

# Preventing Cardio-metabolic disease among Women: Maximizing the Impact of Healthy Lifestyle Habits

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Improvement Program (CHIP)

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*The McGill Comprehensive Health Improvement Program*  
*Le Programme Complet d'amélioration de la santé de McGill*



**Welcome**  
**English**

**Bienvenue**  
**Français**

Workplace wellness programs yield positive effects for Canadian employees.

Would you like to learn about our new online weight loss program?

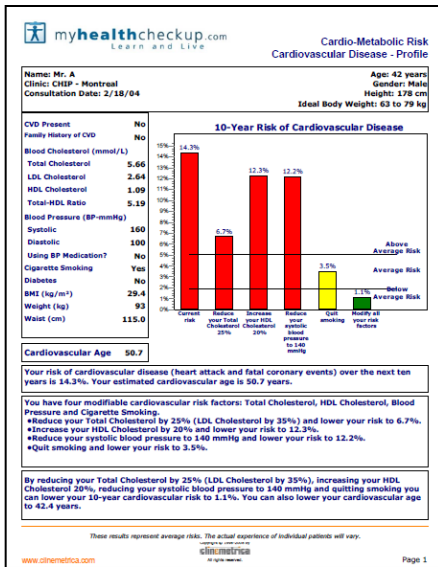
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Voulez-vous en apprendre davantage sur notre nouveau programme de perte de poids en ligne?

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Not-For-Profit Started in 1995



# Clinicians from the McGill Comprehensive Health Improvement Program (CHIP)



## Web-Based Health Promotion

Researchers from the MUHC Division of Clinical Epidemiology

IT Team



# The Targets of the 2015 Healthy Living Strategy (Started 10 Years Earlier)

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**Healthy Eating:** Increase by 20% the proportion of Canadians who make healthy food choices (39% to 47%)

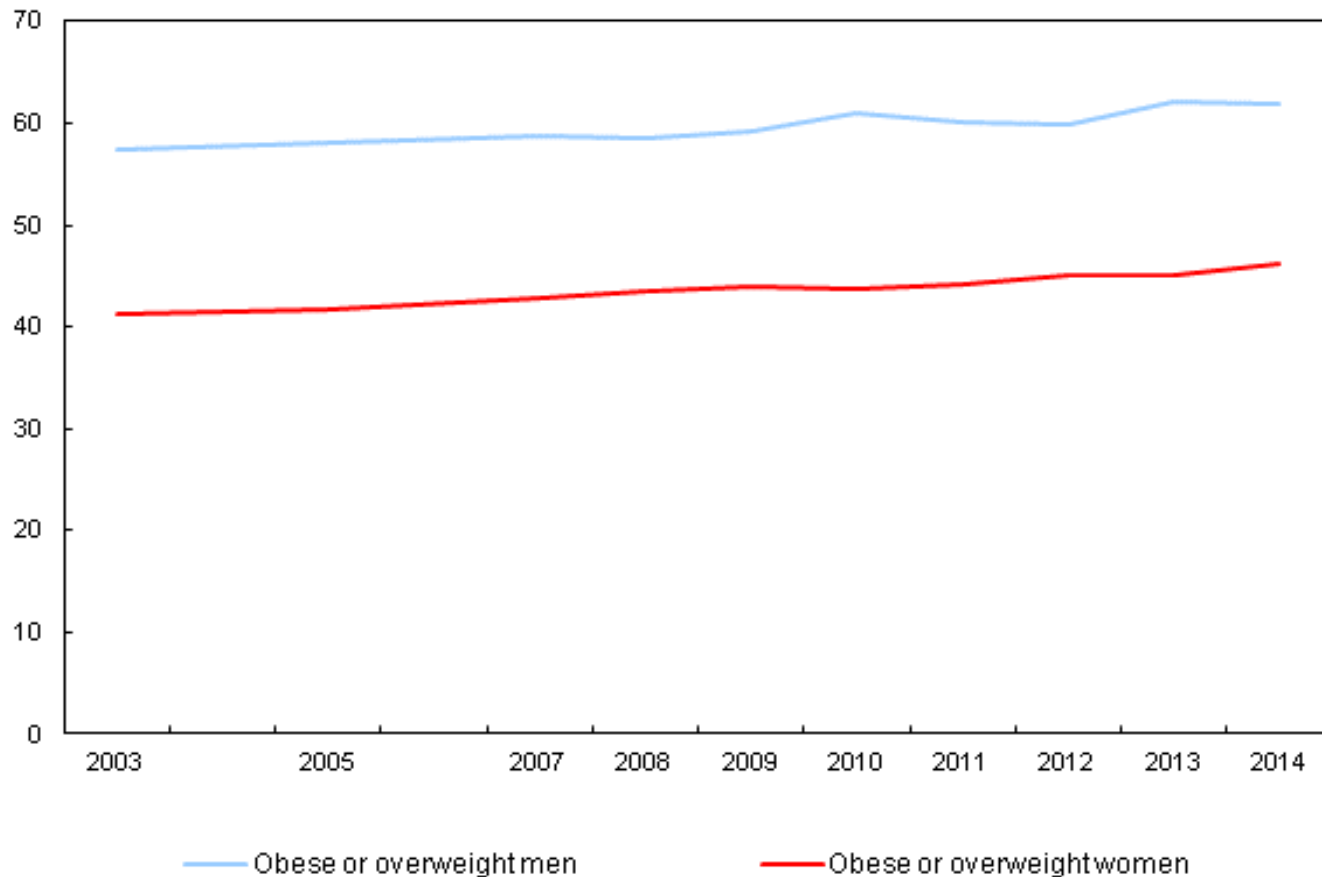
**Physical Activity:** Increase by 20% the proportion of Canadians who participate in regular physical activity, 30 min/day of moderate to vigorous activity (50% to 60%).

