

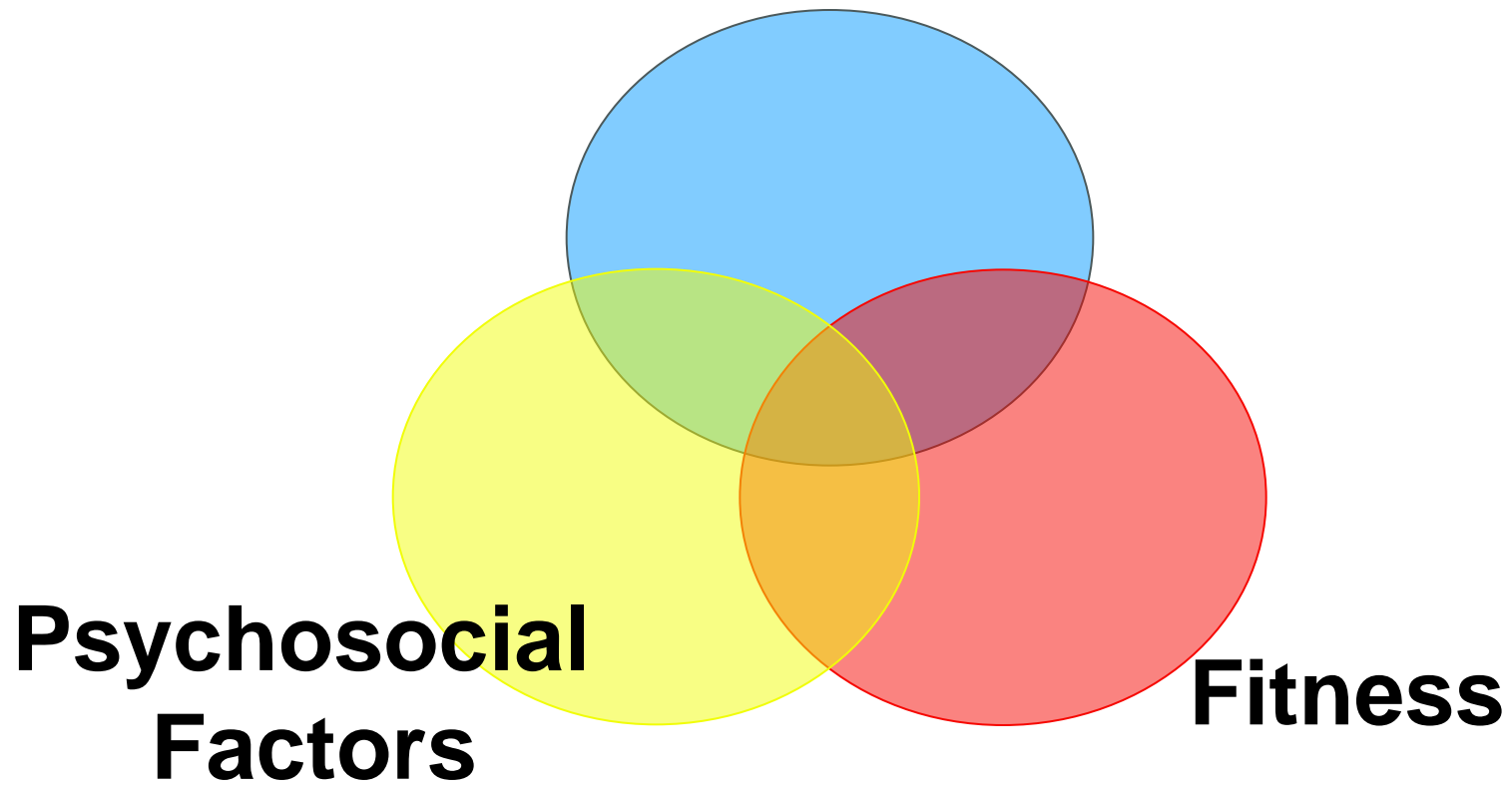
# **Where CS4L Intersects with Health**

Emily Knight & Meghann Lloyd, PhD

## Health Benefits of Physical Activity & Sport

- ✓ Physical inactivity is a preventable risk factor for many chronic and non-communicable diseases  
(Lau, 2007)
- ✓ Physical activity represents a substantial opportunity for chronic disease prevention, health care cost savings, and improved quality of life (WHO, 2002).

