

## Physical Activity

### A. RRFSS Provincial Sample Pilot Project (PSPP)

The RRFSS PSPP is intended to provide reliable and representative estimates for 2011 RRFSS indicators for Ontario as a whole, and in so doing:

- Provide a valid comparator for local health unit results for selected indicators;
- Allow for a reduction in RRFSS “core” content;
- Provide a more flexible, timely system by which to collect provincially-relevant risk factor surveillance data than is currently available.

The provincial sample includes over 1800 interviews, with the number of interviews proportionate to the size of the health units’ populations. Within households, the adult with the most recent birthday is selected to participate in the survey.

### B. PSPP Evaluation

The evaluation of the RRFSS PSPP is supported by Locally-Driven Collaborative Project funding through Public Health Ontario.

The purpose of the PSPP evaluation is to summarize the implementation and results of the RRFSS PSPP, documenting what worked well and why, what the challenges were, what the benefits of the PSPP were and whether or not they were worth the costs.

The information will be used to inform decisions related to future provincial sampling in RRFSS.

### C. Data Collection

January - December 2011

(Data was collected for Ontario and for all RRFSS-participating health units during this time period)

Only RRFSS participating health units who agreed to share their data have been included in this report.

### D. Definitions

IPAQ is used to estimate and individual’s level of physical activity as well as implications for risk (see Table 1). For technical information on scoring, please visit <http://www.ipaq.ki.se/scoring.pdf><sup>3</sup>

A 95% confidence interval (CI) refers to the range of values that has a 95% chance of including the ‘true’ estimate. A large CI means that there is a large amount of variability or imprecision. When CI’s do not overlap, estimates are significantly different. CI’s were selected as the measure of significance due to their conservative nature and transparency; there is less chance of incorrectly identifying a significant difference, which is important given the multiple tests of significance. CI’s are reported in brackets or presented as  $\pm$  in the graphs. CI’s for Ontario are also presented in Figure 4 using a dashed line (---).

Coefficient of variation (CV) refers to the precision of the estimate. When the CV is between 16.6 and 33.3, the estimate should be interpreted with caution because of high variability and has been marked with an asterisk (\*). Estimates with a CV of 33.3 or greater are not reportable.

### PURPOSE OF MODULE

The purpose of this RRFSS module is to assess physical activity across a comprehensive set of domains including leisure time, domestic and gardening activities, work-related and transport-related activities. The International Physical Activity Questionnaire (IPAQ) is used to estimate an individual’s level of physical activity as well as implications for risk. Individuals classified as having high levels of physical activity experience the health benefits of being active, those at moderate levels are at risk of chronic disease and obesity, and those at low levels are at highest risk for premature death from cardiovascular disease<sup>1</sup> (see Table 1). According to the Canadian Fitness and Lifestyle Research Institute, physical fitness can reduce the risk of over 25 chronic conditions<sup>2</sup>.

### KEY FINDINGS

- In 2011, 52% (95% CI, 50-55) of Ontario adults aged 18 to 69 had a high level of physical activity, 29% (95% CI, 27-32) had a moderate level and 18% (95% CI, 16-21) had a low level (see Figure 1).

### Sex

- In 2011, the proportion of Ontario adults with high, moderate and low levels of physical activity did not vary significantly by sex (see Figure 2).

### Age Group

- In 2011, Ontario adults aged 18 to 24 were more likely than the other two age groups to have a high level of physical activity; this difference was significant between adults aged 18 to 24 and 45 to 69 (see Figure 3).
- In 2011, Ontario adults aged 18 to 24 were less likely than the other two age groups to have a low level of physical activity; this difference was significant between adults aged 18 to 24 and 45 to 69 (see Figure 3).