**Healthy Weight:** Increase by 20% the proportion of Canadians at a “normal” body weight, BMI of 18.5 to 24.9 (48% to 56%).

# Results Ten Years Later...

## Excess Body Weight has Increased!

percent



Men 57%

Women 41%

**Source:** Canadian Community Health Survey, 2003, 2005, 2007 to 2014.

# Results Ten Years Later...

No Changes in Diet or Physical Activity!  
(Self-Reports)

	2003	2005	2007	2008	2009	2010	2011	2012	2013	2014
<u>Self Reported</u>	Year-to-date (averages)									
<b>5 or More Daily Fruits and Vegetables (%)</b>	41.3	43.8	43.9	43.9	45.7	43.6	40.7	40.9	41.1	39.8
<b>Physically Active (%)</b>	52.3	52.7	51.0	51.3	53.2	53.1	54.8	54.7	56.3	54.6

# Obesity in adults: a clinical practice guideline

Sean Wharton MD, David C.W. Lau MD PhD, Michael Vallis PhD RPsych, Arya M. Sharma MD PhD, Laurent Biertho MD, Denise Campbell-Scherer MD PhD, et al.,

■ Cite as: *CMAJ* 2020 August 4;192:E875-91. doi: 10.1503/cmaj.191707

## KEY POINTS

Obesity is a prevalent, complex, progressive and relapsing chronic disease, characterized by abnormal or excessive body fat (adiposity), that impairs health.

People living with obesity face substantial bias and stigma, which contribute to increased morbidity and mortality independent of weight or BMI.

The focus of obesity management should be towards improving patient-centred health outcomes, rather than weight loss alone.

Obesity care should be based on evidence-based principles of chronic disease management, must validate patients' lived experiences, move beyond simplistic approaches of "eat less, move more," and address the root drivers of obesity.

People living with obesity should have access to evidence-based interventions, including medical nutrition therapy, physical activity, psychological interventions, pharmacotherapy and surgery.