# Motor Skills



## Active Start & FUNdamentals!

- ✓ Low physical activity levels lead to poor cardiovascular fitness, obesity, insulin resistant, type 2 diabetes, blood lipid abnormalities, and hypertension in youth (Allen et al 2007)
- ✓ **“Childhood is a critical period for nurturing lifetime activity behaviour”** (Allen et al 2007)
- ✓ Physical activity **participation** has implications for **psychological and physiological health** in youth (Barnett et al 2008a)

## Active Start & FUNdamentals!

- ✓ Physical activity has a strong dose-response relationship to fitness, and motor skill competence is correlated with physical activity participation and fitness (Barnett et al 2008a)
- ✓ Children with **good motor skills** are more likely to become **fit adolescents** (Barnett et al 2008)
- ✓ **Sports and games help to reinforce skill development** (Barnett et al 2010)

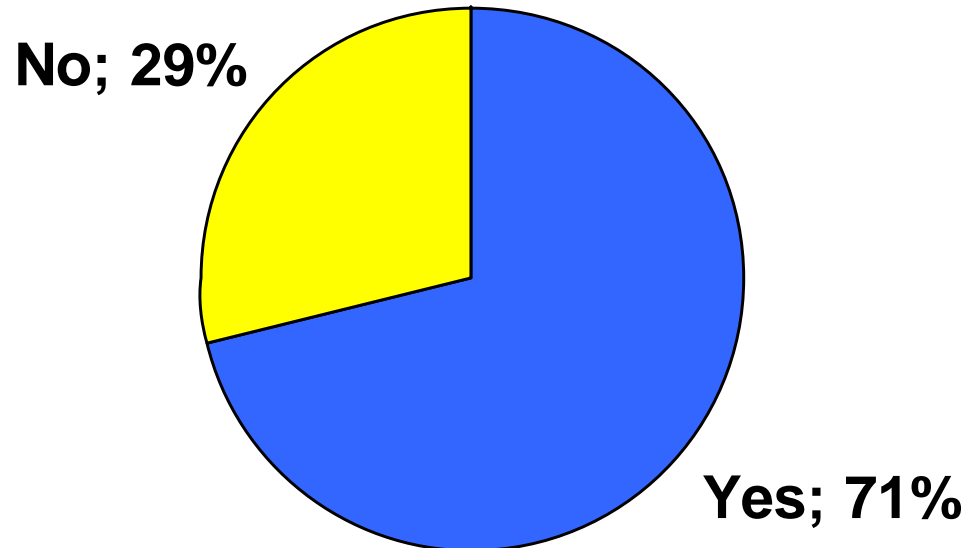
## Active for Life!

- ✓ **Fitness** is a more accurate predictor of cardiovascular and all-cause death than **weight status** (Allen et al 2007)
- ✓ Canadians who **participate** in organized sport and physical activity programs have **higher overall levels of physical activity** (AHKC 2010)

