

THE BIG LITTLE NEWSLETTER FOR THE STUDY

ON THE PREVENTION OF CARDIOVASCULAR DISEASE
AND TYPE 2 DIABETES IN CHILDREN AND ADOLESCENTS

Volume 5 Issue 2 (Fall – Winter 2010)

Your physical activity portrait

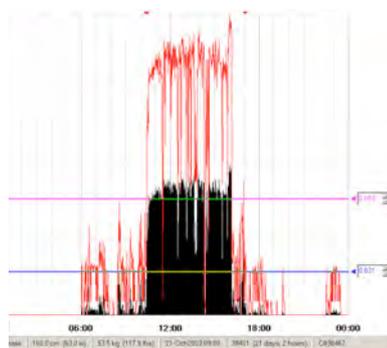


By Marie-Eve Mathieu

What does the accelerometer you wear tell us?

You have all played the game of wearing the accelerometer for one week, not once but twice. Did you know that this little device which looks like a pager tells us a lot about your physical activity level and sedentary activities? This device is so interesting that it allows us to answer important questions like the one Jennifer Brunet presented on page 3 of this Newsletter.

It is sometimes difficult to remember what we do as activities, especially when it is time to complete questionnaires. While only questionnaires can tell us exactly what activity you did (for example baseball and not soccer), the accelerometer records all your movements. In fact, for every minute you wear the accelerometer, a lot of information is recorded and calculated:



- The number of steps you take;
- The total amount of movements you perform;
- Is it a minute where you are ranked as sedentary (little movement), a little active, moderately active or very active (high motion).

Every minute of every day is then added up and that is how we get an overall portrait of your level of physical activity. The graph shows a portrait that was obtained after wearing the accelerometer for one day. The more often you wear the accelerometer, the better your physical activity is measured! It is through this data that Jennifer was able to do the study presented on page 3 and that researchers can better understand the link between your physical activities and your health.



Happy New Year to you!

We wish you had an
'active' holiday season

From the whole team



Did you know that
accelerometers can also be
used to measure the
activity of animals like dogs
and monkeys?



Marie-Eve Mathieu, kinesiologist
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The Journey of your Data

For nearly 6 years, children and their parents are being evaluated as part of the QUALITY study. What follows will give you a better idea of the journey of all the information we collect, from the point when it is compiled until it is disseminated. And we take this opportunity to thank you for being part of this big endeavor!



Before each test, all devices are verified (calibrated) to ensure that measures are perfect! Here you can see the accelerometer being verified.



After each test, all values are entered twice into the computer, this is done to avoid errors.

V1DE5B	V1DE5C	V1DE6A	V1DE6B	V1DE7
29453	1387	0,927	0,843	16290755
28217	1196	0,845	0,742	16290755
22497	1040	0,88	0,79	19250355
30715	1406	0,959	0,93	19250355
21112	1178	0,913	0,835	19250355
20281	939	0,85	0,694	19250355
26943	1290	0,935	0,772	16290755
31622	1306	0,828	0,704	19250355

All the information is kept in the large data file. Each line represents the data of one child and each column is the response to one question or one measure. In total there are 632 lines for the 632 children and 2 921 columns that contain all the information of the first visit!



All original data are kept in binders stored in a locked cabinet. We need 3 full cabinets with double rows to store the 632 binders.



Here you see the blood samples that are kept in a freezer at -80 degrees Celsius. You can see from the picture on the right that our freezer shares a room with other freezers that are used to keep the samples for other projects. And at anytime we can thaw the blood samples and do new tests.



And now, researchers of the QUALITY study and their teams will be able to answer more than 30 questions in the next year with all the information you provided.

Obesity rates are rising sharply among youth in Canada and have reached epidemic proportions. Currently, 26% of children are considered overweight or obese. There is a lot of concern over this because obesity has been linked to numerous negative health consequences, such as increased blood pressure, risk for type II diabetes, risk for cardiovascular diseases, and depression. It is also concerning since many obese children remain obese in adulthood.

We need to learn more about how to prevent obesity. There is great interest in the role that physical activity and sedentary behaviours play in the prevention and management of obesity. A recent study, which was presented at the 3rd International Congress on Physical Activity and Public Health by Jennifer Brunet and colleagues, examined whether normal-weight, overweight, and obese children involved in the QUALITY study report differing levels of physical activity and sedentary behaviours. Results indicated that obese children spend less time engaged in higher intensity physical activities and more time engaged in sedentary behaviours, such as watching television and playing on the computer, when compared to normal-weight children.

Based on these results, the authors make several recommendations for parents:

- (1) Aim to increase children's physical activity participation and reduce the amount of time they spend watching TV and playing on the computer from an early age.
- (2) Give children the opportunity to participate in a wide range of activities to allow them to discover activities that are enjoyable and sustainable in the long-term.
- (3) Offer them support to engage in these activities.

Overall, the authors concluded that both physical activity and sedentary behaviours play a critical role in preventing obesity. They hope that this knowledge will help guide the development of evidence-based recommendations on physical activity and sedentary behaviours as strategies to prevent obesity in Canadian youth.



Caitlin, 13 years old

- A man rides into town on Friday, stays for three days, and leaves on Friday. How is that possible?

... Friday was the name of his horse.

Kiera, 10 years old

- What do cats like to put in their lemonade?

... Micecubes!

Kiera, 10 years old

- Knock Knock.
- Who's there?
- Norma.
- Norma who?
- Normally I have the key but I forgot it.

From the web site

- What is the tallest building in town?

... The library – it has a lot of stories!

Charlie, 11 years old

The Star of the Newsletter



Why do you participate in the study?

Pour aider d'autres enfants.

What is your favourite food?

Steamed hot-dogs and poutine.

What is your claim to fame?

Doing a reverse bridge in my gym class.

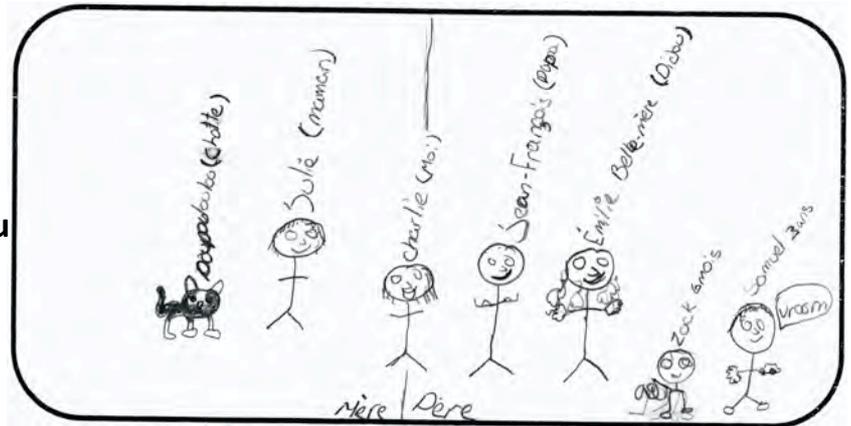
What do you want to be when you grow up?

An artist or a swimmer.

What would you say to other children in the study?

It is useful because you help other children and you miss a day of school.

Charlie's family :



Nous rejoindre

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Funding agencies



Researchers in the QUALITY team are from...

