



BLOOD AND PLASMA DONATIONS
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HÉMA-QUÉBEC

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Photo: Marie-Claude Paquette
studopaitcourse.com



**I GIVE
I RECEIVE**



GIVE BLOOD. GIVE LIFE.



MESSAGE FROM THE PRESIDENT

Proud partners of the gift of life

What feeling do you get from doing a deed that helps save lives? Every donor who has given blood, stem cells or mother's milk can answer this question.

And every time I ask the question, pride is invariably the feeling that is expressed; the pride of doing something that has a significant impact on other people.

Donors are not the only ones to experience this feeling of contributing in a concrete way to the gift of life. The volunteers and my colleagues on the Héma-Québec team all share a common desire to save lives.

Without the commitment of each of these individuals, Héma-Québec would not be able to fulfill its mission and provide sufficient quantities of blood components to Québec hospitals. Thanks to you, the bond of life between recipients and donors is stronger and more alive than ever.

Each year, Héma-Québec delivers close to half a million blood components; it supplies over 380,000 products made from proteins obtained through plasma donations; and it aims to distribute some 40,000 bottles of mother's milk intended for very premature infants and roughly 4,000 corneas and human tissues coming from generous donors who made the ultimate donation at the time of death.



Photo: Marc Couture
marcphotos.com

But the needs are still great. We all have an important challenge to take on: that of convincing even more people to join this collective effort. When you read the pages of this issue, you will see that we have to recruit more plasma and mother's milk donors as well as more stem cell donors of all genetic makeup to meet the needs of Québec patients.

We will succeed thanks to the partners that you are and those who will join us in the months and years to come. Our next strategic planning cycle, which will begin in the spring, will focus on partnerships. The gift of life will benefit from these dedicated partners.

