

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

The third visit!!!



Be at the rendez-vous for your next visit!

We are preparing ourselves for the 3rd visit of the QUALITY study, which will begin in September 2012. We hope to see you all again. Did you know that 89% of the original study families participated in the 2nd visit of the QUALITY study? Stay tuned: depending on when you were initially recruited, you will be contacted for your **3rd visit**, sometime over the next 3 years.

Seven years will have gone by between your 1st and your 3rd visits. This means that many changes will have taken place in your lives. It is for this reason that we would like to see you again. In addition, although you don't know the other participants, you are part of a group. The other members of your group will also have evolved. Keep in mind that the greater the group's participation, the more researchers will be able to determine which factor play a key role in the prevention of heart disease, diabetes and obesity in youth. Each participant is important. Whether it be to test your physical fitness, to do your good deed for the day, to help advance science or to rediscover the different tests and apparatuses, **we are waiting for you!!!**

In this issue

- The 3rd visit!
- Interview : Katherine Gray-Donald
- Type 2 diabetes
- Homage to Dr Marie Lambert



Because one of the goals of the Study is to describe changes over time of certain variables, many of the tests will be repeated upon your next visit to Sainte-Justine Hospital or at Laval Hospital, including:

- **Blood tests**
- **Anthropometric measures : height, weight, skin fold, blood pressure**
- **Glucose tolerance testing (the infamous orange juice test...)**
- **Questionnaire**
- **Dental hygiene test**
- **Bone density measurements and body composition (DEXA)**
- **Aerobic capacity testing, on a bicycle**
- **Etc.**

Following your visit, you will also have to answer questions that will be asked on 3 separate occasions by a nutritionist in order to get an accurate representation of your diet. Katherine Gray-Donald is the primary researcher who will be in charge of this section. Let's see what she can tell us about this topic:



Interview with Katherine Gray-Donald, primary researcher

Why did you decide to collaborate with the QUALITY study?

We have very little information on how the foods that children and adolescents eat affect their health. Much more is known about adults. To give guidance we need to know more about how foods and the nutrients they contain affect health.

Are there many studies that look at the eating habits of youth?

While there are a number of studies measuring what children and adolescents eat, very few have health measures to link food and health.

How easy is it to have a good portrait of what youth eat using a questionnaire that is administered by phone?

The telephone has been used in many surveys to question people about what they eat. The easiest way to find out what individuals eat is to measure exactly what they ate yesterday. Repeating this several times gives us a good measure of what the person usually eats. The one thing we cannot control is



whether or not the person wishes to tell us about all the foods they eat. We know some people would rather not tell us about the candy or chips they ate for a snack, so we have to rely on full reporting.

Do eating habits change a lot between the ages of 8-10 and 15-17 years?

Yes. For one thing they eat much more, especially boys as they are growing very quickly at ages 15-17. They are also on their own and away from their families more of the time so they may be eating out more.



What factors influence the eating habits of youth?

We don't know all the factors but certainly we know that what parents eat and choose to have in their homes affects what children eat. If there are always soft drinks in the home children are more likely to consume them. If appealing fruits are offered to children frequently they will be more familiar with fruits and enjoy them more and hence eat them more. What is available wherever we are also influences people as does the price of foods.



Can you tell us about micronutrients and macronutrients?

Micronutrients are vitamins and minerals that we eat in different foods and the macronutrients are what give us energy; protein, fat and carbohydrates (glucides). We need to balance all of the nutrients by consuming a variety of healthy foods. We know that many people do not get enough fruits and vegetables, some do not get sufficient milk and many get too much sugar, salt and fat from less healthy food choices. Another challenge for nutritionists is to encourage whole wheat breads and cereals.

Are there reliable resources that are easily accessible for individuals to obtain information on nutrition?

Here is an internet site that you can visit:

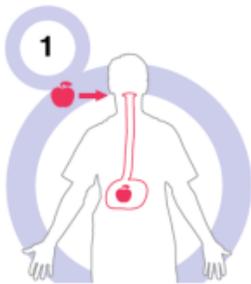
<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-fra.php>



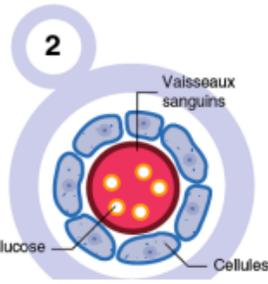
Type 2 diabetes in a few simple points

What is Type 2 Diabetes?