# Majority of Canadians Achieve Physical Activity Guidelines?

**Table 4**

**Average daily minutes of activity at various levels of intensity and average daily step counts, by sex, age group and BMI category, household population aged 20 to 79 years, Canada, March 2007 to February 2009**

Sex /Age group/ BMI category	Intensity of activity					Step counts
	Sedentary	Light	Moderate	Vigorous	Moderate- to-vigorous (MVPA)	
						Average
<b>Men</b>	<b>575</b>	<b>246</b>	<b>24*</b>	<b>3</b>	<b>27*</b>	<b>9,544*</b>
<b>Age group (years)</b>						
20 to 39 <sup>†</sup>	571	253	28*	5	33*	9,926
40 to 59	570	258	24	3 <sup>‡</sup>	26	9,996*
60 to 79	594 <sup>‡</sup>	208 <sup>‡</sup>	15 <sup>‡</sup>	2 <sup>‡</sup>	17 <sup>‡</sup>	7,869 <sup>‡</sup>
<b>BMI category</b>						
Healthy weight <sup>†</sup>	575	252	29*	5	35*	10,577*
Overweight	570	251	23* <sup>‡</sup>	3 <sup>‡</sup>	26* <sup>‡</sup>	9,491*
Obese	586	230	17* <sup>‡</sup>	2 <sup>‡</sup>	19* <sup>‡</sup>	8,342 <sup>‡</sup>
<b>Women</b>	<b>585</b>	<b>238</b>	<b>18</b>	<b>3</b>	<b>21</b>	<b>8,385</b>
<b>Age group (years)</b>						
20 to 39 <sup>†</sup>	572	249	20	4 <sup>‡</sup>	24	8,875
40 to 59	588	245	19	3	21	8,677
60 to 79	602 <sup>‡</sup>	205 <sup>‡</sup>	12 <sup>‡</sup>	1 <sup>‡</sup>	12 <sup>‡</sup>	6,970 <sup>‡</sup>
<b>BMI category</b>						
Healthy weight <sup>†</sup>	589	234	21	4	25	8,819
Overweight	583	242	18	2 <sup>‡</sup>	20	8,506
Obese	583	243	12 <sup>‡</sup>	<2 <sup>‡</sup>	13 <sup>‡</sup>	7,546 <sup>‡</sup>

<sup>†</sup> reference category

\* significantly different from estimate for women (p<0.05)

<sup>‡</sup> significantly different from estimate for reference category (p<0.05)

<sup>‡</sup> use with caution

Source: 2007 to 2009 Canadian Health Measures Survey.



# Physical Activity Levels Among Canadian Youth

**Table 4**

**Average daily minutes of activity at various levels of intensity and average daily step counts, by sex, age group and BMI category, household population aged 6 to 19 years, Canada, March 2007 to February 2009**

Sex /Age group/ BMI category	Intensity of activity					Step counts  Average
	Sedentary	Light	Moderate	Vigorous	Moderate- to-vigorous	
	Average minutes per day					
<b>Boys</b>	<b>507</b>	<b>260</b>	<b>59*</b>	<b>2</b>	<b>61*</b>	<b>12,121*</b>
<b>Age group (years)</b>						
6 to 10†	445	298	67*	2	69*	13,217
11 to 14	524‡	252‡	58*	2	59*	11,857*
15 to 19	554**	230‡	52**	1	53**	11,267**
<b>BMI category</b>						
Not overweight/obese†	500*	262	64*	2	65*	12,584*
Overweight	524	260	50‡	1‡	51‡	11,188‡
Obese	536	248	43‡	<1‡	44‡	10,256
<b>Girls</b>	<b>524</b>	<b>252</b>	<b>46</b>	<b>1</b>	<b>47</b>	<b>10,327</b>
<b>Age group (years)</b>						
6 to 10†	446	306	56	2	58	11,745
11 to 14	527‡	250‡	46‡	2 <sup>E</sup>	47‡	10,351‡
15 to 19	582‡	212‡	38‡	<3	39‡	9,204‡
<b>BMI category</b>						
Not overweight/obese†	524	249	46	2	48	10,224
Overweight	515	262	43	1 <sup>E</sup>	44	10,450
Obese	544	263	47	<3	48	11,159

† reference category

\* significantly different from estimate for girls (p<0.05)

‡ significantly different from estimate for reference category (p<0.05)

<sup>E</sup> use with caution

Source: 2007 to 2009 Canadian Health Measures Survey.

# Gender differences in physical activity motivators and context preferences: a population-based study in people in their sixties.