Serge Maltais

President and Chief Executive Officer

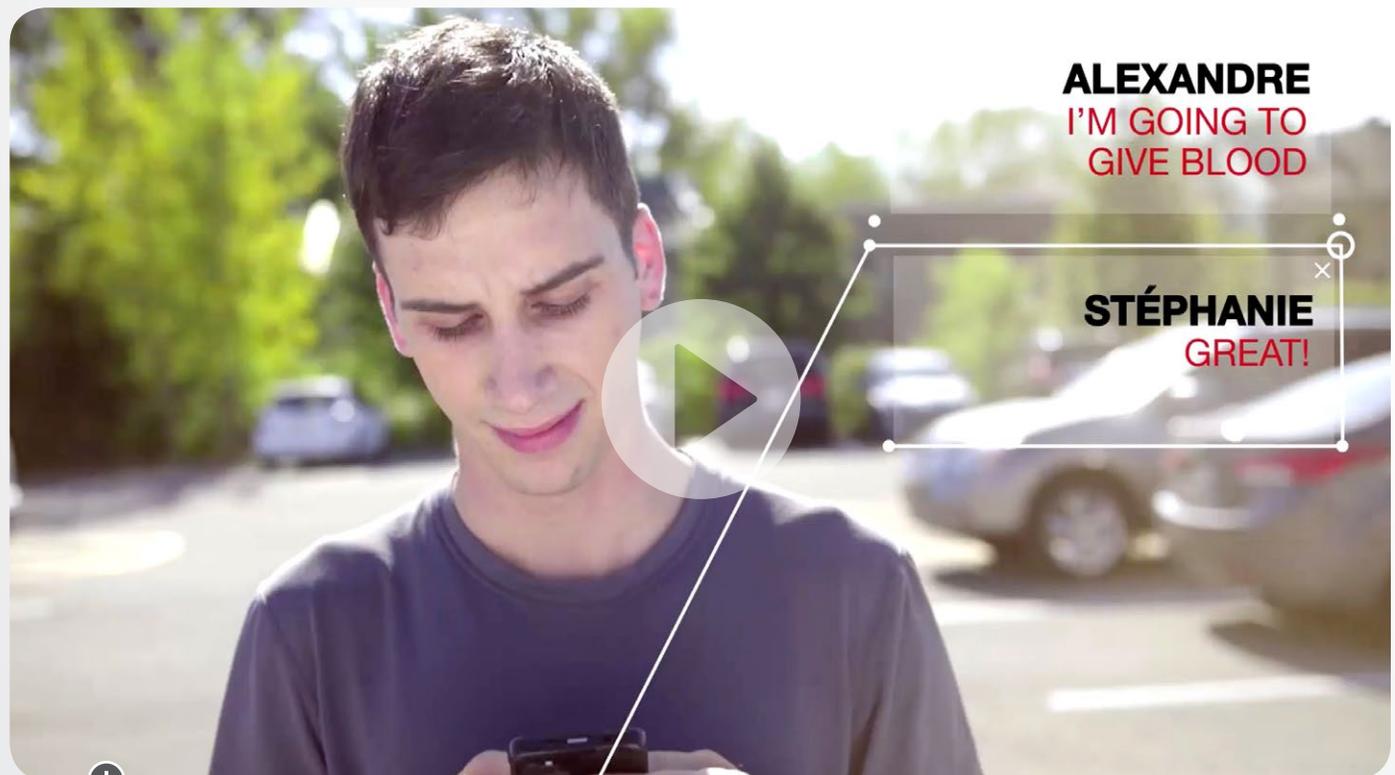
NEW VIDEOS

Blood donations demystified!

Before making your first donation, and even afterwards, it is normal to ask questions. In 2016, we met with you to identify your questions. Our most recent videos, presented on the following pages, answer the questions we are asked most frequently: *What to expect?*, *What happens after?* and *How does it work?*

Each three-minute video discusses and explains an aspect of the transfusion route or the plasma route. You can watch these new videos in our donor centres... They are also available on our Web site in the *Publications > Videos* section, as well as on our YouTube page. Enjoy watching them!

BLOOD DONATION: WHAT TO EXPECT?



This video presents the path taken by the donor at a blood drive, from the welcome desk to the post-donation snack.



Watch all our videos on our channel: [youtube.com/user/hemaquebec1998](https://www.youtube.com/user/hemaquebec1998)

BLOOD DONATION IN NUMBERS

(from April 1st to November 30, 2016)

▶ BLOOD DONATION: WHAT HAPPENS AFTER?



This video highlights the processing steps all donations must undergo before being sent to hospitals.

▶ APHERESIS DONATION: HOW DOES IT WORK?



This video explains an apheresis donation. The 3D animation makes it possible to see how the device used separates the blood into its various components, collects the desired components and returns the others to the donor.



