

**Physical Activity and Body  
Mass Index of Children  
and Youth in the Province  
of Nova Scotia 2001/02 and  
2005/06**

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# Acknowledgements

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# **Physical Activity and Dietary Intake of Children & Youth in the Province of Nova Scotia (PACY) Studies Objectives**

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- **To objectively measure physical activity**
- **To determine environmental, physiological and psychosocial determinants of physical activity and food choice behaviours**
- **To measure height, weight, and waist circumference**
- **To determine usual food intakes**

# Methodology

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- **Participants**
  - Approximately 1700 (2001/02) and 2300 (2005/06) students in Grade 3, 7, 11 were randomly selected from randomly selected schools from six Sport and Recreation Regions across Nova Scotia
- **Anthropometry**
  - Height, weight, waist circumference, BMI
- **Physical Activity**
  - Accelerometers were used to objectively measure physical activity for 7 consecutive days
- **Social, Behavioural, and Environmental Factors**
  - Questionnaires for students, parents, teachers
- **Dietary Intake**
  - Web-based survey that included a food frequency questionnaire and 24-hour recall



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# Body Mass Index

# BMI Classification of Grade 3 Students

	<b>Boys 2001/02</b>	<b>Boys 2005/06</b>	<b>Girls 2001/02</b>	<b>Girls 2005/06</b>
<b>Healthy Weight</b>	<b>63.0%</b>	<b>53.0%</b>	<b>55.4%</b>	<b>59.6%</b>
<b>At Risk</b>	<b>17.6%</b>	<b>21.5%</b>	<b>24.7%</b>	<b>20.6%</b>
<b>Over- weight</b>	<b>19.4%</b>	<b>25.6%</b>	<b>19.9%</b>	<b>19.9%</b>

# BMI Classification of Grade 7 Students

	<b>Boys 2001/02</b>	<b>Boys 2005/06</b>	<b>Girls 2001/02</b>	<b>Girls 2005/06</b>
<b>Healthy Weight</b>	<b>63.3%</b>	<b>59.7%</b>	<b>60.1%</b>	<b>69.7%</b>
<b>At Risk</b>	<b>16.4%</b>	<b>21.8%</b>	<b>20.5%</b>	<b>17.1%</b>
<b>Over- weight</b>	<b>20.4%</b>	<b>18.5%</b>	<b>19.4%</b>	<b>13.2%</b>

# BMI Classification of Grade 11 Students

	<b>Boys 2001/02</b>	<b>Boys 2005/06</b>	<b>Girls 2001/02</b>	<b>Girls 2005/06</b>
<b>Healthy Weight</b>	<b>66.1%</b>	<b>69.4%</b>	<b>75.0%</b>	<b>69.8%</b>
<b>At Risk</b>	<b>16.7%</b>	<b>16.6%</b>	<b>17.1%</b>	<b>20.2%</b>
<b>Over- weight</b>	<b>16.2%</b>	<b>14.1%</b>	<b>7.9%</b>	<b>10.0%</b>