### Health Unit

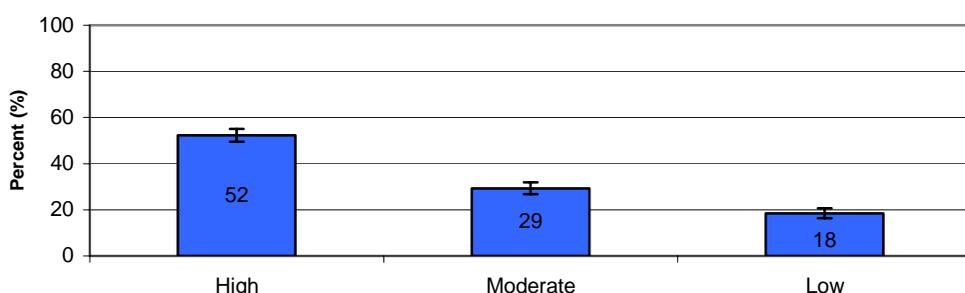
- In 2011, the proportion of adults with a high level of physical activity was significantly higher in Brant, Chatham-Kent, Haldimand-Norfolk, Haliburton, Kawartha, Pine Ridge, Kingston, Leeds, Grenville and Lanark, Simcoe-Muskoka District and Waterloo than in Ontario (see Figure 1 and Table 2).
- In 2011, the proportion of adults with a moderate level of physical activity was significantly lower in Haliburton, Kawartha, Pine Ridge and Kingston than in Ontario (see Figure 1 and Table 2).
- In 2011, the proportion of adults with a low level of physical activity was significantly lower in Haldimand-Norfolk and Kingston than in Ontario (see Figure 1 and Table 2).

**Table 1: Health Risk Classification According to International Physical Activity Questionnaire (IPAQ)<sup>3</sup> Category**

IPAQ Category	Risk Level Implication	Physical Activity Description
<b>High</b>	Health-enhancing physical activity	Equivalent to 12,500 steps, or at least one hour/day of at least moderate-intensity activity or 30 minutes of vigorous-intensity activity over and above daily basal levels <sup>†</sup>
<b>Moderate</b>	At risk of chronic disease and obesity	Equivalent to 30 minutes of at least moderate-intensity physical activity on most days accumulated in leisure and work time
<b>Low</b>	At highest risk of premature death due to cardiovascular disease	No activity is reported or some activity is reported but not enough to meet moderate or high category

† Basal level of activity is considered to be equivalent to approximately 5000 steps per day

**Figure 1: IPAQ Category, Ontario Adults Aged 18 to 69, 2011**



**D. Limitations**

RRFSS results are self-reported and may not necessarily be recalled accurately. Individuals not living in households (such as those in prison, hospitals, or the homeless) are excluded. Similarly, individuals who live in a household without a landline telephone (about 12% of all Ontario households<sup>4</sup>) will not be reached through RRFSS. Thus the percentages may not represent the true estimates for the general population as respondents may have different characteristics than people who have not been included in the survey.

Household (HH) weights were used for any questions related to individuals. The HH weight adjusts for the fact that adults from larger HH are less likely to be selected than individuals from smaller HH. Provincial results were also weighted to account for the actual distribution of adults among health units in Ontario. Estimates were multiplied by the 2006 population for the health unit to adjust for this difference.

Household weights for Ottawa have been adjusted to account for the French oversample.

Don't know and refused responses were excluded from the analysis, along with maximal outliers (greater than 960 total minutes per day). Those aged 70 and older were also excluded as the IPAQ is only used to classify physical activity levels for adults aged 18-69.

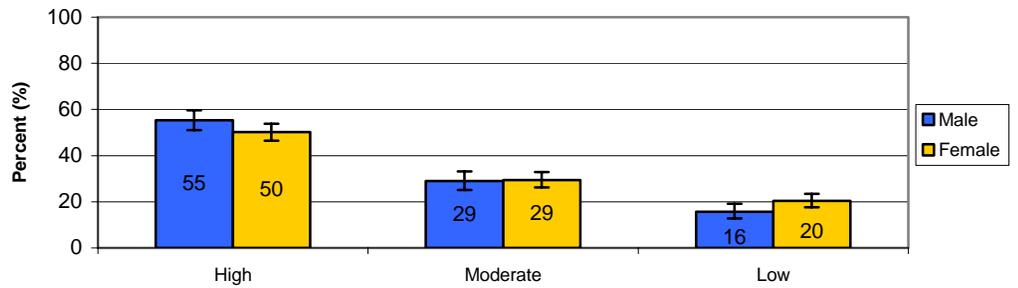
Non-rounded estimates and confidence intervals were used when determining significant differences; however, rounded numbers were used for the presentation of data, thus estimates may not total 100 and confidence intervals may appear to overlap.