19%

OF BLOOD DONATIONS

were made in
GLOBULE Centres



1,000

DONORS REGISTERED

on average for blood donation
in a GLOBULE Centre each week

Blood collections
increased

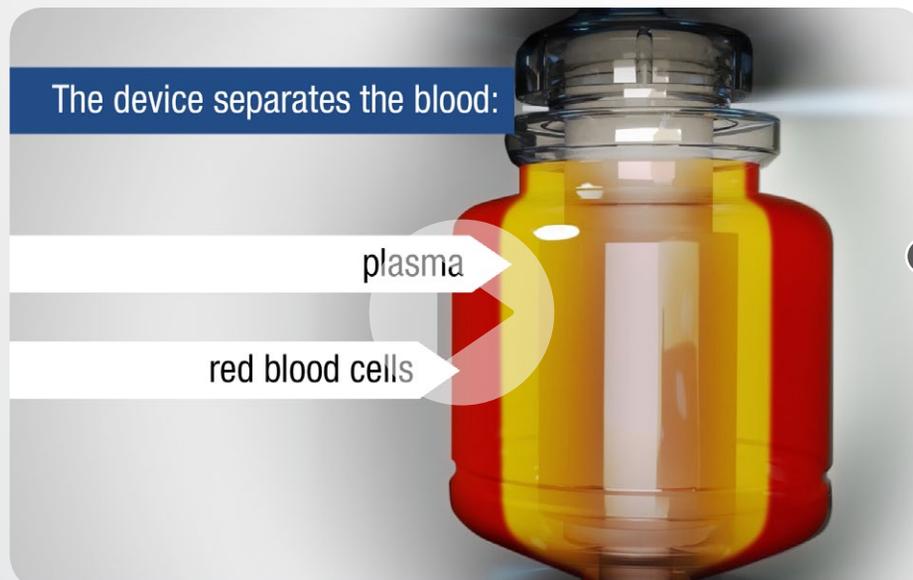


IN GLOBULE CENTRES

compared to the same
period last year

▶ For more information on whole blood donation: www.hema-quebec.qc.ca, Blood > Donors > Donation types section

NEW VIDEOS (cont'd)

 **PLASMA DONATION: WHAT TO EXPECT?**


This video illustrates the path taken by the donor in a PLASMAVIE Plasma Donor Lounge, from the welcome desk to the post-donation snack.

It uses 3D animation to explain how the device collects only the plasma and returns the other blood components to the donor.

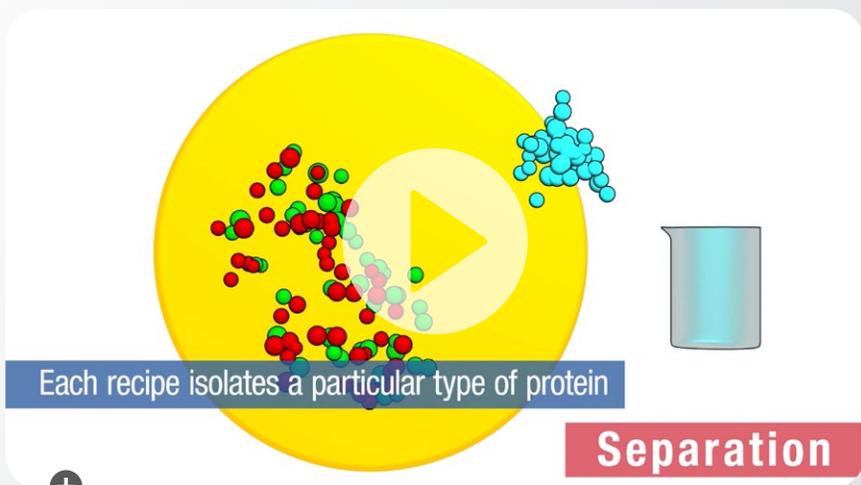
PLASMAVIE IN NUMBERS

(from April 1st to November 30, 2016)

▶ PLASMA DONATION: WHAT HAPPENS AFTER?



This video shows the steps following the donation, from the time the plasma arrives in Héma-Québec's laboratories up to when the plasma solutions are sent to hospitals.



A 2D animation illustrates how the proteins (albumin, immunoglobulin and the coagulation factors) are extracted from the plasma.



5,254 DONORS
made

28,466
DONATIONS



930

APPOINTMENTS
on average per week



5.4
DONATIONS
on average per donor

25%

of donors made
8 DONATIONS OR MORE



▶ For more information about PLASMAVIE
Plasma Donor Lounges: plasmavie.ca

PLASMA

Healed with plasma proteins

“Plasma donors provide hope, strength and, in the case of Leksia, healing...” That’s what Cassandra Michon realized a little more than a year ago, when she not only learned about products manufactured from blood plasma but, above all, when she discovered the extent to which plasma donors make a difference in the lives of those who need such products, like her daughter Leksia.

The little girl was three months old when small red spots covered her entire body and blood appeared in her stool. A blood test revealed that her platelet level was abnormally low. Platelets are blood cells. They contribute to the coagulation of blood and the healing of wounds. A very low platelet level, like Leksia’s, represents a high risk for spontaneous internal hemorrhages. The situation was urgent.

She was quickly given a platelet transfusion, but her immune system destroyed the platelets in only six hours. It attacked her own blood. Immunoglobulins (proteins extracted from the plasma) had to be administered to restore her immune system and enable the platelet level to increase sufficiently.

