, and the overwhelming majority of smokers first begin to smoke while still in their teens... The smoking patterns of teenagers are particularly important to Philip Morris."

(1981 report by researcher Myron E. Johnson, sent to Robert E. Seligman, Vice President of Research and Development, Philip Morris)

Smoking is a Community/Public Health Issue

- 22% of all deaths in Canada are attributable to smoking.⁷ Smoking causes 4 times as many deaths as car accidents, suicide, homicide and AIDS combined.⁸
- Half of all long-term smokers will die or be disabled by a smoking-related illness.⁹

Schools Can Make a Difference...

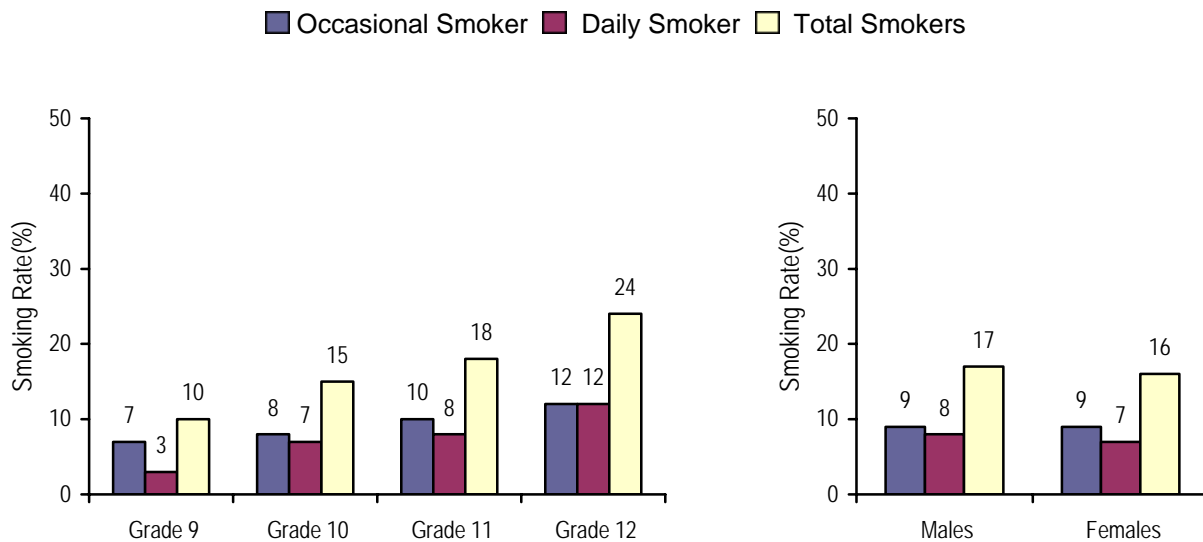
School efforts linked with local public health and community agency efforts can reduce problems related to youth smoking. Research has shown that successful efforts include education (coordinated curriculum), a supportive environment (clear, enforced rules about smoking), services and students who know people care. See the SHAPES-Ontario website, www.shapes.uwaterloo.ca, for a list of useful resources and websites.

In Ottawa, the *exposé* Smoke-Free Youth Project is a student led campaign that includes a media contest, cessation for youth, promotion and enforcement of Ontario's Tobacco Control Act, curriculum support, youth mobilization and school and community development. See the *exposé* website, www.smokefreeottawa.com/expose, for more information about this project.

Who Smokes within the Schools Surveyed

Overall, 16% of the students we surveyed reported that they are currently smoking. The graphs below summarize the percentage of students who smoke by grade and by sex. For these graphs, a daily smoker is defined as a person who currently smokes cigarettes every day, and an occasional smoker is defined as a person who currently smokes cigarettes, but not every day.

Student Smoking Rates within the Schools Surveyed



The Canadian Tobacco Use Monitoring Survey¹⁰ indicates that 17% of youth ages 15-19 in Ontario are current smokers. When compared to this rate, the smoking rate within the schools surveyed is:*

Very High	High	Average	Low	Very Low

*Smoking rates 4% above or below Ontario's provincial smoking rate for age 15-19 (17%) are considered "Average."

"Our goal is to cut youth smoking rates to 15% by the year 2007 and to 10% by the year 2012."
 - Robert Cushman M.D., Medical Officer of Health, Ottawa Public Health, 2005

Schools Can Make a Difference...

Implementing programs and/or policies that would lead to even a 5% absolute reduction in smoking prevalence within the schools surveyed, would result in the prevention of an estimated 801 students from becoming long-term smokers. This would save 401 students from death or disability from a smoking-related illness. School programs to prevent tobacco use can make a major contribution to the future health of young people, especially when these programs are combined with community efforts. The resource list found on our project website (www.shapes.uwaterloo.ca) is a good starting point for planning interventions.

Social Influences for Smoking

Students take up smoking for a variety of reasons. Peers and family members are especially influential in the decision to start or continue smoking. These influences are sometimes direct (peer pressure), but are more often indirect (modeling). We asked students a series of questions relating to peers and family.

All students were asked, “*How many of your 5 closest friends smoke cigarettes?*” Smokers are more likely to report that they have friends who smoke compared to non-smokers. In fact, 70% of non-smokers report that none of their 5 closest friends smoke cigarettes, whereas 45% of daily smokers report that ALL five of their closest friends smoke.

<i>How many of your 5 closest friends smoke cigarettes?</i>	Percentage of Students Responding		
	Daily Smokers	Occasional Smokers	Non-Smokers
0	5	18	70
1 or 2	18	48	23
3 or more	77	34	6

Students were asked if their father, mother, or older sibling(s) smoked. Again, there is a noticeable difference in the experiences of smokers and non-smokers. Smokers are more likely to have an immediate family member who smokes.

Family Member Smokes	Percentage of Students Responding		
	Daily Smokers	Occasional Smokers	Non-Smokers
Father Smokes	44	27	19
Mother Smokes	33	21	14
Older Sibling(s) Smoke	41	28	12

Schools Can Make a Difference...

Smoking often occurs in social situations among peers. Programs that help students to develop skills for resisting social influences would be helpful. The most successful programs teach students refusal skills through direct instruction, modeling, rehearsal, and reinforcement. It is also important to increase awareness of the artificial atmosphere created in our society that leads students to see the cigarette as a rite of passage into adulthood and an emblem for rebellion.

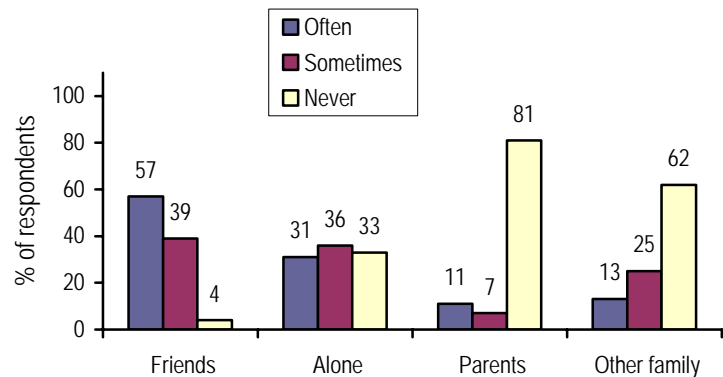
Encourage staff, students and their families to promote a non-smoking norm even if they are smokers themselves. Let parents know that even when they smoke themselves, banning smoking in the home and speaking against smoking reduces the likelihood that their children will smoke.

Student Smoking Patterns

We asked students who consider themselves smokers where, when, and with whom they smoke. Their responses to these questions provide a more complete picture of smoking within the schools surveyed and give indications of how to provide meaningful programming to address smoking.

Most students surveyed who smoke report that they often smoke with friends and seldom smoke with parents or other family. Notice that 31% of students surveyed who smoke report that they “*often*” smoke alone. This indicates that there is a notable group of smokers for whom smoking is no longer a social activity - an indication of addiction.