Jannique G. Z. van Uffelen, Asaduzzaman Khan, Nicola W. Burton. BMC Public Health, 2017, Volume 17,

## Motivators and Preferences (OR, 95%CI) Supporting Physical Activity: Women Compared to Men

- Lose or Manage Weight 1.74 (1.12-2.71)
- Improve Appearance 2.93 (2.07-4.15)
- Spend Time with Others 1.76 (1.31-2.36)
- Meet New Friends 1.76 (1.31-2.36)
- Done at a Fixed Time 1.42 (1.06-1.91)
- Require Skill and Practice 0.40 (0.29-0.55)
- Vigorous 0.33 (0.24-0.47)
- Involves Competition 0.32 (0.22-0.46)
- Done Outdoors 0.51 (0.30-0.86)
- Same Age 2.00 (1.43-2.78)
- Same Sex 4.67 (3.14-6.94)
- Supervised 2.79 (1.94-4.02)

# Being a Physician who Promotes Health is Harder than Being a Rocket Scientist

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It is easier to launch  
Canadians into  
space than it is to  
get them to lose  
weight and exercise  
most days of the  
week

**“Are you eating properly and getting plenty of exercise?”**



**The Challenge...**

**Lack of Interest**

***The  
Solution...***

***Intrinsic  
Motivation***



# ***Gamification and Social Connectivity***

**Make something fun, and  
socially engaging**



# Engage Leadership Build Community

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Get the  
Senior Command  
on Board



Or Build Teams  
Among Friends,  
Family Members,  
Health Professionals  
and their Patients

# MissionVAV Covid-19 Resiliency Challenge

Collect points for assessing your health  
and choosing an exercise goal

**Map View**

**UPDATE MY:**

- Wellbeing**
- Tracking
- History

**REVIEW MY:**

- Activity Stats
- Performance

**REVIEW TEAM:**

- Performance
- Standings
- Message Board

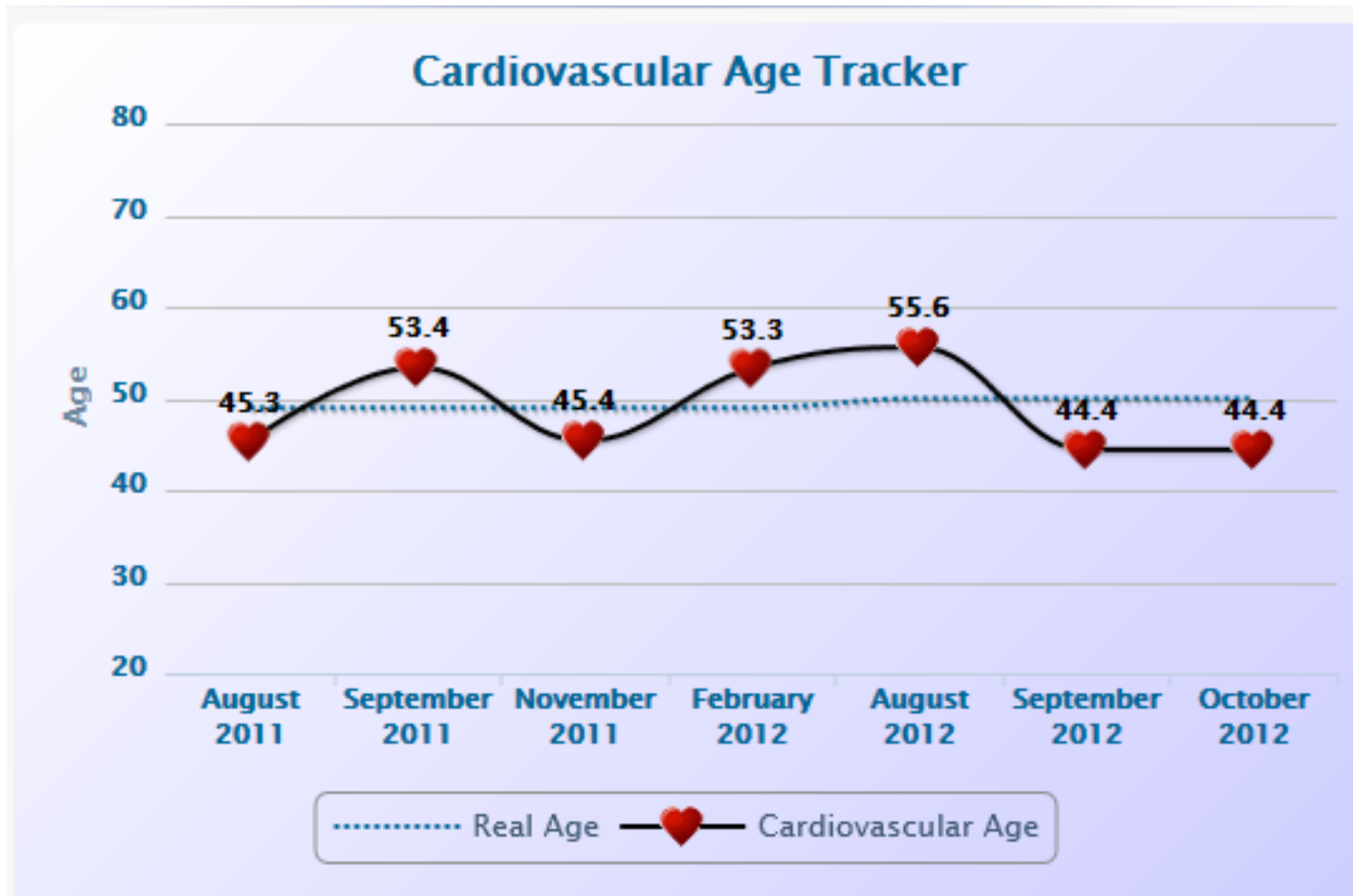
### Evaluate your habits!