Unfortunately, a few days later, the spots reappeared on her body. This time, a steroid treatment gave her a brief moment of respite. “We were very concerned since there was no clear diagnosis,” Cassandra recalls. →





Kassandra and Carl
with their daughters
Oksana and Leksia

“Thanks to all those who take the time to make the difference in the lives of recipients and their loved ones. They enable us to savor life and each moment of happiness spent as a family... and to enjoy good health!”

– Kassandra Michon

“We lived day by day. Each injection represented a brief period of relief and hope that Leksia would respond to the treatment. That’s when I learned about the scope of the situation and the importance of having access to blood products: it was the blood of strangers that would make all the difference,” says Kassandra.

Fortunately, plasma donors were there to help! The second injection of immunoglobulins stabilized Leksia’s condition. In a few months, her platelet level returned to normal. Now, at the age of 16 months, she is in great shape and her parents thank the donors from the bottom of their hearts. “Thanks to all those who take the time to make the difference in the lives of recipients and their loved ones. They enable us to savor life and each moment of happiness spent as a family.... and to enjoy good health!” •



For more information on plasma donation:
www.hema-quebec.qc.ca, *Blood > Donors > Donation types* section

HÉMA-QUÉBEC

In every corner of Québec

Three new PLASMAVIE Plasma Donor Lounges opened in Saguenay, Sherbrooke and Gatineau.



Photo: Marc Couture - marcphotos.com

Gatineau



Laval Montréal

Legend:



GLOBULE



PLASMAVIE



PLASMAVIE-GLOBULE



Photo: Jeannot Levesque

Saguenay



Plasma Donor Lounges are modern and inviting. They feature personalized service designed to make the donation experience as pleasant as possible.

Québec



Saint-Laurent

Trois-Rivières



Sherbrooke



Brossard



Sherbrooke

Photo: Fotografika - fotografika.ca

STEM CELLS

The Registry makes diversity a priority

Unlike meeting the need for blood, where blood groups are few (A, B, AB or O) and very similar in everyone, finding compatible stem cells for transplant is a major challenge. There are more than 15,000 genetic markers...

And for a stem cell transplant to succeed, the characteristics of the transplanted stem cells must be as close as possible to those of the patient. These characteristics, called HLA, are hereditary. So, a patient's brothers and sisters are most likely to be compatible.

Unfortunately, three times out of four, a compatible donor is not found within the family and a search must then be initiated among persons who share a similar genetic makeup. In these cases, stem cell donor registries become the only hope. The problem is that more than 85% of donors on the Stem Cell Donor Registry are white (Caucasian). Whites have a much greater chance of finding a compatible donor than Asian, Hispanic, Black or First Nations people. In fact, First Nations people are among the most disadvantaged by this situation. Unlike in the case of Black and Hispanic populations, for example, the Public Cord Blood Bank cannot currently compensate for the underrepresentation of First Nations people on the Registry.

First Nations at the heart of a study

Héma-Québec, which has been working for several years to improve the diversity of its Registry, will increase its activities with First Nations over the coming months. The first purpose is to raise awareness of stem cell donation. The second is to study their HLA markers and to understand how they are distributed within the various First Nations communities.