**E. References**

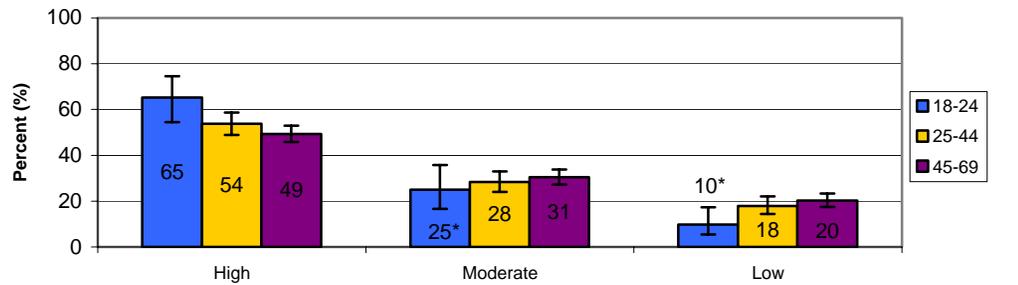
- 1 Rapid Risk Factor Surveillance System (2011). IPAQ Items- Physical Activity. Retrieved July 2012, from <http://www.rrfss.ca/resources/datadictionary/IPAQ,%20final%20Nov%202010.doc>
- 2 Canadian Fitness and Lifestyle Research Institute (2012). 09-08: Health Benefits of Physical Activity for Adults. Retrieved July 2012, from <http://www.cflri.ca/node/499>
- 3 International Physical Activity Questionnaire (IPAQ)(2005). Guidelines for Data Processing and Analysis of the IPAQ. Retrieved July 2012, from <http://www.ipaq.ki.se/scoring.pdf>
- 4 Ialomiteanu, A., Adlaf, E. M. (2011). CAMH Monitor 2010: Technical Guide. Retrieved May 2012 from [http://www.camh.ca/en/research/Documents/www.camh.net/Research/Areas\\_of\\_research/Population\\_Life\\_Course\\_Studies/CAMH\\_Monitor/CM2010\\_TechDoc.pdf](http://www.camh.ca/en/research/Documents/www.camh.net/Research/Areas_of_research/Population_Life_Course_Studies/CAMH_Monitor/CM2010_TechDoc.pdf)

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**Figure 2: IPAQ Category, Ontario Adults Aged 18 to 69, By Sex, 2011**



**Figure 3: IPAQ Category, Ontario Adults Aged 18 to 69, By Age Group, 2011**



**Table 2: IPAQ Category, Ontario Adults Aged 18 to 69, By Health Unit, 2011**

Health Unit/Province	High Level		Moderate Level		Low Level	
	Percent (95% CI)	↑ ↓	Percent (95% CI)	↑ ↓	Percent (95% CI)	↑ ↓
<b>ONTARIO</b>	<b>52 (50-55)</b>	-	<b>29 (27-32)</b>	-	<b>18 (16-21)</b>	-
Brant	60 (57-64)	↑	24 (21-27)		16 (14-19)	
Chatham-Kent	60 (57-63)	↑	25 (22-28)		16 (13-18)	
Durham Region	55 (52-58)		28 (26-31)		16 (15-19)	
Haldimand-Norfolk	59 (56-62)	↑	28 (25-31)		13 (11-16)	↓
Haliburton, Kawartha, Pine Ridge	63 (60-67)	↑	22 (20-26)	↓	14 (12-17)	
Halton	57 (54-60)		29 (26-32)		14 (12-17)	
Kingston	65 (61-67)	↑	24 (21-26)	↓	12 (10-14)	↓
Leeds, Grenville and Lanark	62 (58-66)	↑	24 (21-28)		14 (11-17)	
Middlesex-London	54 (50-57)		29 (26-32)		17 (15-20)	
Niagara	58 (55-62)		27 (24-30)		15 (12-17)	
Ottawa	51 (48-55)		31 (28-35)		18 (15-21)	
Peel	52 (48-55)		29 (26-33)		19 (16-22)	
Simcoe-Muskoka District	61 (57-64)	↑	24 (21-28)		15 (13-18)	
Sudbury	57 (53-60)		26 (24-30)		17 (14-20)	
Waterloo	59 (55-62)	↑	27 (24-30)		14 (12-17)	
York	49 (46-52)		33 (30-36)		18 (16-21)	

↓ Health Unit was significantly lower than Ontario      ↑ Health Unit was significantly higher than Ontario

**Figure 4: High Level of Physical Activity – IPAQ Category, Ontario Adults Aged 18 to 69, By Health Unit, 2011**

