

THE BIG LITTLE NEWSLETTER FOR THE STUDY ON THE PREVENTION OF CARDIOVASCULAR DISEASE AND TYPE 2 DIABETES IN CHILDREN AND ADOLESCENTS

The third visits with families are ongoing. Already 48 families were seen at the CHU Sainte-Justine and the families of the Quebec region will begin shortly their follow-up. What a useful exchange of services between the participants and the Study team! In fact, when you participate in this follow-up, you help researchers to collect important data about the development of young people who is the target population. The teenager(s) and parent(s) have a blood test and the measurement of blood pressure. In addition, the youth has the opportunity to benefit from a dental examination, a bone densitometry and an aerobic capacity test on ergocycle.

Hope to see you again!

The QUALITY Team

48 Families assessed

In this issue

- 48 families already assessed!
- The content of blood profile
- Interview with Carolyn Côté-Lussier
- Making healthy choices!



The content of blood profile

Here are the components of blood profile:

Fat	Total cholesterol:	mmol/L	Triglycerides:	mmol/L
	HDL-cholesterol:	mmol/L	LDL-cholesterol:	mmol/L

A few weeks after your visit, you will receive the results of **your blood test**. Certain items of this assessment raise many questions.

What is cholesterol? Cholesterol is a type of essential fat and is used to build our cells and hormones. It is partly formed in the liver and the rest comes from the diet. Too much cholesterol can increase blood cholesterol and this excess is deposited in the arteries through the low-density lipoprotein "**LDL**" and form atherosclerosis (fatty deposit) that clogs arteries. It is important to decrease LDL which are "bad" cholesterol carriers.

LDL-Cholesterol: In too large quantities, adverse effect on the heart.



For their part, the high density lipoproteins "**HDL**" are "good" carriers because they carry cholesterol to the liver for elimination.

HDL-Cholesterol: protective effect on the heart.



Triglycerides are another form of fat and when they are available in large quantities in the blood, they become harmful to the heart and also contribute to atherosclerosis. Triglycerides come from fat in the diet and are also produced by the liver from sugars consumed in large quantities.

Triglycerides: In too large quantities, adverse effect on the heart.



The blood profile in detail

Here are the values to be aimed for teenagers and adults for each parameter. But keep in mind that if a person has other risk factors for cardiovascular disease, these values must be evaluated and modified by a doctor to get a global picture of health.

LDL: ≤ 3.4 mmol/L

HDL: ≥ 1.0 mmol/L

Triglycerides: ≤ 1.7 mmol/L



What to do to improve my blood profile?

If my LDL-cholesterol is high:

- ↓ overweight
- ↓ saturated fat (choose lean cuts of meat and low fat dairy products).
- ↓ hydrogenated and trans fats (avoid industrialized products such as cookies, pies, fries ...).
- when you have to choose foods containing fat, choose monounsaturated or polyunsaturated fats. Olive oil, canola oil and omega-3 fatty acids (such as those found in fish) are good examples.
- ↑ consumption of dietary fibers (varied fruits and vegetables, whole grains)
- ↓ smoking

If my HDL-cholesterol is low:

- ↓ overweight
- ↑ aerobic exercise of moderate intensity, 5-7 times per week, for 30 to 60 minutes (however, if you start training, low intensity is recommended at the beginning). Running, sports such as soccer, cycling, brisk walking, dancing and swimming are examples of types of aerobic exercise. The effect of exercise could result in an increase of HDL-cholesterol after 3 months. This positive effect will continue, but only if you stay active regularly.

If my triglycerides are high:

- ↓ overweight
- ↓ all types of fat intake
- ↓ concentrated sugars (sweetened beverages, sweets)
- ↓ alcohol consumption
- when you have to choose foods containing fat, choose monounsaturated or polyunsaturated fats. As previously mentioned, olive oil, canola oil and omega-3 fatty acids (such as those found in fish) are good examples.
- ↑ aerobic exercise of moderate intensity, 5-7 times per week, for 30 to 60 minutes (however, if you start training, low intensity is recommended at the beginning). The effect of exercise could result in a decrease of triglycerides after only 2 weeks. This positive effect will continue, but only if you stay active regularly.

Since LDL, HDL and triglycerides are modifiable, it is good to be monitored to ensure that you are on the right track. If these values are outside the standards or limits, talk to your doctor.



Interview with Carolyn Côté-Lussier

Feeling good: Social and physical environment predictors of youths' feelings of safety in the community, and the effects of feeling safe on physical and mental health



Could you describe to us your study and research field and the link with QUALITY Study?

I am a criminologist and social psychologist based in the Department of Social and Preventive Medicine at *Université de Montréal*. I am interested in understanding why certain people feel unsafe in their residential neighborhoods and how we can make people feel safer, and healthier.

We know that for adults, living in neighborhoods, they perceive as ranking high on what we call social and physical disorder (e.g., litter, graffiti, groups loitering) is associated with feeling less safe. We also know that adults who feel less safe in their residential neighborhoods tend to have poorer sleep quality, engage in less physical activity, report more depressive and anxiety symptoms, and report having poorer overall health.