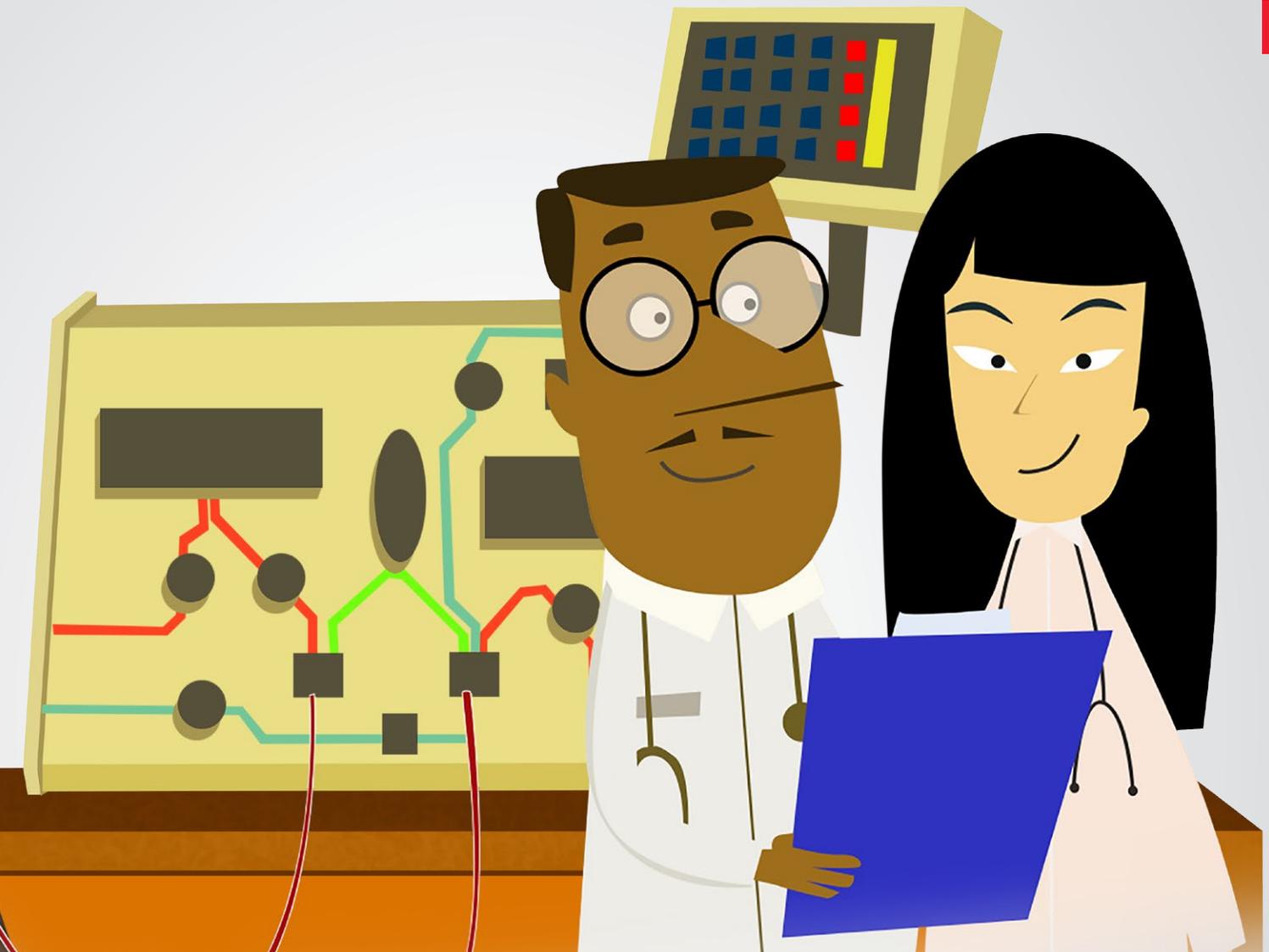
The First Nations are very poorly represented in Canadian registries (Héma-Québec and OneMatch) and absent from the international ones. In Québec, approximately 500 First Nations



individuals (0.8%) are included in the Registry. Yet First Nations patients represented 3% of those referred to the Registry this year. The result: the probability of responding to the needs of people from these communities is very low. Particularly since there is no data on their HLA typing, which makes searches even more complex since it is difficult to evaluate and provide for the various compatible combinations of HLA markers.