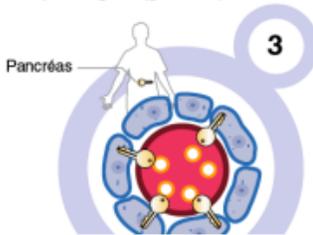
Type 2 diabetes is a chronic disease that is characterized by excess glucose in the blood. Normally, cells use glucose thanks to insulin. In diabetics, cells are less sensitive to insulin and therefore, the uptake of glucose is less efficient. In addition, the pancreas excretes an insufficient amount of insulin.



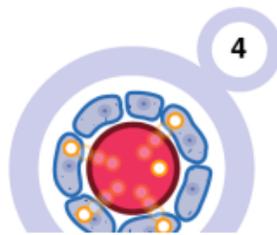
1
The food arrives in the digestive tract, where the carbohydrates in the food are broken down into simple sugars (glucose).



2
The glucose moves from the digestive tract into the circulatory system.



3
On its own, glucose cannot penetrate the cell walls. To do so, it needs insulin, which is secreted by the pancreas and acts like a key, allowing the glucose to enter the cells.



4
When glucose circulating in the bloodstream enters the cells, the level of sugar in the blood (glycemia) drops.

What are the signs and symptoms of diabetes?

The signs and symptoms are not obvious. They often pass unnoticed. One out of three diabetics is not diagnosed. The medical exam is an important way to diagnose type 2 diabetes. Certain indicators can also be risk factors for susceptibility among certain individuals: infections, cuts that take a long time to heal, rashes on the skin, trouble with vision, fatigue, extreme thirst, frequent need to urinate and erectile dysfunction.

Why should we prevent this disease in youth?

Type 2 diabetes has become more common in adolescents and youth than ever before. The long term consequences of this disease can be detrimental and can diminish the quality of life of those affected by it.

What are the long term consequences of this disease?

The possible consequences of type 2 diabetes :

Retinopathy

(Problems with vision that may lead to blindness).

Cardiac problems

And complications related to poor blood circulation

Neuropathy

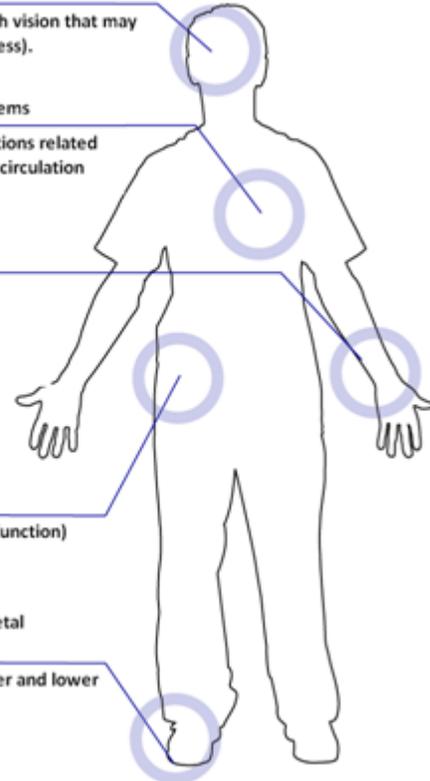
(Damage to nerves that innervate muscles, skin, blood vessels and other organs).

Nephropathy

(Poor kidney function)

Musculo-Skeletal problems

Affecting upper and lower limbs



How can you diminish the risk of becoming diabetic?

Certain risk factors associated with diabetes are not modifiable such as age, family history and ethnicity. However, others are modifiable such as obesity and physical activity. We must therefore encourage healthy eating habits and regular physical activity in order to achieve a healthy weight and an ideal blood glucose level.

Adapted from : Trousse Diabetaction 2011

Here are links for internet sites that give ideas on how to be active and eat a balanced diet:

<http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/assets/pdfs/06paap-fra.pdf>

<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-fra.php>

Homage

It's with regret that we announce the death of Dr Marie Lambert, who passed away on Monday, February 20th, 2012, in Montreal, at the age of 59.

Dr Marie Lambert, principal investigator on the QUALITY study, worked with tremendous diligence in order to launch and pursue the QUALITY study. In addition to accomplishing her tasks as a pediatric geneticist at CHU Sainte Justine and a university professor, Dr Lambert invested her passion in the QUALITY project and in the health of children and adolescents.

All the collaborators of the QUALITY team will honour the hope and vision of Dr Lambert and will ensure the successful continuation of the QUALITY study, with Dr. Lambert's dedication and enthusiasm.



How to reach us

Tél. : (514) 345-7751 ou sans frais au 1-877-326-8596 Courriel: famille@recherche-ste-justine.gc.ca

Funding agencies and sponsor



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