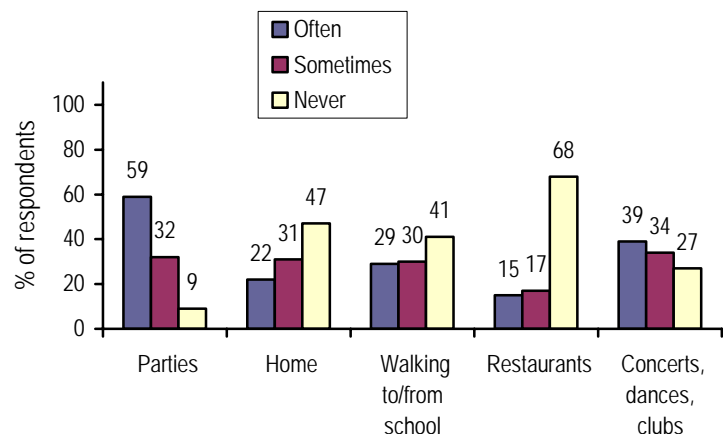
Who Students Smoke With



Students were more likely to report that they “*often*” smoke at social venues, such as parties and concerts, than at home. This is consistent with *when* students report that they “*often*” smoke:

- on weekends – 50%
- in the evening – 37%
- after school – 40%
- during the school day – 38%
- before school – 30%

Where Students Smoke



Schools Can Make a Difference...

Students’ perceptions of smoking in their school environment can influence their risk for smoking. Research has demonstrated that students are at increased risk for smoking if they often see students smoking near their school or often see students at their school smoking where they are not allowed.¹¹ Schools can try to reduce the visibility of smoking during the school day by developing policies that prevent students smoking on the sidewalk surrounding the school, or working to develop policies with neighbours and/or businesses around schools that prevent students from smoking on their property.

Preventing students from smoking during the school day could have a positive influence (e.g. decreased exchange of cigarettes with other students, decreased social modeling by other students, and less peer pressure to smoke).

How Students Obtain Cigarettes

Most of the students we surveyed are under the age of 19. Despite the fact that provincial law prohibits the sale of cigarettes to anyone under the age of 19, many students are able to buy cigarettes and in many cases they are not asked their age. In the past month, 63% of smokers stated that they were not asked their age when buying cigarettes, another 10% were asked less than half the time. Only 13% were always or almost always asked their age when buying cigarettes.

Students who smoke obtain their cigarettes in the following ways:

<i>How do you usually get your cigarettes?</i>	% responding
Buy them	27
Someone else buys them	21
Friends	36
Home	7



<i>If you buy your own cigarettes, where do you buy them?</i>	% responding
Convenience store	67
Gas station	52
Grocery store	18
Bar*	13
Restaurant	11
Friend or other person	36

Note: column may exceed 100% as students were asked to select ALL that apply.

*Please note that this response was not included on the questionnaire used to survey students in 3 of the schools.

Schools Can Make a Difference...

Establishing partnerships between school boards, schools, local health departments and tobacco retailers is important in reducing the number of youth who access tobacco. Enforcing legislation and working with schools on the issue of social supply (students sharing tobacco) on school property can reduce youth access to tobacco. Retailer education and increased compliance with laws that prohibit sales to minors can be another way to effectively reduce youth tobacco use. Consider offering incentives (such as recognition in local papers or contests) to stores that refuse to sell tobacco products to minors or cracking down on stores that do sell to youth.

School Smoking Policies

The 1994 Ontario Tobacco Control Act banned smoking on school property to reduce students' exposure to smoking during the school day. Survey results for your school show that although many students smoke while "at school," most leave school property to do so.

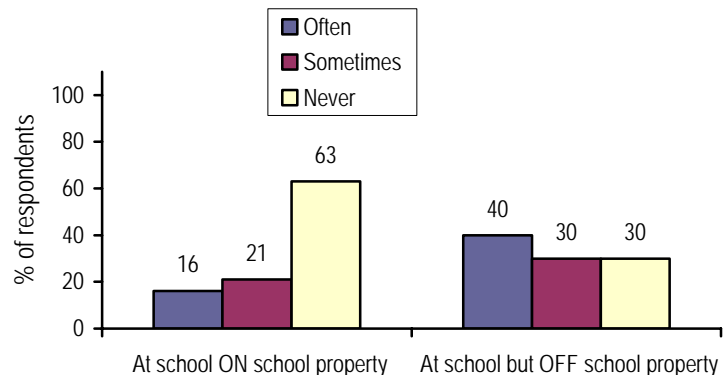
Still, 37% of smokers within the schools surveyed reported that they often or sometimes smoke on school property during the school day.

Visibility of students smoking can be an important social influence. Within the schools surveyed, 87% of all students said that the statement, "I often see students smoking near this school," is true or usually true.

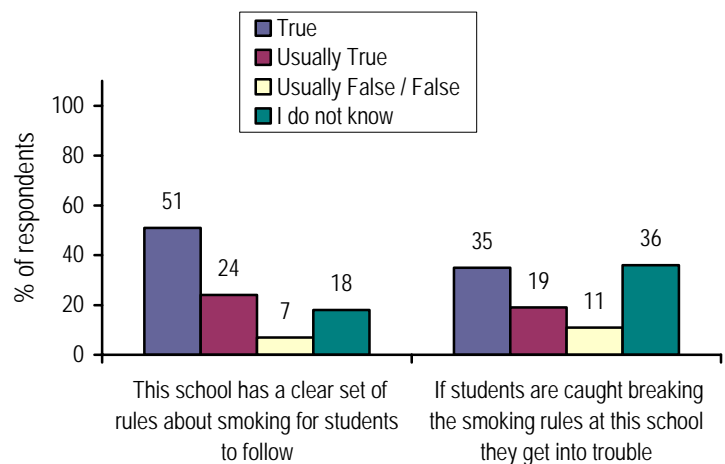
All students were asked about their perceptions of school rules on smoking and their enforcement. When students were asked, "How many students at this school smoke where they are not allowed to?" 63% of them responded "a lot" or "some".

As the graph on the right shows, many students reported that the school has a clear set of rules about smoking, and that students caught breaking the rules face consequences. However, a number of students reported that they did not know about the rules and consequences at their school.

Smoking During School



Awareness of Smoking Policies



Schools Can Make a Difference...

The education and enforcement of the Ontario Tobacco Control Act and the perception of enforcement are crucial to the success of school smoking bans. A recent study found that school smoking bans that were strictly enforced were related to an 11% decrease in the uptake of smoking.¹² To obtain this type of a reduction, it is important that students perceive that most or all students obey the rules. It is important for students to understand that the rules are not arbitrary, but intended to protect the health of students.

Students' Perceptions of Smoking

We asked students, “How many people your age do you think smoke cigarettes?” The table below shows students’ estimation of the smoking rate within the schools surveyed compared to the actual smoking rate of 16%; responses that are an overestimation of the actual smoking rate are shaded in blue, accurate responses are shaded in yellow and responses that are an underestimation are shaded in burgundy.

Students’ Perceptions of Peer Smoking Rates

Response options (%)	Percentage of Students Responding			
	Smokers	Non Smokers	All	
91-100%	7	1	2	79% overestimated
81-90%	4	3	3	
71-80%	9	6	7	
61-70%	10	9	9	
51-60%	9	9	9	
41-50%	11	12	12	
31-40%	17	19	19	
21-30%	15	18	18	14% accurately estimated
11-20%	12	15	14	
0-10%	5	8	8	8% underestimated

The results show that the majority of students (78%) within the schools surveyed (83% of smokers and 77% of non-smokers) believe that smoking is more common than it actually is; 14% of students have an accurate perception of the smoking rate, and 8% underestimated.

Schools Can Make a Difference...

Correcting misperceptions can alter students’ attitudes about smoking, especially those related to the creation of “peer pressure”. Communicating these results in the school newspaper, on a bulletin board, in an assembly or in other ways may help to show students that smoking is not as common as they think. Remember that repeated long-term exposure to these new ideas will be necessary to change attitudes about smoking.