## Active for Life!

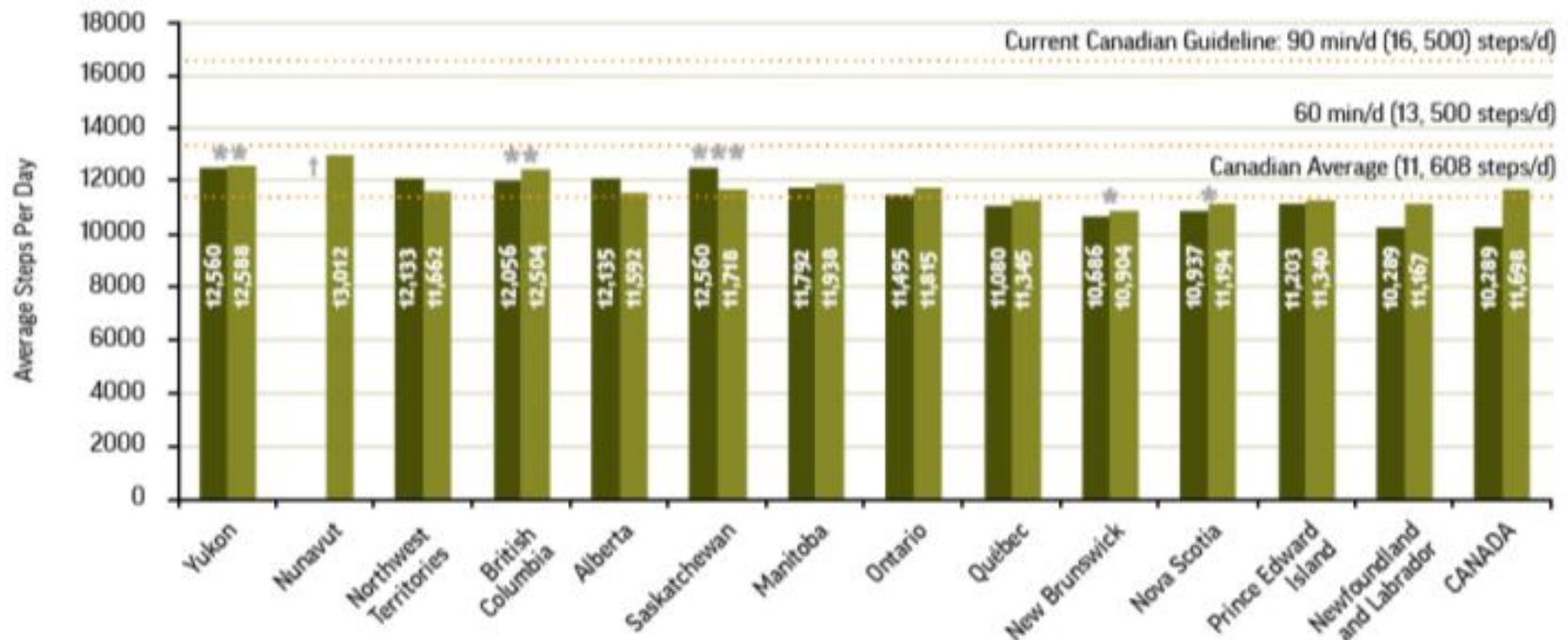
- ✓ Peers influence physical activity participation
- ✓ Active Parents = Active Kids!