	Score	Actions	Baseline 25 July to 08 August	Follow-Up 22 August to 05 September
<b>Happiness</b>				
Mood			✓	🔒
Stress			✓	🔒
<b>Health</b>				
Heart/Diabetes				
<b>Vigor</b>				
Sleep				
Fitness				

### Choose your personal goals

- 5,000 steps per day  
A low-steps goal is perfect for inactive adults, who on average take 3,500 to 5,000 steps/day. Here are a few examples of how to reach this Personal Goal:
  - Walking slowly for 75 minutes
  - Bowling for 60 minutes
  - Gardening for 45 minutes
- 7,500 steps per day  
A medium-steps goal is perfect for active older adults, who on average take 6,000 to 8,000 steps/day. Here are a few examples of how to reach this Personal Goal:
  - Walking normally (3 mph) for 75 minutes
  - Dancing for 65 minutes
  - Swimming laps for 35 minutes
- 10,000 steps per day  
A high-steps goal is perfect for active adults, who on average take 7,000 to 13,000 steps/day. Here are a few examples of how to reach this Personal Goal:
  - Walking fast for 70 minutes
  - Practicing vigorous yoga for 60 minutes
  - Cross-country skiing for 45 minutes
- Define your own:  
 steps per day

# Track Your Progress





# Make Tracking Simple

- Wellness
- Heart
- Diabetes
- Smoking
- Drinking
- Sleep
- Mood
- Stress
- Fitness
- Nutrition
- Weight

My Challenges

**On the 96th day we sailed again,  
HOW I WISH I WAS IN SHERBROOKE NOW!  
When a bloody great Yankee hove in sight  
With our cracked four pounders we made to fight.**

The five days on shore meant a quick top-up of supplies and hopefully some repair work to the Antelope's undersides!

A large merchant ship (Yankee hove) was always the sought-after prize. Many privateers were under 100 tons but captured 400 or 500 ton enemy vessels.

The four pounder is a small gun, about the thickness of a telephone pole, that fired a ball weighing 4 pounds. These guns were lightweight, making a vessel fast and seaworthy. The drawback was their very limited range. Some privateers armed mainly with four pounders enjoyed very successful careers, but it took a very skilled commander and gunner to deploy them effectively.