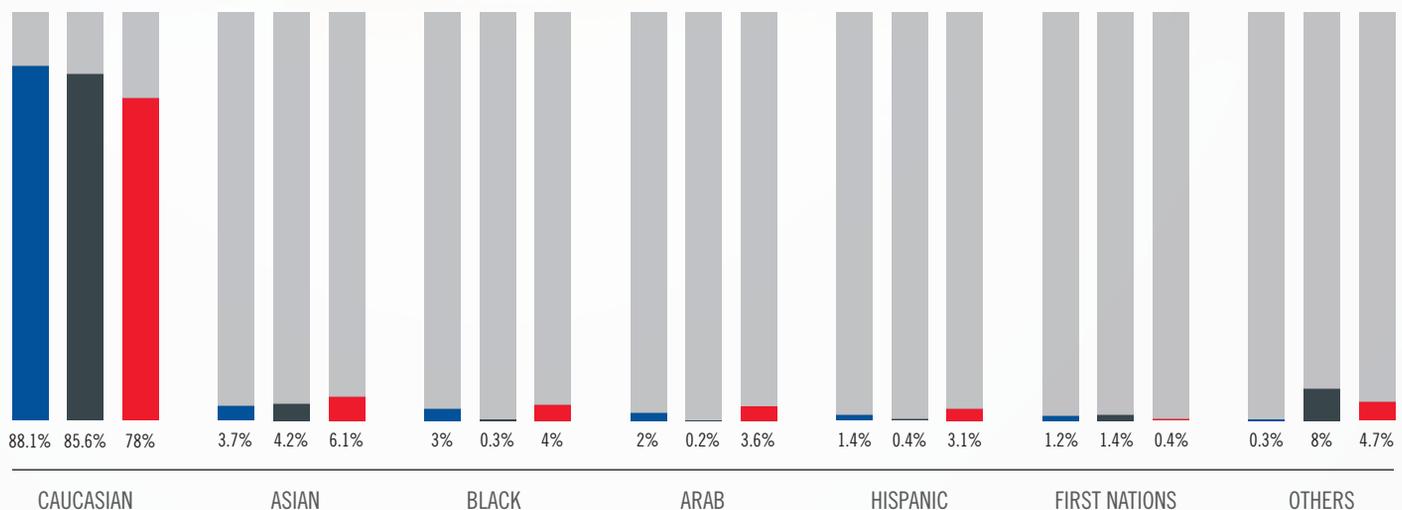
The research and steps undertaken by Héma-Québec are intended to reveal the similarities and differences between the First Nations communities and to verify if their HLA typing is similar to that of other populations around the world; to increase the registration of First Nations individuals in the Stem Cell Donor Registry; and, above all, to save lives!

This project, which is funded by the Héma-Québec Foundation and Héma-Québec's Stem Cell Donor Registry, has been well received in the communities approached to date. The support of the First Nations of Quebec and Labrador Health and Social Services Commission has given new momentum to the efforts deployed to make the urgent need for First Nations donors better known. •



Breakdown of human biological groups in the population, the Registry and the Public Cord Blood Bank

- Québec population (2011)
- Stem Cell Donor Registry
- Public Cord Blood Bank



CORD BLOOD

A promising discovery

During the past year, the team of Josée Laganière, senior researcher at Héma-Québec, found a new way to produce more stem cells from umbilical cord blood in laboratory. This finding could extend the range of patients who are eligible for stem cell transplants from cord blood. Héma-Québec's scientific team is delighted by this news.

"We're in the pre-clinical stage. Before they can be used as medication, the cells produced must be proven to be superior to those that are developed using other methods and clinical trials must be conducted to prove their safety and their effectiveness compared to what is already available," explained Mrs. Laganière.

The use of cord blood as a source of stem cells intended for transplant has grown at a steady pace over the last 30 years. Up to now, as a result of the limited number of stem cells contained in an umbilical cord, cord blood has been primarily used to treat children, since they require a smaller dose of stem cells.

In the case of adults, stem cells obtained from peripheral blood or bone marrow are used. Nevertheless, this discovery opens the door to the possibility of extending cord blood stem cell transplants to adults. It's easy to understand why this discovery is generating such enthusiasm! •

Josée Laganière,
senior researcher



For more information on research and development:
www.hema-quebec.qc.ca, *Research and development section*

HUMAN TISSUES

Canada's largest human tissue bank

Héma-Québec's Human Tissue Bank is the leader in volume and variety of tissues provided for transplant purposes.