### CAPL- Family Sport & Physical Activity Participation



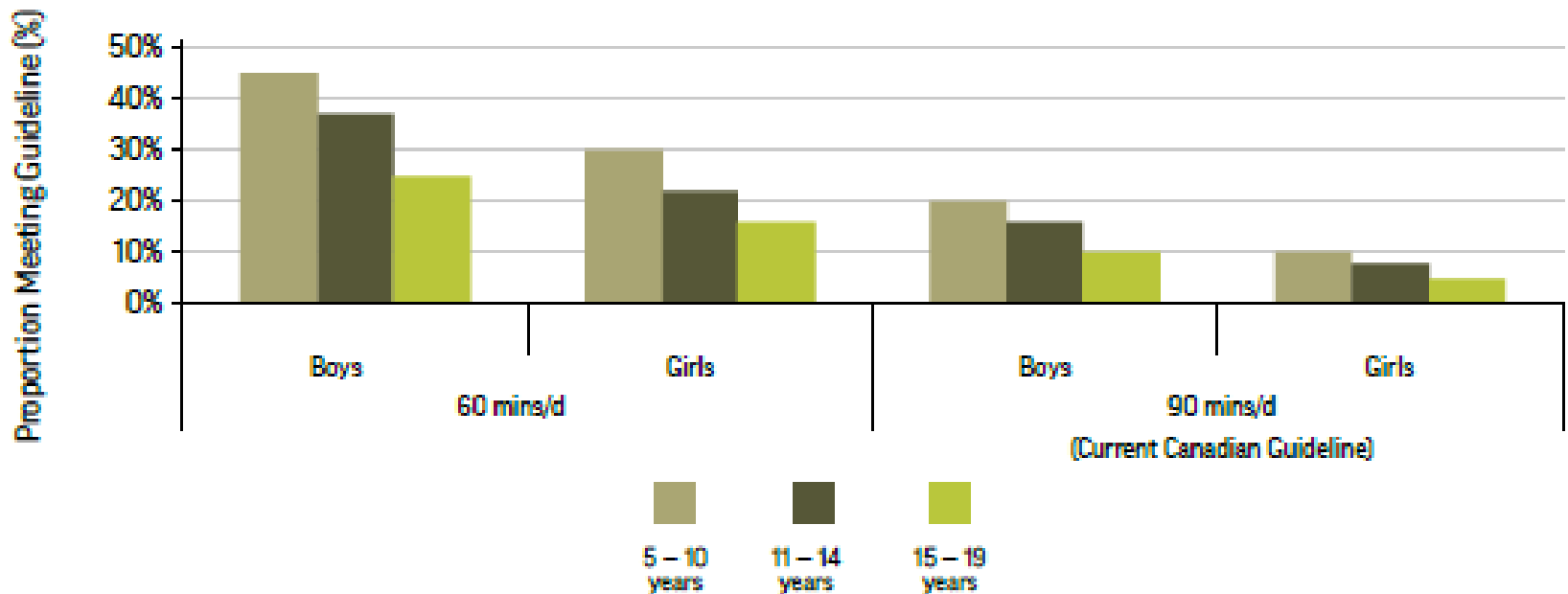
## Physical Inactivity & Obesity Crisis

- **69%** of Canadian children are not meeting international physical activity guidelines (AHKC Report Card 2010)



## Physical Inactivity & Obesity Crisis

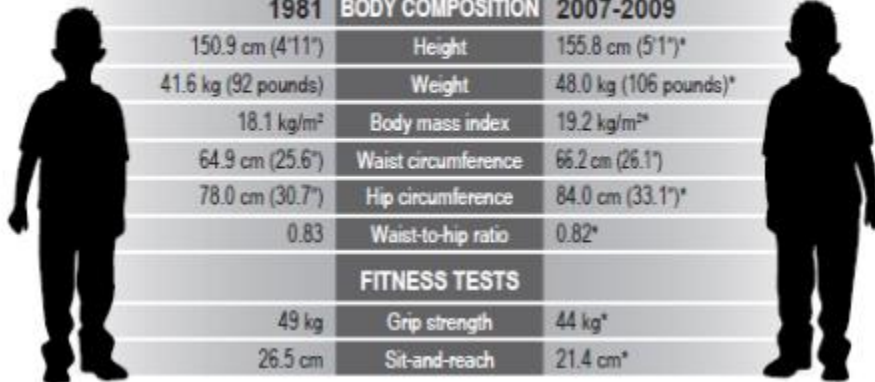
- Physical activity levels **decline with age**
- Overweight or obese children are more likely to become overweight and obese adults



# Physical Inactivity & Obesity Crisis

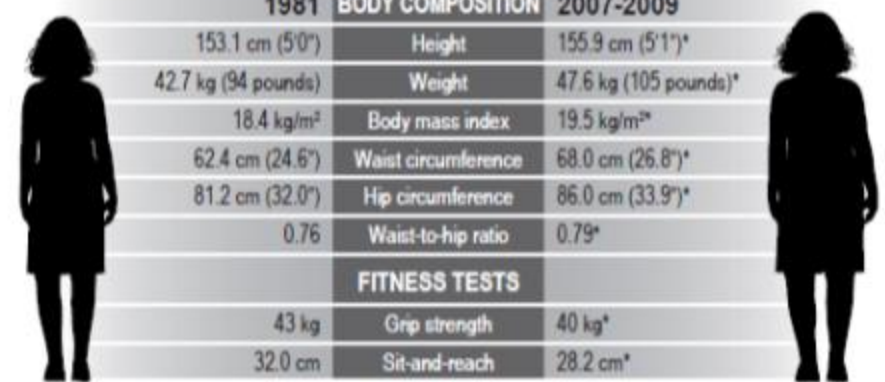
– **26%** of Canadian children are overweight or obese (Tremblay 2010)

## BOY



1981	BODY COMPOSITION	2007-2009
150.9 cm (4'11")	Height	155.8 cm (5'1")*
41.6 kg (92 pounds)	Weight	48.0 kg (106 pounds)*
18.1 kg/m <sup>2</sup>	Body mass index	19.2 kg/m <sup>2</sup> *
64.9 cm (25.6")	Waist circumference	66.2 cm (26.1")
78.0 cm (30.7")	Hip circumference	84.0 cm (33.1")*
0.83	Waist-to-hip ratio	0.82*
FITNESS TESTS		
49 kg	Grip strength	44 kg*
26.5 cm	Sit-and-reach	21.4 cm*