Parents' perceived neighborhood safety is also associated with their children's health. When parents report that their neighborhood is unsafe, because of disorder but also because of traffic-related concerns (e.g. car), their children tend to engage in less physical activity although engaging in more physical activity and less sedentary behaviour is important for youths' health.

But a lot less is known about youths' own feelings of safety, and how these relate to their health. There are two research questions that I am particularly interested in. First, what features of youths' residential neighborhood are associated with how safe they feel in their community? Second, how are youths' own feelings of safety associated with their physical (e.g., level of physical activity, screen time, BMI) and mental (e.g., anxiety and depression symptoms) health?

To address some of these questions, I work with epidemiologist Dr. Tracie Barnett (Concordia University) who specializes on the association between neighborhood features (e.g., residential

density, trees, traffic) and health. I also work with Dr. Jonathan Jackson (London School of Economics and Political Science), a criminologist who specializes in studying fear of crime.

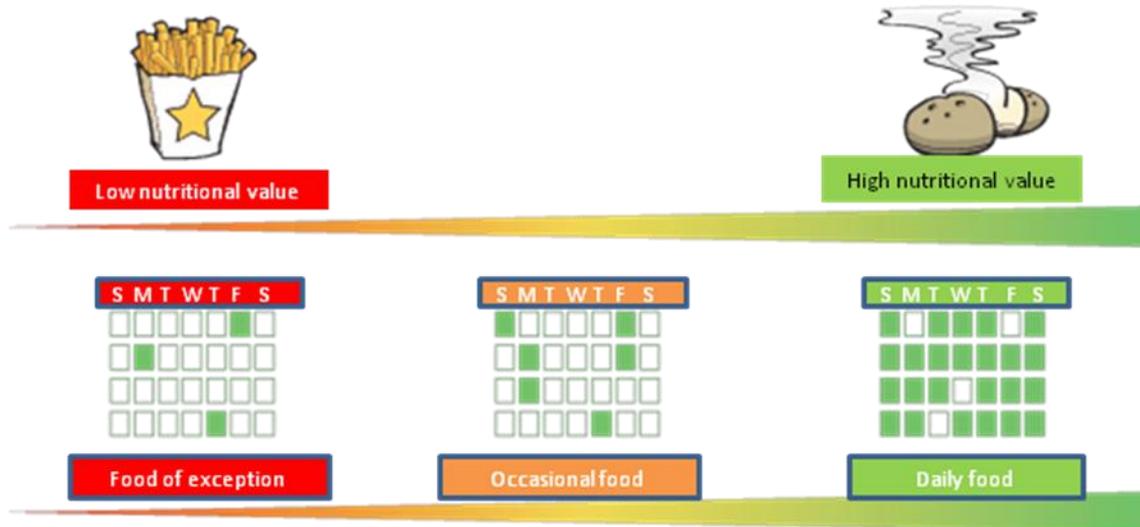
The QUALITY study is of particular interest for several reasons. First, the study is longitudinal and this will allow us to analyze changes over time in youths' feelings of safety, changes in their neighborhood and changes in their level of physical activity. The study is also rich because both youth and their parents are interviewed, which allows us to observe whether the same neighborhood features are associated with youth and parent feelings of safety. We can also see whether youths' or parents' feelings of safety are more strongly associated with youths' health outcomes.

Using the QUALITY data, we have been able to test certain of our hypotheses and the results are promising. We have found that different neighborhood features are associated with youth and parent feelings of safety. For instance, youth appear to feel safer in neighborhoods where there is more greenery (e.g., trees, parks) and more lighting. Youth who feel safer also report being more interested in doing physical activity. We hope that these results will lead to targeting neighborhood features that can improve youths' feelings of safety, health and well-being.

Carolyn Côté-Lussier has a Bachelor's (Carleton University) and Master's (University of Toronto) degree in criminology, and a PhD in Social Research Methods from the London School of Economics and Political Science. She is the recipient of a "*Fonds de recherche du Québec – Société et culture*" postdoctoral fellowship.

Making healthy choices!

The nutritional value of a food can help us making good choices for a healthy diet. More a food is nutritious and non-processed more often we will choose it. On the contrary, if a food is high in fat and sugar, we do choose it rarely. For a same food, e.g. potato, our choice should be oriented more often on baked one rather than fried one. Here is a figure showing the continuum of nutritional value of food and its frequency of choice.



■: on the menu

Source: Adapted from Government of Quebec, 2011

To reach us

Tel.: (514) 345-7751 or toll-free 1-877-326-8596 E-mail: famille@recherche-ste-justine.qc.ca

Funding agencies



Fonds de la recherche
en santé
Québec



Affiliations of QUALITY researchers



CHU Sainte-Justine
Le centre hospitalier
universitaire mère-enfant
Pour l'amour des enfants



Université
de Montréal