Susceptibility to Smoking

There is a relatively small window in life when one is susceptible to becoming a smoker. Most established smokers start experimenting with cigarettes between the ages of 10 and 18.¹³ Once one starts to smoke it can be very difficult to quit. Therefore, it is important to intervene before susceptible students start smoking.

Students who feel strongly that they will not try smoking in the future and who feel they can resist peer pressure to smoke are less likely to begin smoking.

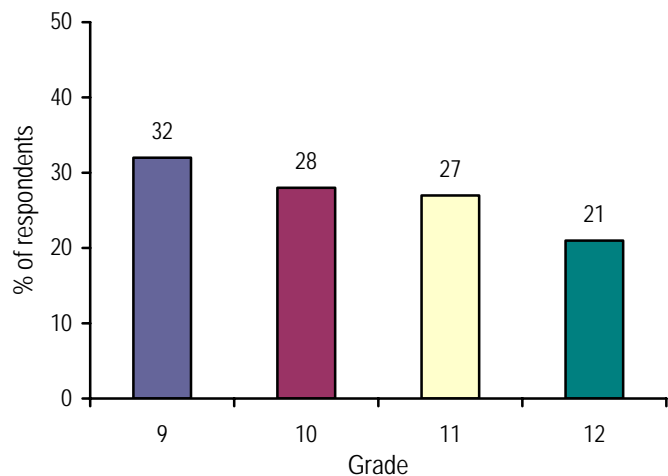
We asked students who have never smoked two questions about their intentions to remain smoke-free:

- “Do you think in the future you might try smoking cigarettes?” and
- “At any time during the next year do you think that you will smoke a cigarette?”

We also asked one question relating to their confidence in resisting peer pressure:

- “If one of your best friends were to offer you a cigarette, would you smoke it?”

Percentage of Students Susceptible to Smoking



From their answers to these questions we determined that 28% of the students who have never smoked a cigarette have low confidence in their ability to remain smoke-free in the future, and are thus at high risk to begin smoking.

We also asked students who had never smoked if they had ever been curious about smoking a cigarette. Within the schools surveyed, 15% responded yes.

Schools Can Make a Difference...

Most experts agree that there are stages to smoking uptake including (1) a preparation phase in which intentions and expectations regarding smoking shift, (2) early experimentation, (3) regular but non-daily smoking and (4) established smoking. Students whose attitudes and beliefs predispose them to smoking may soon start to experiment. Smoking control efforts should focus on preventing students from becoming susceptible, preventing susceptible students from experimenting, as well as encouraging experimenters and established smokers to quit.

Trying to Quit Smoking

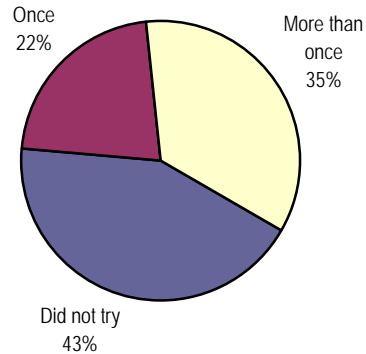
Quitting smoking is not an easy process for adults or for youth. New evidence indicates that the first symptoms of addiction to nicotine may occur as early as a few days or weeks after the beginning of even occasional smoking by youth.¹⁴ Students can have a very difficult time quitting even when they have strong motivation to do so.

Students were asked about support for those who wish to quit smoking. When they were asked if there was help available at their school, 46% said yes, help is available, 7% said that there is no help available and 47% did not know. When students were asked if they would join a quit smoking program if one were offered at the school, 17% of smokers said that they would.

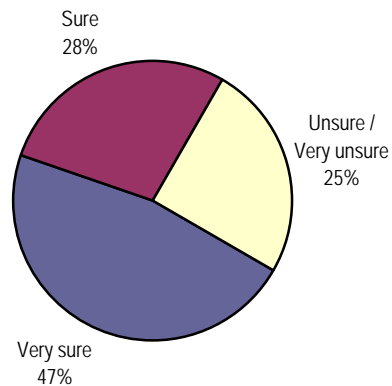
Many smokers make several quit attempts before successfully maintaining a long-term smoke free lifestyle. When daily smokers within the schools surveyed were asked, “*How many times in the past year have you tried to quit smoking?*”, many (57%) reported one or more quit attempts.

Students were also asked how sure they were that they could quit smoking. Despite the large proportion of students who feel they could quit smoking if they wanted to, many students do not have a clear quit date in mind. When students who smoke were asked about their plans to quit smoking, 60% of females and 45% of males stated they plan to quit but are not sure when; 29% of females and 27% of males plan to quit within a week to a year; and, 11% of females and 28% of males have no plans to quit.

Number of Quit Attempts in the Past Year



How Sure are Students that They Could Quit



Schools Can Make a Difference...

Cessation services are an important aspect of a comprehensive approach to tobacco control. If schools within Ottawa provide such services, consideration should be given to promoting them. If there currently are no services in place, implementing a program would be of great benefit to the many students within Ottawa who would like to quit smoking but find it difficult to do so. The resource list on the project website (www.shapes.uwaterloo.ca) suggests several good cessation programs that can be implemented by the school alone or in conjunction with your local public health department.

This special section outlines students' responses to items on tobacco denormalization designed to evaluate the *exposé* Smoke-Free Youth Project.

Tobacco Denormalization & Youth: The *exposé* Smoke-Free Youth Project

What is Tobacco Denormalization?

Tobacco denormalization attempts to change community attitudes and beliefs towards tobacco use as a normal and socially acceptable behavior. Denormalization campaigns seek to counter tobacco industry marketing and increase pro-health messages. For example, initiatives such as the *truth* campaign in the United States highlight the conduct of the tobacco industry and educate both smokers and non-smokers about their tactics.¹⁵

Counter-marketing initiatives work by encouraging youth to act against a powerful institution of authority – the tobacco industry – rather than against health authorities or pro-health messages.

The *exposé* Smoke-Free Youth Project

The *exposé* Smoke-Free Youth Project in Ottawa incorporates many counter-marketing themes in its activities. As part of the *exposé* evaluation, we assessed important measures of denormalization, including attitudes towards smoking and the tobacco industry.

What Students Think About Smoking

Is smoking cool? Tobacco denormalization includes changing how youth perceive smoking, beyond the health risks alone. What are the benefits to smoking: does smoking help students to make or keep friends? Is smoking an attractive habit? For some youth, these factors may be more important to whether they smoke than the serious health risks of smoking.

Social Beliefs

- Overall, 7% of students think that smoking makes people their age look cool
- 14% feel that their friends approve of smoking
- 33% of students say that their friends would date a smoker

Health Beliefs

- 90% of students agreed that smoking causes serious health damage
- 87% agreed that smoke from other people's cigarettes is harmful to their health

Aesthetic and Economic Beliefs

- 70% of students think that smoking is disgusting
- 87% think that smoking is a waste of money

What Students Think About the Tobacco Industry

Nobody likes the idea of being exploited, especially by businesses trying to make money. Not surprisingly, youth attitudes towards the tobacco industry have been found to be an important predictor of smoking behaviour.¹⁶ For example, youth who perceive that they are being targeted by the tobacco industry and its marketing campaigns are less likely to smoke. We asked students their attitudes and beliefs towards tobacco companies and the marketing initiatives targeting youth to get an understanding of this relationship.