## GIRL



1981	BODY COMPOSITION	2007-2009
153.1 cm (5'0")	Height	155.9 cm (5'1")*
42.7 kg (94 pounds)	Weight	47.6 kg (105 pounds)*
18.4 kg/m <sup>2</sup>	Body mass index	19.5 kg/m <sup>2</sup> *
62.4 cm (24.6")	Waist circumference	68.0 cm (26.8")*
81.2 cm (32.0")	Hip circumference	86.0 cm (33.9")*
0.76	Waist-to-hip ratio	0.79*
FITNESS TESTS		
43 kg	Grip strength	40 kg*
32.0 cm	Sit-and-reach	28.2 cm*

## Physical Inactivity & Obesity Crisis

- Economic cost of obesity and physical inactivity is **\$9.6 billion**, which is nearly **5%** of Canadian health care costs (Katzmarzyk 2004)



- What was the #2 Health Story of 2010?

Component of Statistics Canada Catalogue no. 82-003-X  
Health Reports

## Article

### **Physical activity of Canadian children and youth: Accelerometer results from the 2007 to 2009 Canadian Health Measures Survey**

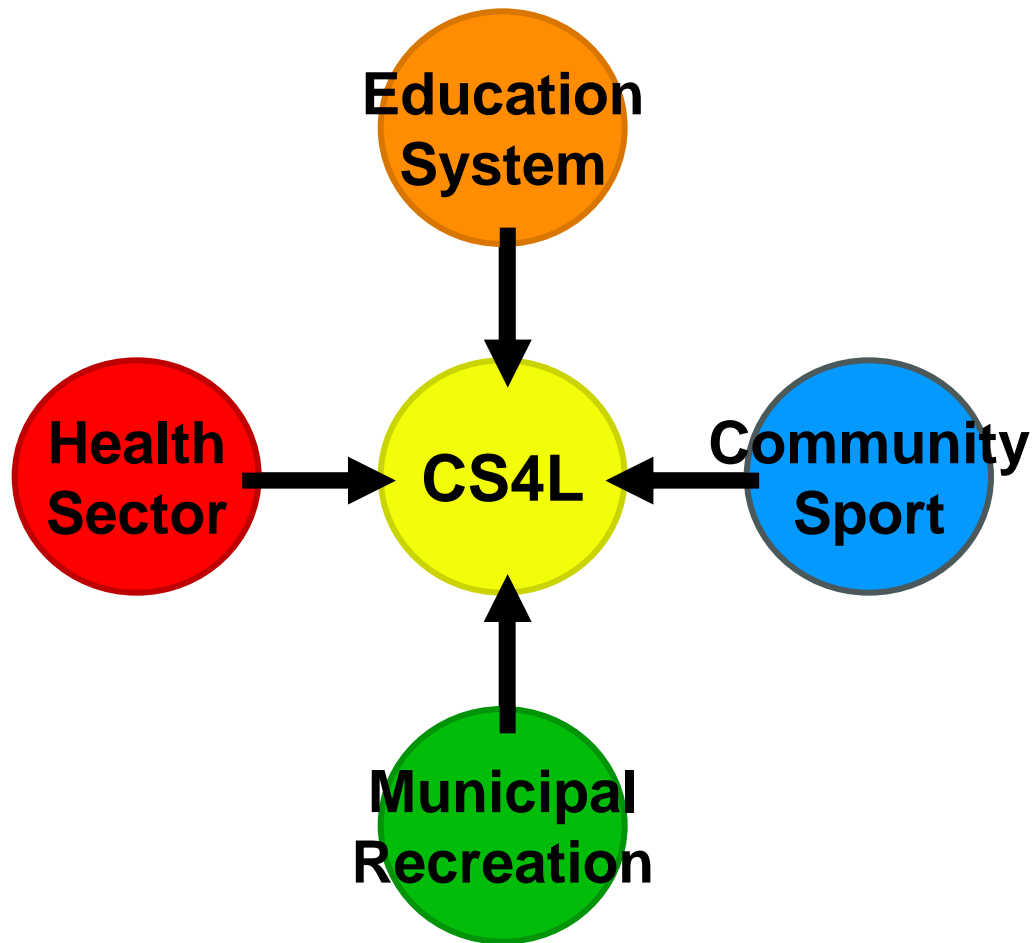
by Rachel C. Colley, Didier Garriguet, Ian Janssen,  
Cora L. Craig, Janine Clarke and Mark S. Tremblay

January 2011



- 9% of boys and 4% of girls are meeting the 60 minutes per day guideline in Canada on at least 6 days of the week.
- 62% of waking hours are spent in sedentary pursuits

Where Does CS4L Fit In?