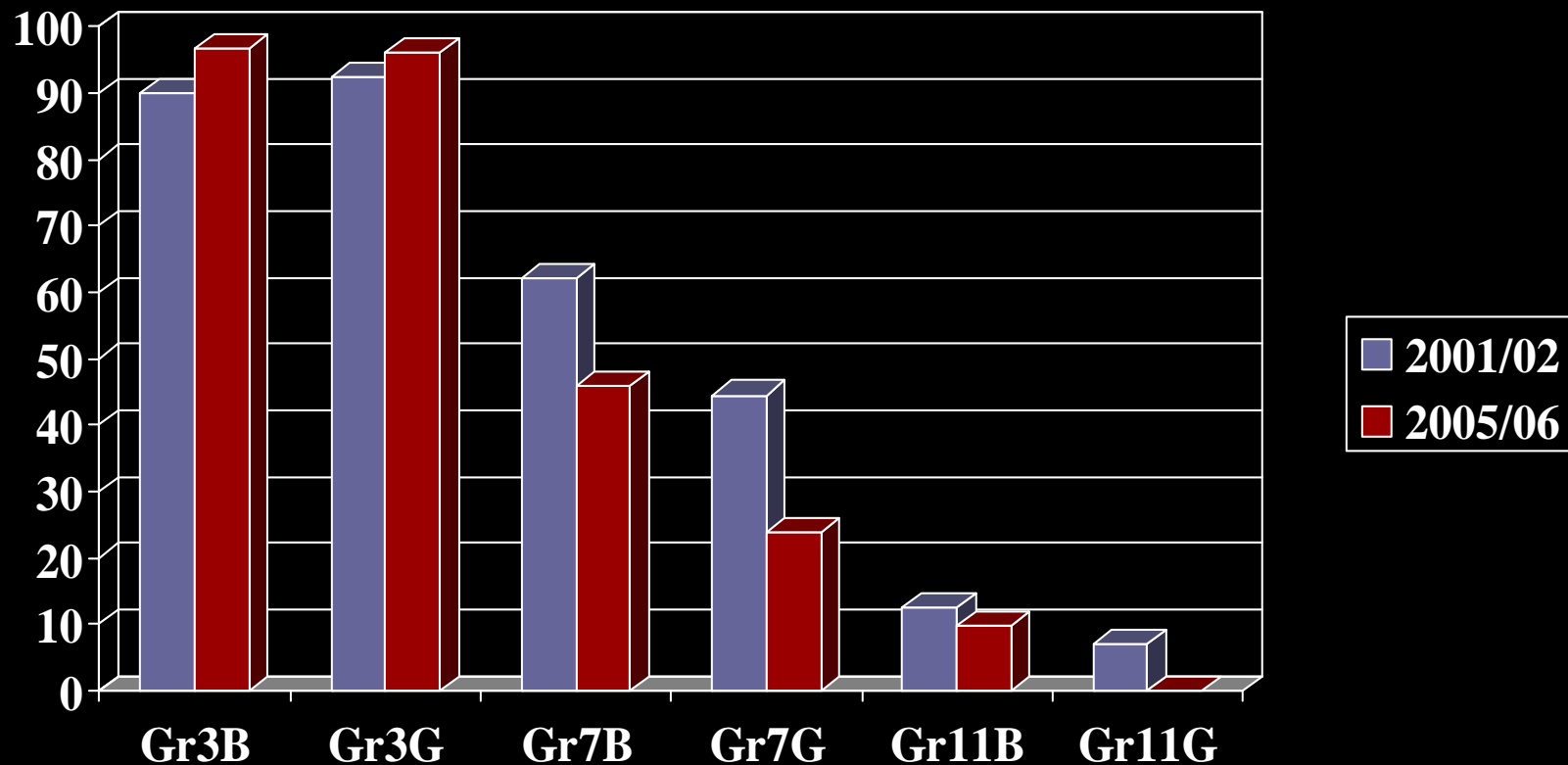


# Physical Activity Levels

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# Percentage that Obtained the Physical Activity Recommendation\*



\* at least 60 minutes of moderate or more intense physical activity on five or more days of the week

# Number and Percentage of Grade 7 Students that Obtained the Physical Activity Recommendation\*

Days		0	1	2	3	4	5	6	7
Boys	200 1/02	1.1	2.9	7.8	9.8	16.4	20.1	20.1	20.0
	200 5/06	1.9	6.4	12.5	16.2	17.7	16.6	17.7	10.9
Girls	200 1/02	6.4	4.9	12.4	14.5	17.3	18.0	15.5	11.0
	200 5/06	9.3	16.5	15.4	18.0	17.1	11.0	9.3	3.5

\* At least 60 minutes of moderate or more intense physical activity on five or more days of the week

# Number and Percentage of Grade 11 Students that Obtained the Physical Activity Recommendation\*

Days		0	1	2	3	4	5	6	7
Boys	2001/02	29.9	23.4	13.9	10.8	9.5	6.9	4.3	1.3
	2005/06	28.1	21.5	18.4	14.0	8.3	3.9	3.1	2.6
Girls	2001/02	40.7	22.4	19.3	6.2	4.5	2.8	3.1	1.0
	2005/06	57.2	21.2	13.7	4.9	2.6	<1	0	0

\* at least 60 minutes of moderate or more intense physical activity on five or more days of the week

# Social, Behavioural, and Environmental Factors Influencing Physical Activity

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# Top Constraints to Participation Grade 3

Constraint/Percentage	Boys		Girls	
	01/02	05/06	01/02	05/06
Too expensive	22.0	16.5	27.0	24.1
I don't have equipment	11.0	14.4	11.0	19.7
Too much school work	9.0	15.7	12.0	13.5
Weather is bad	-	15.7	-	11.6
Too far away	14.0	12.3	12.0	15.8
No one to go with	10.0	13.1	10.0	15.5
I don't have a place to do so	10.0	12.9	10.0	13.5
Scared to go out at night	3.0	8.2	8.0	11.3
Sickness or injury	5.0	5.1	6.0	4.9



# Top Constraints to Participation Grade 7

Constraints/Percentage	Boys		Girls	
	01/02	05/06	01/02	05/06
Too much school work	22.0	30.7	31.0	37.0
No one to go with	15.0	24.3	26.0	37.0
The weather is bad	18.0	27.8	15.0	29.1
It is too far away	15.0	22.3	17.0	23.9
It is too expensive	18.0	22.0	18.0	24.3
Don't have equipment	14.0	20.6	13.0	23.2
Sickness or injury	19.0	21.2	14.0	22.4
I don't have a place to do so	10.0	17.2	8.0	18.6
Too risky or dangerous	5.0	9.6	5.0	9.5