General Attitudes towards Tobacco Companies

- Overall, only 6% of students think that tobacco companies do good things for their community
- A small percentage of students (9%) think that the tobacco companies can be trusted to tell the truth about their products
- 84% agreed that making money is more important to tobacco companies than the health of people who smoke their cigarettes

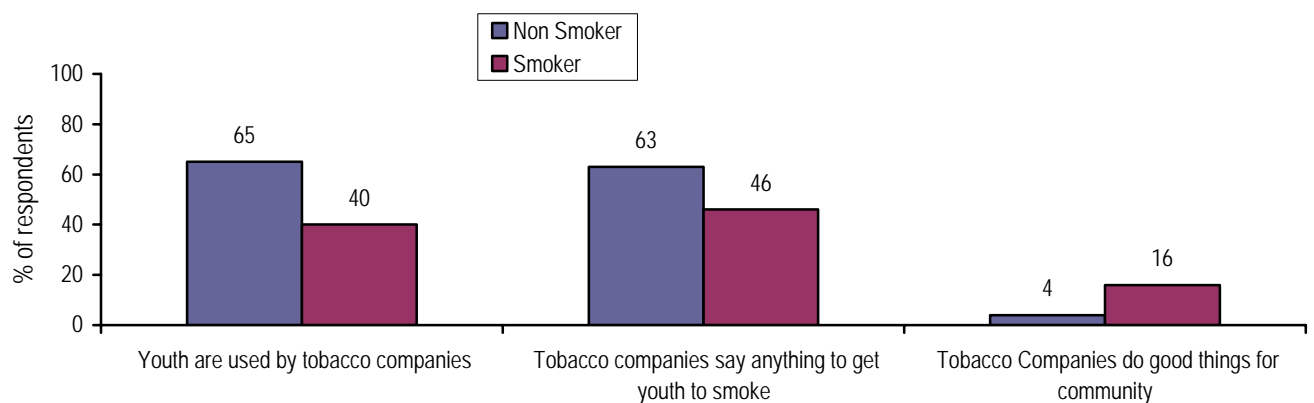
Tobacco Industry Manipulation

- 71% of students think that tobacco companies are directly targeting people their age
- 60% think that tobacco companies will do or say almost anything to get people their age to smoke
- 60% of students feel that people their age who smoke are being used by tobacco companies
- 67% agreed that tobacco companies try to manipulate young people to think smoking is cool

Differences in Attitudes of Smokers and Non-Smokers

Even though most youth report anti-tobacco industry attitudes, whether or not youth smoke seems to make a difference. For example, non-smokers are more likely than smokers to feel that people their age who smoke are being used by tobacco companies.

Smokers and Non-Smokers Attitudes toward Tobacco Companies



Student Exposure to Tobacco Marketing & Promotions

In 2002 Canadian tobacco companies spent over \$300 million to promote tobacco.¹⁷ Although direct forms of advertising have been prohibited for years, the tobacco industry in Canada continues to find ways of promoting its products (such as retail promotions, promotional events in bars, etc.). We know that this marketing has strong influence on tobacco use. Within the schools surveyed:

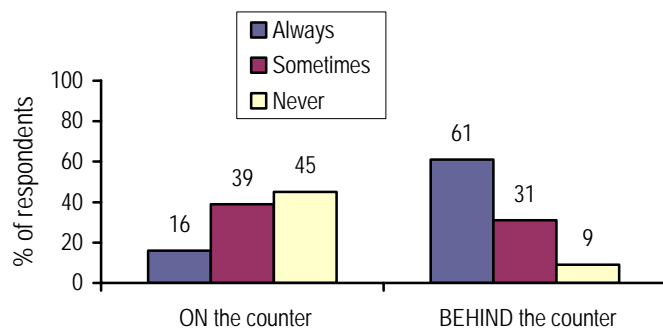
- 85% of students report noticing tobacco advertising and promotions in the last 6 months; specifically, 83% of smokers noticing tobacco advertising and promotions compared to 86% of non-smokers.
- 32% of students reported noticing sporting events or teams sponsored by a tobacco company within the last 6 months.
- 26% of students have noticed parties or music events sponsored by tobacco companies in the last 6 months.

Another way that tobacco companies promote their products is through displays at the point of sale, such as on counter tops or as “power walls”. Power walls are large, colourful, highly visible behind-the-counter displays of cigarette packages, and are one of the last forms of tobacco advertising allowed in Canada.

The visual prominence of power walls helps to “normalize” tobacco products by giving the impression that smoking is socially acceptable and prevalent.¹⁸

We asked students how often they had noticed cigarette packs displayed behind or on the counter at convenience stores, corner stores, or gas stations in the last 30 days. The graph on the right shows that most students are exposed to this type of tobacco advertising on a regular basis.

Frequency of Noticing Cigarette Displays



What Do Students Think About Tobacco Marketing?

It is clear from their responses that many students have noticed some form of tobacco marketing, but what do they think about it and what effect does it have on them? We asked students their thoughts on some aspects of tobacco advertising, particularly that aimed at youth:

- 60% of students say that tobacco companies advertise to people their age
- 33% agree that tobacco companies use athletes and sports sponsorship to sell cigarettes to people their age.

We also asked students if they would ever use or wear something that has a cigarette company name, picture or logo on it such as a free t-shirt, hat or bag:

- 9% said yes, they would,
- 16% said maybe; and,
- 64% said no.

Anti-Smoking Messages in School and Beyond

To evaluate anti-smoking campaigns, it is important to understand whether students are familiar with initiatives such as the *exposé* Smoke-Free Youth Project, and whether exposure to these initiatives is related to smoking behaviour or key predictors of smoking. It is also important to look at students' exposure to other anti-tobacco messages at school and in the community.

Awareness of *exposé*

We asked students if they had heard about the *exposé* Smoke-Free Youth Project; 74% said they had. We also asked if they had heard about the *exposé* mass media contest; 47% of students reported that they had heard of this contest. These students then selected all applicable responses from a list of potential sources of information regarding the contest.

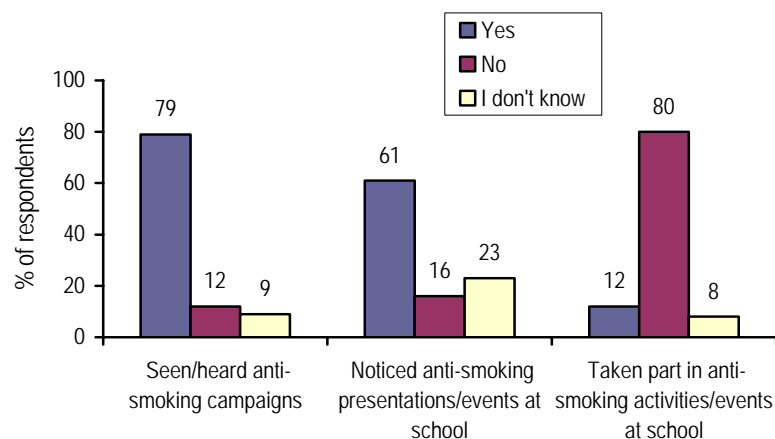
The 47% of students who were aware of the *exposé* mass media contest heard about it in these ways:

- from a friend – 22%
- from a teacher – 49%
- television – 17%
- from a family member – 3%
- radio – 6%
- pamphlet – 22%

School and Community Anti-smoking Messages

To determine students' exposure to and awareness of anti-smoking messages in the school and community, we asked students whether they had noticed or participated in anti-smoking campaigns in the last year. Although many students reported noticing anti-smoking campaigns and events, few had taken part in these activities.

In the last year, have students...



Students were also asked how many classes or lectures they had in the last year that talked about cigarette smoking. Within the schools surveyed, students reported:

- No classes – 24%
- 1 or 2 classes – 53%
- 3 or 4 classes – 17%
- 5 or more classes – 7%

Schools Can Make a Difference...

Involvement in the *exposé* Smoke-Free Youth Project is a great way to bring your students anti-tobacco messaging with a new and innovative perspective. For more on *exposé*, talk to your Ottawa Public Health representative, or visit the website at <http://www.smokefreeottawa.com/expose/index.html>.



Part B:

**Physical
Activity
within the
Schools
Surveyed**

The Issue

Physical Activity is a School Issue

- Students who participate in school sports are less likely to drop out of school and tend to have higher educational aspirations.¹⁹
- Increased participation in physical education is associated with improved classroom behaviour, as well as increased enthusiasm toward school and school work.²⁰
- Physical activity is associated with improved behaviour and cognitive functioning in youth with attention-deficit disorders and problems controlling impulsive actions.²¹

Physical Activity is an Adolescent Issue

- Over half of Canada's youth are physically inactive; 82% of youth are not active enough for optimal growth and development.²²
- Physical activity strengthens the heart, bones and muscles, improves fitness and can help achieve a healthy body weight.²³
- Physical activity is associated with increased self-esteem and decreased depression and anxiety.¹⁹

Children spend 40% less time being physically active than they did 15 years ago.