## What do we need to know?

- Research Questions:
  - What health initiatives currently exist in Canada that incorporate CS4L principles?
  - What can we learn from these programs to further strengthen the cross-over between CS4L and the health sector?

## Search Strategy- **Definition of Key Terms:**

- CS4L Principles
  - CS4L is a movement that promotes **healthy growth and development** through good sport, so that people can **enjoy a lifetime of physical activity** and excel in sport. As such: there is a pathway of excellence from the playground or pond to the podium; children should develop physical literacy while having FUN participating; and all Canadians should be physically active through participation in sport and recreation.

## Search Strategy- **Definition of Key Terms:**

- Health Initiatives or Programs
  - Any Canadian program that **combines** aspects of both the Health Sector and CS4L principles.

## Search Strategy- Definition of Key Terms:

- Chronological Age Definitions
  - Children & Youth = Canadians from **0-17** years of age
  - Adults = Canadians **18-64** years of age
  - Older Adults = Canadians **65** years of age and older

## Search Strategy- Inclusion Criteria:

- Data Collection
  - Interviews
    - in-person, phone, e-mail
  - Published or printed information
    - including websites, pamphlets, program guides, etc
  - Survey responses
    - including paper surveys from CS4L 2011 workshop and the electronic survey at <http://www.surveymonkey.com/s/2XCFRT8>

## Search Strategy- Inclusion Criteria:

- Date Limits
  - Programs in existence as of January 2011
  - Survey and interview responses between January 14<sup>th</sup> – March 4<sup>th</sup> 2011
- Language
  - English, or available in English

## Search Strategy-**Information to be Extracted:**

- 10 questions, to determine:
  - Where do programs exist?
  - What are programs doing?
  - Are programs successful?
  - What can we learn from these programs?

## Contact:

[CS4Lhealthproject@gmail.com](mailto:CS4Lhealthproject@gmail.com)

## Online Survey:

<http://www.surveymonkey.com/s/2XCFRT8>



# HEALTH Initiatives & CS4L?



## References

- Active Healthy Kids Canada. Healthy Habits Start Earlier Than You Think. The Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. 2010; Toronto, ON.
- Aires, L., Silva, P., Silva, et al (2010). Intensity of Physical Activity, Cardiorespiratory Fitness and Body Mass Index in Youth. *Journal of Physical Activity and Health*. 7; 54-59.
- Allen, D., Nemeth, B. Clark, R. et al (2007). Fitness is a Stronger Predictor of Fasting Insulin Levels than Fatness in Overweight Male Middle-School Children. *J Pediatrics*. 150; 383-387.
- Barnett, L., Beurden, E., Morgan, P., et al (2008). Does Childhood Motor Skill Proficiency Predict Adolescent Fitness? *MSSE*. 40(12); 2137-2144.
- Barnett, L., Morgan, P., Beurden, E. (2008a). Perceived sports competence mediates the relationship between childhood motor skill proficiency and adolescent physical activity and fitness: a longitudinal assessment. *International Journal of Behavioral Nutrition and Physical Activity*. 5:40.
- Barnett, L., Morgan, P. Beurden, E. (2010). A Reverse Pathway? Actual and Perceived Skill Proficiency and Physical Activity. *MSSE*. DOI: 10.1249.MSS.0b012e3181fdfadd
- Katzmarzyk, P., Janssen, I. (2004). The Economic Costs Associated with Physical Inactivity and Obesity in Canada: An Update. *Can J Appl Physiol*. 29(1): 90-115.
- Lau, D., J. Douketis, K. Morrison, et al. (2007). Canadian clinical practice guidelines on the management and prevention of obesity in adults and children. *CMAJ*. 176:S1-13.
- Trembaly, MS., Shields, M., Laviolette, M., et al (2010). Fitness of Canadian children and youth: Results from the Canadian Health Measures Survey. *Health Reports*. 21(1): 1-14.
- World Health Organization. The WHO Report 2002: Reducing Risks, Promoting Healthy Life. 2002; Geneva.

Thank You



Contact:

[CS4Lhealthproject@gmail.com](mailto:CS4Lhealthproject@gmail.com)

Online Survey:

<http://www.surveymonkey.com/s/2XCFRT8>