**My Team Challenge: MyHealthCheckup Privateers Challenge**

**Challenge Objective**

Be the first team to reach **14,113,198** steps

**My Team : Betsey**  
Shearwater SKSG

My Team has **25** participants

**Exercise challenge**

- My Daily Log 10000
- People in my Team
- My Team Challenge
- Select your Personal Challenge

**Team Wall**

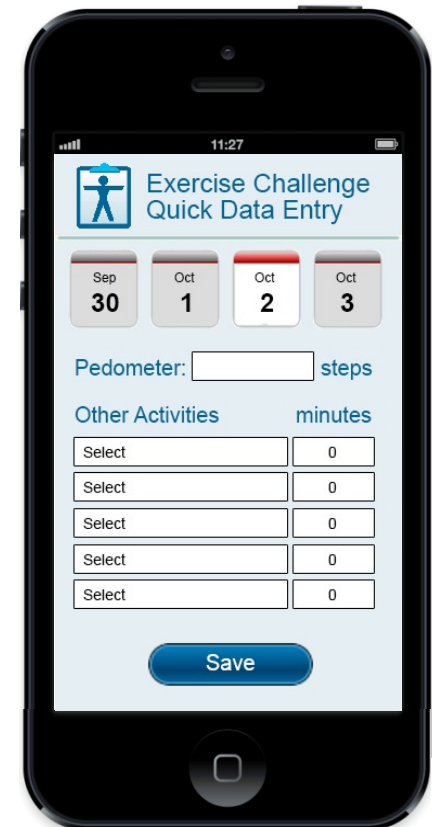
Remaining: 256 send

2013-11-18 10:14:33

**Josh** wrote:  
We are neck and neck with Europa lets keep it up guys big push!

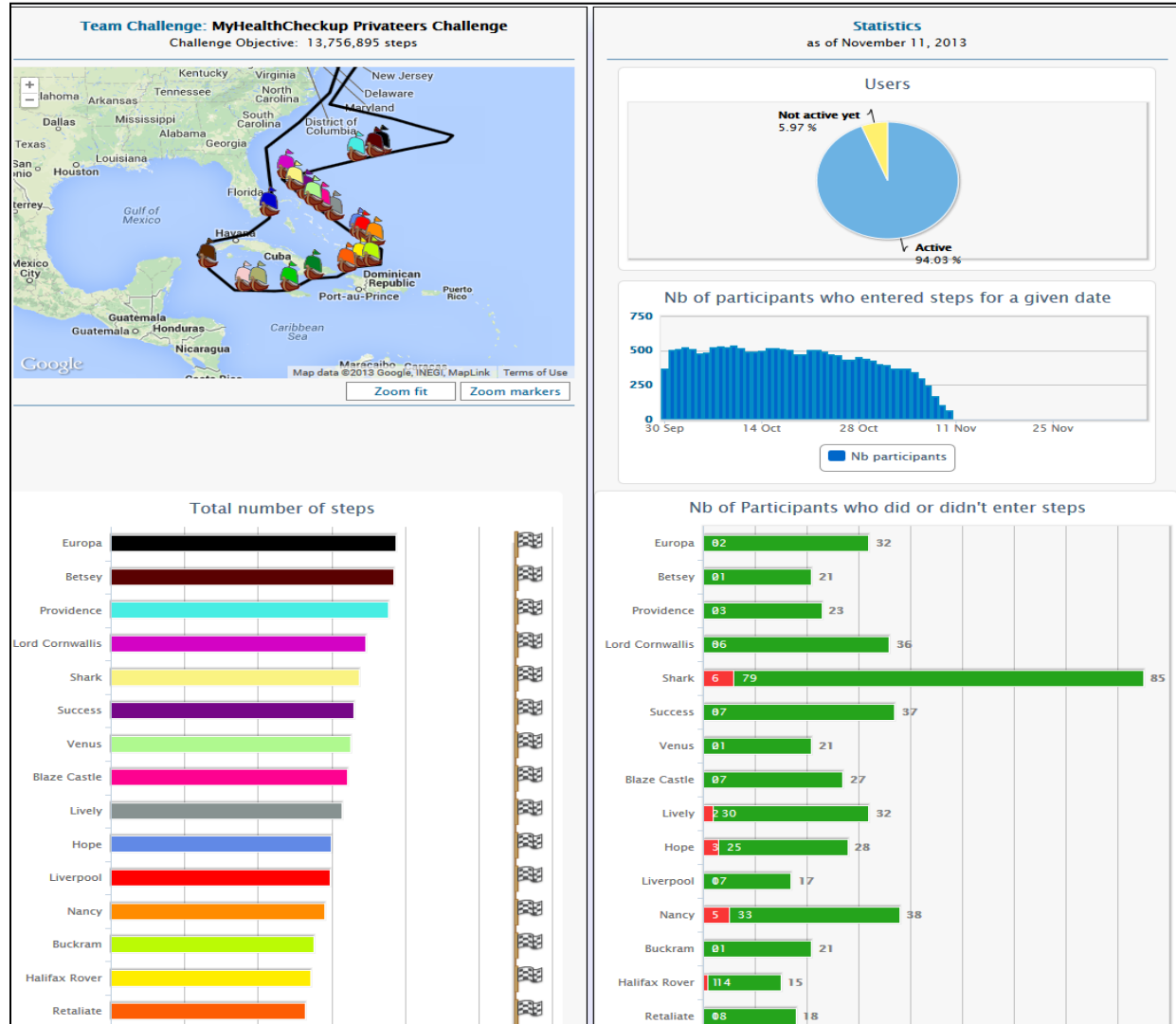
2013-11-15 09:20:46

**Mark** wrote:  
We fell to 2nd but not by much. Get thoes steps logged.



# Keep Everyone Engaged With Data... In Real Time

Leader Boards  
Support  
Competition  
And Build  
Community



# Results Matter

## (Analytics Drive Engagement)

Changes in risk factors and health conditions of military participants (n=274)

	Before	After
Weekly Exercise (METs)	2003	2613 ***
Sedentary (weekly METs < 720)	35%	11% ****
Blood Pressure (mmHg)	124/79	122/77 *
Stress (Perceived Stress Score)	11.4	10.1 ****
High Stress (≥ 18 on Perceived Stress Scale)	15%	12%
Sleep (Insomnia Severity Index)	6.2	5.3 ****
Poor Sleep (≥ 8 on Insomnia Severity Index)	35%	25% **
Fatigue (≥ 16 on Multidimensional Fatigue Inventory)	11%	1% **

\* p<0.05; \*\* p<0.01; \*\*\*p<0.001; \*\*\*\*p<0.0001, Significant (p<0.01)

# Communication Is Critical



Newsroom  
Media Relations Office