"If the trend isn't reversed, today's children could become the first generation that dies at a younger age than their parents."

(Dr. Rick Bell, Canadian Association for Health, Physical Education, Recreation and Dance)

Physical Activity is a Community/Public Health Issue

- Behaviours started in childhood and adolescence tend to carry over to adulthood²⁴; 56% of Canadian adults 20 years and older are considered physically inactive.²²
- Physical inactivity is associated with an increased risk of type 2 diabetes, obesity, coronary heart disease, cancer and osteoporosis, which can lead to decreased quality of life and premature death.²⁵
- In 2001, the economic burden of physical inactivity in Canada was estimated at \$5.3 billion. This represented 2.6% of all health care costs in Canada that year.²⁶

Schools Can Make a Difference...

Effective action to increase youth physical activity will promote healthy lifestyles. Youth physical activity can be increased by letting students know that their school and community care, increasing awareness through education, as well as creating a supportive school environment and services (rules, facilities and programs that facilitate or promote activity). Schools, local public health and community agencies can work together to achieve common goals for physical activity.

See the *SHAPES-Ontario* website at www.shapes.uwaterloo.ca for a list of useful resources and websites.

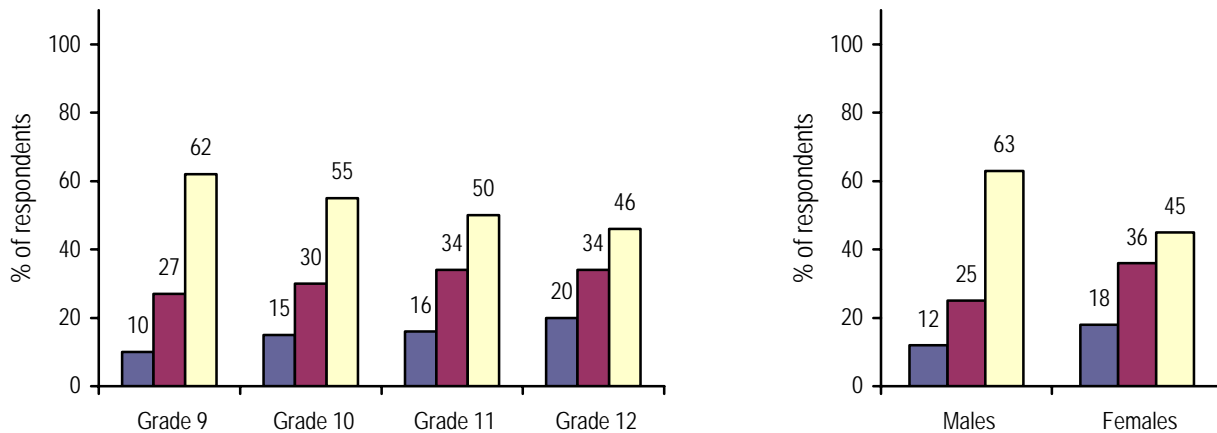
Physical Activity Levels within the Schools Surveyed

Levels of activity for youth in Canada are low. In fact, only 44% of Canadian youth are physically active, and just 18% are considered to be active enough to meet recommendations for optimal growth and development.²²

Physical Activity is measured in kilocalories per kilogram per day (KKD). KKD is a measure of how much energy a person expends in a day. It is recommended that youth expend at least 6 to 8 KKD for optimal growth and development.²⁷

Physical Activity Levels within the Schools Surveyed

■ Inactive (< 3.0 KKD) ■ Moderately Active (3.0 KKD to 8.0 KKD) ■ Active (≥ 8.0 KKD)



Based on student reports, 54% of students within the schools surveyed are active, and another 31% are considered moderately active. However, 15% of your students are physically inactive, and therefore of concern.

Please use caution when interpreting these results; our testing of the questionnaire indicates that students tend to over-estimate their time spent being physically active.

For example, time spent waiting in line for a ski lift or at lights to cross a street may be counted as active time on questionnaires.

Schools Can Make a Difference...

Schools can help to decrease the number of students who are physically inactive and increase the number of students who meet guidelines for optimal growth and development by providing opportunities to be physically active at school and by encouraging students to be active outside of school.

Strength and Flexibility Training

Strength Training

Strength training involves resistance training to enhance one's ability to exert or resist force, and helps develop and maintain strong muscles, healthy bones and healthy body weight and image. It is recommended that youth train 2-3 days per week to achieve gains in strength.²⁸

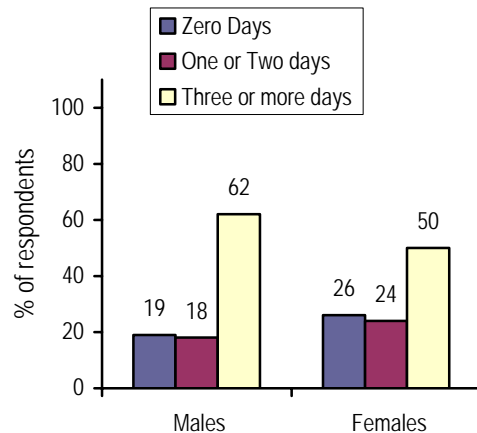
At the schools surveyed, 78% of students reported participating in strength training activities such as push-ups, sit-ups, pilates and weight lifting. Of students that reported participating in strength training, males reported that they strength train an average of 4.2 days per week, and females reported that they strength train an average of 3.6 days per week.

Flexibility Training

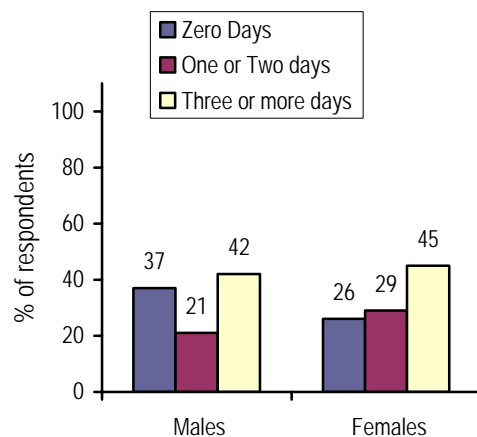
Flexibility training helps to maintain the ability to use joints through the full range of motion. It is an important component of living a healthy active lifestyle, but is often overlooked in physical activity programming. While there are no specific guidelines for youth, Canada's Physical Activity Guide recommends that adults do flexibility activities 4 to 7 days a week as part of a regular physical activity program.²⁹

At the schools surveyed, 68% of students reported doing exercises for flexibility such as stretching and yoga. Of students that reported participating in flexibility training, males reported that on average they exercise for flexibility 3.7 days per week, and females reported that they average 3.4 days of flexibility training per week.

Frequency Per Week of Strength Training



Frequency Per Week of Flexibility Training



Schools Can Make a Difference...

Strength and flexibility are important components of being physically fit. As with any activity, students should know how to do these activities safely and properly. Students can be encouraged to do strength and flexibility training through exposure to these activities in physical education classes. Strength training clubs at school can also be useful. Consider a range of activities, such as weight lifting, pilates, yoga, plyometrics, and circuit training. Clubs should emphasize participation and proper technique (rather than amount of weight lifted). Students should use appropriate individual exercises and workloads, and regularly monitor their progress. It may be beneficial to start a girls-only club; this can allow girls to train without feeling intimidated by boys or self-conscious of their abilities.

When Students are Active

There are various times and ways that students can be active. We asked students questions about different opportunities they have for physical activity - transportation to and from school, intra-curricular activity and extra-curricular activity.

We asked students about how they usually get to and from school each day.

- 18% of students use active modes, such as cycling, walking, running or skateboarding,
- 61% of students use inactive modes, such as getting a ride or taking a bus, and
- 21% of students use a combination of active and inactive modes of transport.