# Top Constraints to Participation Grade 11

Constraints/Percentages	Boys		Girls	
	01/02	05/06	01/02	05/06
Too much school work	33.0	41.4	55.0	52.6
No one to go with	18.0	30.3	27.0	39.5
My job prevents me	19.0	20.7	23.0	28.7
The weather is bad	15.0	31.9	25.0	28.0
It is too far away	17.0	24.3	14.0	27.7
I don't have any equipment	14.0	24.3	21.0	27.2
It is too expensive	18.0	20.4	20.0	26.7
Sickness or injury stops me	15.0	18.8	17.0	24.2
I don't have a place to do so	17.0	17.8	14.0	22.4
It is not fun anymore	-	7.9	-	7.3





# Total Daily Screen Time by Grade and Sex

Hours per day	Grade 3		Grade 7		Grade 11	
	Boys	Girls	Boys	Girls	Boys	Girls
<b>PACY 2001/02</b>						
<b>Total screen time</b>	<b>2.25</b>	<b>1.88</b>	<b>3.14</b>	<b>2.44</b>	<b>3.95</b>	<b>3.04</b>
<b>PACY 2005/06</b>						
<b>Total screen time</b>	<b>3.70</b>	<b>3.11</b>	<b>5.36</b>	<b>4.78</b>	<b>6.29</b>	<b>5.51</b>

# Now what?

- **“Comprehensive programming through collaborative project and policy planning between all levels of government and across government departments as well as community organizations is required to ensure optimal health enhancing physical activity and dietary intake of Nova Scotia children and youth” PACY Report, 2007**



# **Active Kids, Health Kids Strategy**

**A physical activity strategy for children, youth, and families in Nova Scotia**

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## **■ Strategy in Action:**

- Leadership and policy**
- Community mobilization**
- Active community environments**
- Public awareness**
- Research, evaluation, and knowledge transfer**

# Specific Recommendations

<b>Key Issue From Study</b>	<b>Policy/Program Recommendation</b>
<b>Youth inactivity – Junior and Secondary school</b>	<ul style="list-style-type: none"><li>• <b>Meaningful youth engagement to determine what gets them active</b></li><li>• <b>Develop no cut policies for school and community sports; have A, B, C teams so all can play</b></li><li>• <b>Mandatory PE in secondary school</b></li><li>• <b>Mandatory daily PE in junior school</b></li><li>• <b>Ensure policy allocating facility time in schools and community facilities is equitable</b></li><li>• <b>Change practice times</b></li><li>• <b>Prepare school PE and health staff to provide PA counselling (i.e., PACE Canada)</b></li></ul>

# Specific Recommendations

<b>Key Issue From Study</b>	<b>Policy/Program Recommendation</b>
<b>Youth inactivity – Junior and Secondary school</b>	<ul style="list-style-type: none"><li>• Social marketing campaign with after school programs AND late buses</li><li>• School and neighbourhood planning that encourages active transportation to school</li><li>• Promote accumulation of time concept</li><li>• Require school strategic plans to include a PA component</li><li>• Develop school board policies for skating, swimming, cycling, skateboarding</li></ul>
<b>Girls inactivity</b>	<ul style="list-style-type: none"><li>• Free “first” classes/programs for girls</li><li>• Girls only PE</li><li>• Allocate facility time for girls only</li></ul>

# Specific Recommendations

<b>Key Issue From Study</b>	<b>Policy/Program Recommendation</b>
<b>Screen time</b>	<ul style="list-style-type: none"><li>• Educate parents about the “reality” of screen time</li><li>• Meaningful youth engagement regarding suggestions of limiting screen time (TV, computer, video games, cell phones)</li></ul>
<b>Too much school work</b>	<ul style="list-style-type: none"><li>• Create school policies regarding amount of homework</li><li>• Assign homework that involves PA</li></ul>
<b>No one to go with</b>	<ul style="list-style-type: none"><li>• User fee policies that encourage “bring a buddy”</li><li>• Two for one admissions</li></ul>

# Specific Recommendations

<b>Key Issue From Study</b>	<b>Policy/Program Recommendation</b>
<b>Poor weather</b>	<ul style="list-style-type: none"><li>• Campaigns that promote winter activity – “Take the roof off winter”</li><li>• Ask weather broadcasters (TV, radio, other) to remind people to dress for the weather</li><li>• Advocate for activity in rain, wind, snow</li></ul>
<b>Cost of participation</b>	<ul style="list-style-type: none"><li>• User fee policies that allow youth to (1) pay over time instead of up front, and (2) exchange labour for participation</li><li>• Universal policy on free access for youth to community programs. Stop treating programs as a source of revenue</li><li>• Provincial and federal government provide tax credits for PA program registration fees</li></ul>

# Thank you!

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The full report “Physical Activity Levels and Dietary Intake of Children and Youth in the Province of Nova Scotia – 2005” and the Active Kids, Healthy Kids Strategy can be downloaded from:

<http://www.gov.ns.ca/hpp/> and  
<http://www.gov.ns.ca/hpp/physicalActivity/akhkstrategy.asp>