## Workplace wellness programs yield positive effects for Canadian employees (March 2018)

- Employee wellness programs in the workplace have been shown to work in the USA, particularly when participation is tied to a reduction in health insurance premiums.
- A new study published by researchers from McGill University in the Journal of Occupational and Environmental Medicine highlights the benefits of such programs for Canadians.



# Social Connectivity Drives Engagement...

## ➤ Team Message Board

Quel est votre objectif pour la fin de semaine? Moi c'est Gatineau-Aylmer en vélo.... :S Let's go gang, on continue! On fait le plein de pas!

C'est vraiment l'fun de croiser plein de collègues quand on sort pour une marche le midi!

Wouhou ce matin Vélo - Boulot!!! C'est vraiment super comme sensation d'arriver au bureau en vélo!!! Let's go groupe!!!!

my toddler helped double my daily steps this weekend!! chasing a two year old on a bike path for the win!

BTW ladies, did you know that house cleaning is an activity??? I lost 85 calories picking up after my kids last night!!!



# Access 24/7 is Critical



Twitter and Facebook Know How to Engage

# CHIP Rules for Successful e-Health Promotion

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1. Make it Fun
2. Build a Community
3. Gather Baseline and Follow-Up Data
4. Keep Assessments Simple...Measure What Matters
5. Track Progress (for the individual, team, and community)
6. Measure Results ASAP to Guide Program Development
7. Leverage Teachable Moments
8. Ensure Privacy and Security

<https://www.youtube.com/watch?v=eKs6K0H01YQ>