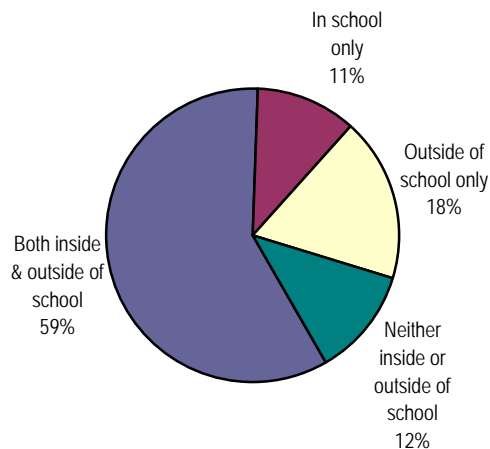
It is important to ensure that students are *active* as much as possible during Physical Education class time. A survey of school staff in Ontario determined that students are active approximately 79% of the time in Physical Education class.³⁰ In comparison, students within the schools surveyed report the following:

- *less than 31 min* being active – 11%
- *31 to 45 min* being active – 20%
- *46 to 60 min* being active – 39%
- *more than 1 hour* being active – 31%

Extracurricular activities, both those offered at school and by other community groups, are important opportunities for physical activity.

This graph compares the percentage of students who participate in physical activity only in school, only outside of school, both inside and outside of school, and neither. Within the schools surveyed, 70% of students participate in physical activity in school; this illustrates the importance of school physical activity programs to your students. Twelve percent of students do not participate in physical activity at either time, and could benefit from school programs.

Participation in Extracurricular Activity



Schools Can Make a Difference...

Remind students that active transportation - biking or walking to school - can help them to achieve their daily exercise requirements, and is also environmentally friendly. Schools can encourage active transportation by providing a safe bike lock area for students and providing secure areas where students can leave equipment (e.g. in-line skates, skateboards, helmets).

Increasing active time in Physical Education classes is a good way for schools to increase students' activity levels. One way to increase active time is using small groups to decrease wait times during activities. Physical activity should not be forced or taken away as a form of punishment, since this deters youth from participating in physical activity.³¹

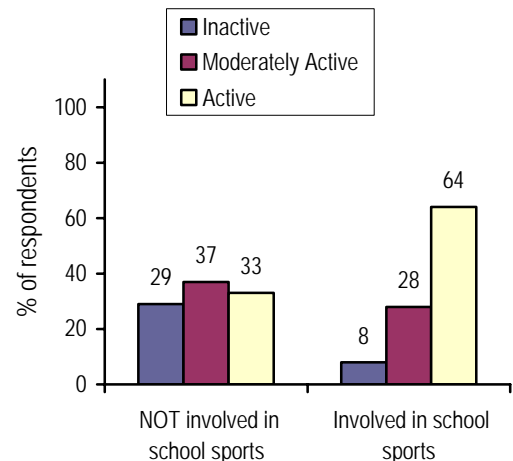
Involvement in School Sports

We asked students about their involvement in intramural/house league sports, varsity/competitive school sports, and “other physical activities” at school (such as playing in the gym or outside). Here are rates of participation reported by students at your school:

- 32% in intramural sports (males 39%, females 24%)
- 40% in varsity sports (males 45%, females 35%)
- 58% in “other physical activities” (males 65%, females 51%)

Overall, 70% of students participated in at least one school sport (males 76%, females 65%); in this group, only 8% of students are considered inactive. Compare this to the 30% of students who do not take part in intramural or varsity sports (males 24%, females 35%); 29% of these students are classified as inactive. As the graph to the right shows, students who participate in school sports are more likely to be active.

Student Physical Activity Levels When Involved in School Sports



We also asked students what they thought about the number of sports offered at their school:

- 22% said there are too few sports offered
- 44% said the number of sports offered is just right
- 3% said there are too many sports offered
- 30% said it did not matter to them

Schools Can Make a Difference...

Intramural and varsity sports can be great ways for getting more students involved in physical activities. Students who are involved in these activities are more likely to continue being physically active throughout their adulthood.³² Participation in intramural and varsity teams also has social benefits; it presents a great opportunity to meet new friends and build camaraderie amongst students, especially if teams are co-ed or represent multiple grades. Focus on broadening participation in varsity and intramural sports by offering a balance of both in a variety of sport and activity programs.

Increasing participation is often easiest through intramural activities since everyone at school is eligible to participate and students can have fun taking part in sports regardless of their athletic ability. An easy way for your school to increase intramural sport offerings would be for students to create their own intramural leagues for community service hours or for credit. Organizing and running an intramural program can be a great project for a senior student looking for experience in sport management.

Varsity teams can include more students by having practice squads, which can expand participation in team-based events and develop skilled players for subsequent years. Individual events, like track and field, can include everyone interested, or select students for meets based on performance or by rotating team members.

Other Activities

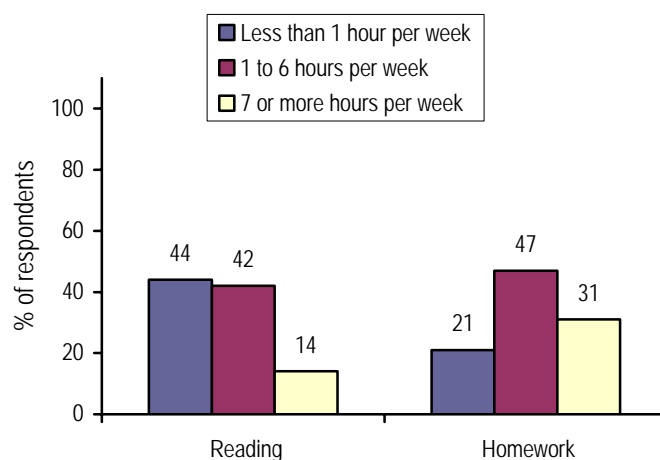
Sedentary activities include things such as watching television, using the computer, reading and homework. Some of these activities are counterproductive to physical activity, while others are beneficial. To promote overall health, students should decrease the total amount of time they are inactive while maintaining homework and reading time.

Leisure time reading has well known benefits to students. We asked students how much time they spend reading (not including for school or work) and doing homework per week. Results are shown in the first graph.

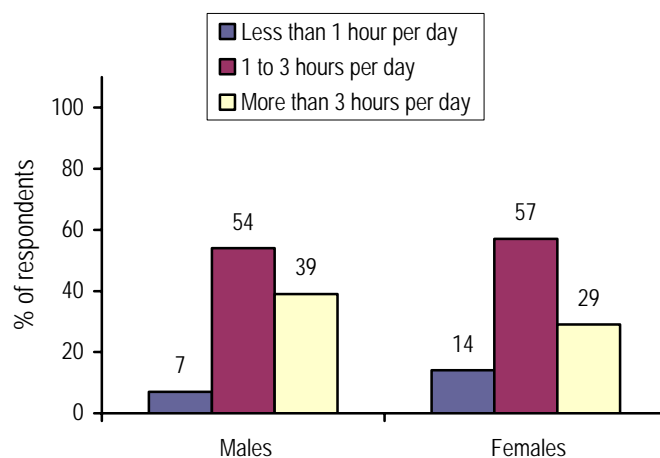
Sedentary activities, such as watching television, are incompatible with healthier, more active choices for leisure time activities. In addition, watching a lot of television has been linked to increases in smoking uptake in youth.³³ Students should aim to decrease their “screen time”, which is time spent in front of the television, playing video games or on the internet.

The second graph shows (by sex) the amount of time per day that students spend watching television/movies, surfing the internet, playing video/computer games, talking on the phone and instant messaging. Within the schools surveyed, 34% of students report that they typically spend more than 3 hours on these activities per day.

Time Reading and Doing Homework per Week



Time on TV, Computer, and Phone per Day



Schools Can Make a Difference...

Help students build awareness of the time they spend inactively by having them keep track of their activities for a period of time. Students can set goals for reducing inactive time and record progress toward their goal. Consider running a personal challenge that has students commit to being active in place of one half-hour TV program for one or two weeks. Offer a discussion in class so students can share their activities with peers to encourage and provide new ideas.

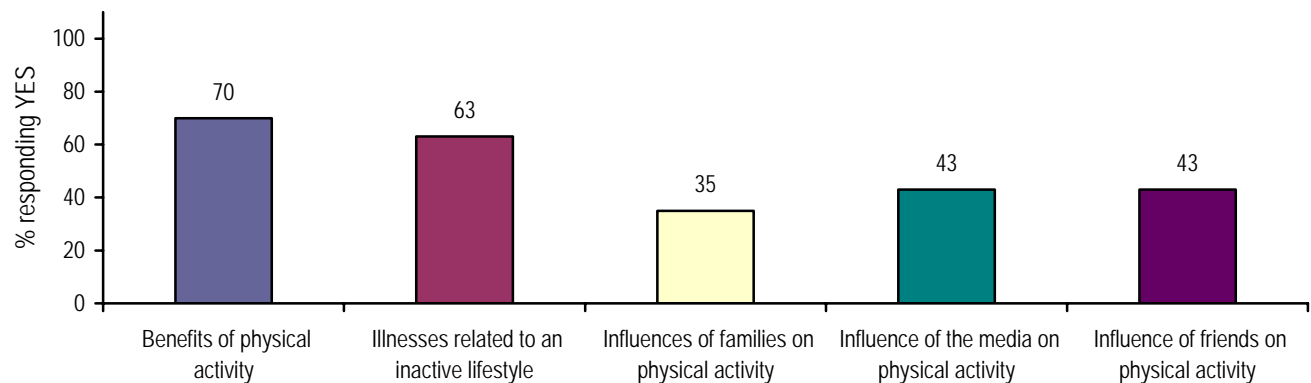
Students' Perceptions of Physical Activity

We asked students for their opinions about physical activity and their perceptions of how, and if, physical activity issues are taught at school. Research has shown that a student's attitudes towards activity affect activity levels.³⁴ Within the schools surveyed:

- 70% of students felt that emphasis was placed on developing positive attitudes about physical activity and 67% felt that emphasis was placed on developing self-esteem.
- Almost all students (95%) felt students should have opportunities to participate in physical activity each day.
- Most students (68%) thought that physical education should be a required school subject.

It can be useful to remind students of the facilities available at their school, how physical activity and proper nutrition are taught at your school and how peers, family and other sources influence their activities. We asked the students if the subjects at school taught them about topics related to physical activity. The graph below shows the percentage of students who thought that these issues were taught at their school.

Physical Activity Issues Taught in School



In regards to physical activity facilities within the schools surveyed, students had these thoughts:

- 76% of students felt the indoor facilities met their needs,
- 70% of students felt the outdoor facilities met their needs, and
- 73% of students felt that the facilities at this school accommodated physical activity even when the weather is extreme (e.g., raining or snowing).

Schools Can Make a Difference...

Schools can help make students aware of physical activity issues in many ways. Physical education and health classes are not the only subjects where influences on activity can be taught. For example, English and Business classes can teach students about the influence of the media on their activities, and Social Studies classes can teach students about how their family and friends influence their level of activity. Teachers can also help students make the connection between physical activity and chronic diseases such as diabetes, heart disease and diseases such as anorexia, bulimia and obesity.³⁵ Reminders (announcements, bulletin board notices, etc.) about lunch time activities and after school programs can increase students' awareness of the facilities available at your school.

Social Influences for Physical Activity

Peers and family members can influence adolescents' behaviours directly (peer pressure) or indirectly (modeling). We asked students a series of questions relating to peer and family physical activity.

All students were asked, "How many of your 5 closest friends are physically active?" Active youth are more likely to report that they have friends who are active compared to inactive students.

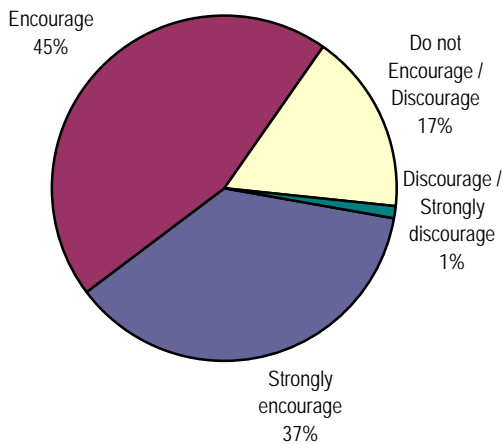
How many of your 5 closest friends are physically active?	Percentage Responding		
	Inactive Students	Moderately Active Students	Active Students
0	13	5	3
1 or 2	33	23	13
3 or more	54	72	84

Students were asked if their father and mother were physically active, somewhat active, or inactive. Generally, active youth are more likely to report that they have active parents.

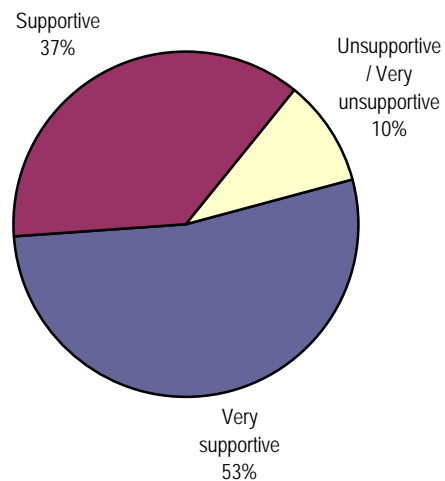
Student reports that Parent is "Active"	Percentage of Students Responding		
	Inactive Students	Moderately Active Students	Active Students
Father is Active	34	37	46
Mother is Active	27	28	34

Students were asked how much their parents encouraged and supported them to be physically active. Within the schools surveyed, 77% of students had parents who both encouraged and supported them.

Parental Encouragement of Physical Activity



Parental Support for Physical Activity



Physical Activity and Healthy Body Weight

Physical activity and nutrition are both important components in determining a person's body weight. This report focuses primarily on physical activity; however, healthy eating is important to consider when interpreting these results.

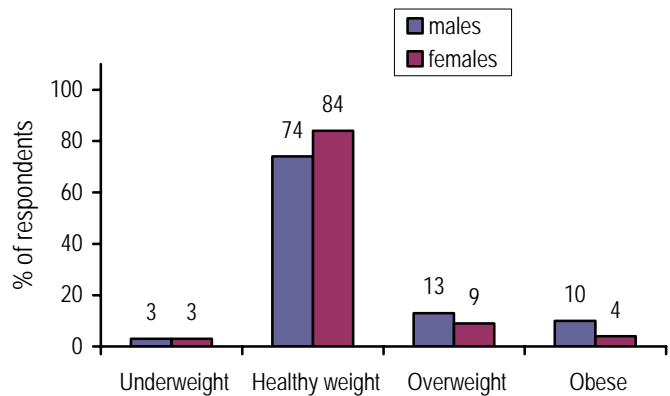
Healthy body weight can be determined using the body mass index (BMI).³⁶ BMI is a measure of a person's weight in comparison to their height.

Using BMI, 37% of Canadian youth are considered overweight.²² Being overweight during childhood can lead to increased illness and risk of chronic diseases such as heart disease, cancer and type-2 diabetes.³⁷ Overweight and obese youth are often stigmatized by peers and adults.^{38,39} These youth may experience psychological stress, and have a poor body image, as well as poor self-esteem.³⁶ Although this report does not detail issues related to being underweight, it is also important to be conscious of the risks of excessive exercising, improper dieting and eating disorders such as anorexia and bulimia.

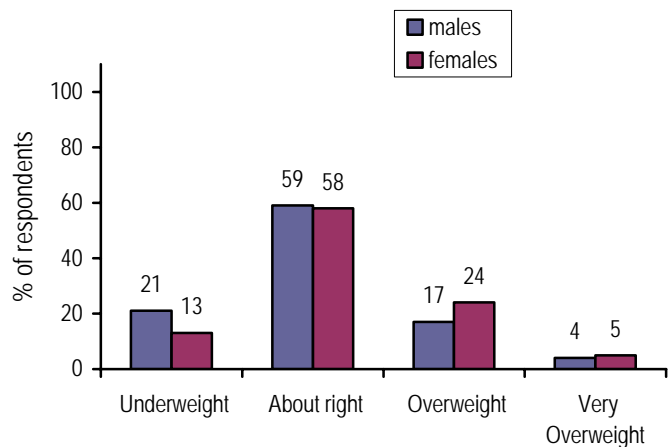
At the schools surveyed, 79% of students fall within the recommended healthy weight category for their age. Many (58%) students feel their body weight is "about right".

A healthy body weight is one component of a well-balanced lifestyle. Accurate perceptions of one's weight are important, since perceiving one's weight incorrectly could lead to unhealthy eating and exercise habits and poor self-image. Approximately 62% of students at the schools surveyed had accurate perceptions of their body weight.

Students BMI Categories
(based on self-reported height and weight)



Students Perceived Weight Categories



Schools Can Make a Difference...

In addition to achieving a healthy body weight, proper nutrition and healthy eating habits are important to the growth, development and cognitive function of adolescents. A Physical Education unit talking about nutrition and weight should include teaching students about proper weight and false perceptions. Having students keep a food diary for a few days can help them become aware of what foods they are eating and where they can improve their dietary habits. Canada's Food Guide to Healthy Eating and additional resources for teaching children and adolescents about healthy eating can be found on the *SHAPES-Ontario* website (www.shapes.uwaterloo.ca). Part of a comprehensive approach to student health is to help students make healthy food choices; schools can help by providing healthy food options in the cafeteria and vending machines.



Part C:

**The School
Environment
within the
Schools
Surveyed**

School Connectedness

In addition to programs and education, school rules and a sense of connection to the school can support students in making healthy choices. Students who feel an attachment to their school, and who consider their teachers to be supportive, are less likely to smoke or to engage in other unhealthy or risky behaviours.^{35,36} Activities to build a positive school community are helpful in reducing and preventing smoking, and in increasing physical activity.

Here is what students at the schools surveyed said about their school environment:

<i>How strongly do you agree or disagree with the following statements?*</i>	Percentage of Students Responding			
	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel close to people at my school.	27	56	13	4
I feel I am part of my school.	25	56	14	5
I am happy to be at my school.	30	50	13	7
I feel the teachers at my school treat me fairly.	21	58	15	6
I feel safe in my school.	28	59	7	6

*Please note that this question was not included on the questionnaire used to survey students in 3 of the schools.

Schools Can Make a Difference...

Providing students with opportunities to provide input in the decision-making and organization of school activities can help them feel more connected to their school. For example, students could help to decide on new equipment or facility upgrades, and then organize and run a fundraising event for it. Students will feel like they have contributed something to their school and that their opinions are valued. They will also be more enthusiastic about fundraising and will be more likely to use the new equipment or facilities.

Another suggestion is to have students brainstorm ideas to decrease the smoking rates or increase physical activity at school. By working together towards a common goal, students will feel closer to each other and will feel like their school cares about their health.

The School Environment

The school environment plays an important role in helping students make healthy lifestyle choices. Research shows that school-level factors influence smoking rates independent of family, economic and community factors.⁴⁰ Schools are uniquely positioned to influence the health and well-being of students, ideally in partnership with home and community, but even independently.

Smoking Prevention

One of the most obvious ways schools can support students to stay smoke-free is through tobacco control education. Considerable research has been done to determine the elements of successful smoking prevention curricula. Compare the curriculum and teaching time devoted to smoking prevention in your school with the elements in the box below and consider ways to improve or maintain your programs.

Youth who participate in higher levels of physical activity are less likely to smoke, or they smoke fewer cigarettes. Team sport participation seems to be especially associated with decreased likelihood of smoking. Some schools have students sign contracts to not smoke while they are representing the school in a sporting event.

School-based smoking prevention programs should:

- include at least 10 sessions devoted specifically to tobacco use prevention
- be delivered in at least two school years (sessions may be blocked or distributed over the year)
- begin immediately before the age when uptake of tobacco is highest, usually just before the transition to middle or secondary school
- focus on short-term health and social consequences (e.g., shortness of breath and smelly clothes)
- include training in refusal skills including modeling and practice of resistance skills
- include information on social influences on tobacco use especially peer, parent and media and demonstrate that smoking is not normative for adolescents
- involve students in the delivery of the program (teacher led with student involvement works best)
- include adequate teacher training and a high level of teacher commitment to the program

Source: Health Canada and the Canadian Cancer Society -- efficacy criteria used in the assessment of smoking prevention programs.⁴¹

Schools Can Make a Difference...

- Correct misconceptions about the benefits of smoking and emphasize the short-term downsides and social consequences of smoking.
- Consider focusing on media literacy and consumer savvy. Several successful youth led campaigns have focused on exposing tobacco industry tactics for attracting youth. See www.smokefreeottawa.com/expose/ and www.thetruth.com for examples of innovative programs.
- Provide an environment where smoking is clearly not acceptable, where smoking is not convenient, and where smoking by older students is not visible. Students are especially influenced by and often find a source of cigarettes in older peers.

Increasing Physical Activity

School-based physical activity programs should:

- Involve stakeholders. By including various perspectives and voices in your planning, you can expect increased buy-in by all stakeholders. You will also find that you will build capacity as well as achieve your main objective.
- Use coordinated approaches, such as the Comprehensive School Health Approach (<http://www.schoolfile.com/cash/consensus.htm>).⁴² Within CSH there are three sub themes: (1) *physical education*, (2) *physical and social environment*, and (3) *services*. In order to change behaviour, we need to address all components of CSH. Communication through education is *necessary but not sufficient*.
- Lead through evaluation. Develop a culture in which evaluation from all stakeholders guides future planning. You can use SHAPES as an evaluation process for students and staff to assess current and novel programs and activities. Via evaluation of your school programs, you can become a leader for your school and other schools.

Here are some examples for how to involve youth, community members, parents, and staff members in physical activity initiatives:

Youth

- Modify the physical education curriculum to be partially unstructured and encourage students to create their own units within the class.
- Encourage youth to start sport and activity clubs.

Community / Parents

- Use expertise from the community where the community member's role relates to youth activity. For example, invite a personal trainer to be a guest speaker in your class to help students create personalized activity programs.
- Offer a coaching course to allow parents or community members to be a part of school teams.
- Offer an open house inviting community groups so as to help increase student awareness of these programs.

School staff

- Brainstorm ideas for how to incorporate physical activity into all subjects.
- Create opportunities for staff to model appropriate behaviours.
- Provide staff with pedometers so that they get feedback on the value of physical activity in their own lives.

Schools Can Make a Difference...

- Implement an "Active Living Week". This involves students and teachers participating in a special physical activity event each day of this week. Have the students help plan the events, such as relays or obstacles, jump rope contests or scavenger hunts.
- Post "fact sheets" in halls and stairwells that remind students and staff of the benefits of taking the stairs or walking the length of a hall one extra time.
- Include a physical component to a class *other than* physical education, such as Geography or History. Make physical activity part of the lesson plan for an interesting way to get kids involved and active. For example, geography lessons might relate to distance travelled, direction or outdoor education.

More About this Report:

The Population Health Research Group at the University of Waterloo produces individual reports for each of the schools, boards and Health Units participating in the *SHAPES-Ontario* project. It is our intention to produce useable reports at low cost. To do this we have sought the input of educators, researchers and public health practitioners. We have created a largely automated system with quality control and editing procedures to ensure that the data you receive is accurate and can be returned to your Health Unit in a timely manner.

We value your input and would welcome your feedback on this report and/or on your Health Units participation in this project. Please contact us on the web at www.shapes.uwaterloo.ca or by e-mail: shapeson@healthy.uwaterloo.ca.

THANK YOU FOR YOUR PARTICIPATION.

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