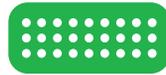
Héma-Québec collects the following human tissues:



Corneas



Heart valves



Skin tissue

Arterial tissue
(abdominal aortas, arteries)Musculoskeletal tissues
(ligaments, tendons, fragmented bones, femoral heads)

SOME STATISTICS ABOUT HUMAN TISSUES IN QUÉBEC (from April 1st to November 30, 2016)



500 DONORS
IN QUÉBEC

500
EYE TISSUE
DONATIONS

144
OTHER TISSUE
DONATIONS



Héma-Québec started collecting, processing and banking

ARTERIAL TISSUES

HUMAN TISSUE DISTRIBUTION ROSE BY



4.8%

compared to the same period last year

Each donor recommendation enables Héma-Québec to supply an adequate amount of human tissues to patients awaiting a transplant. If every potential donor was systematically identified, it would make all the difference in the lives of recipients.

MORE THAN



30

CORNEAS HAD TO BE SOURCED OUT OF COUNTRY BY LACK OF DONORS



Over an eight-month period, the supply of skin tissue reached only

50%
OF ITS ANNUAL TARGET



DID YOU KNOW?

Even if you have formally consented to tissue donation, it is your loved ones who will make the ultimate decision upon your death about whether your tissues are removed. Hence the importance of letting them know your desire to be a donor.

Thank you for helping us ensure a legacy... of life!

MOTHER'S MILK

More donors are needed

When she was pregnant with her first child, Kathleen Foster was diagnosed with preeclampsia. This condition, which is responsible for a good number of premature births, is characterized by increased blood pressure and is often accompanied by vision problems, headaches, nausea and abdominal pain. Hospitalized and placed on bed rest, Kathleen gave birth when she was only in her 28th week of pregnancy: Justine weighed barely 750 grams at birth.

Like most mothers who give birth prematurely, Kathleen was never able to stimulate her milk production sufficiently. The neo-natal team at the Centre mère-enfant Soleil of the CHUL suggested that she turn to the mother's milk bank, as a result of the many benefits that it provides for premature babies born at 32 weeks or less.

On average, it reduces the baby's risk of developing necrotizing enterocolitis by 3.3 times. This disease is associated with a high mortality rate, results in severe

intestinal damage and affects close to 6% of premature babies. Moreover, premature babies attain a satisfactory weight more easily and there is less need for them to be re-hospitalized when they are fed milk from the bank.

In Québec, it is estimated that 4,000 litres of milk are needed each year to meet the needs of approximately 1,000 premature babies. Kathleen was not aware of this dimension of Héma-Québec's mission, but did not hesitate a second to use milk from the bank for her daughter, for six

weeks. Today, Justine's condition remains precarious, but for Kathleen, "there is no doubt that if she is doing better it is partly as a result of this precious product, which she received at the start of her life."

"The donors are very generous and respond to a vital need. Their contribution is essential for mothers who, like me, are unable to breastfeed. They help provide the best to vulnerable babies like Justine," says Kathleen Foster. •

Kathleen,
with her daughter
Justine, mother's
milk recipient



Donors eligibility criteria

- In good health
- Nursing and able to produce surplus milk
- Non-smokers
- Answer a questionnaire and have a blood test
- Reside in a municipality of the metropolitan communities of Montréal or Québec City



Montréal



Québec City



107

ACTIVE DONORS

AS OF NOVEMBER 30, 2016

OBJECTIVE: 500
PER YEAR



MORE THAN

10,250

BOTTLES DISTRIBUTED

SINCE THE MILK BANK WAS CREATED
IN MAY 2014

OBJECTIVE ON MARCH 31, 2018:

4,000 LITRES

AVERAGE PER YEAR

From donation to distribution

DELIVERY
The milk is distributed to the hospitals to be given to very premature babies.



DONATION

Héma-Québec provides the bottle to you; you collect your milk at home and freeze it.



PICK UP

Plan to have your bottles picked up by Héma-Québec at least once a month or depending on the storage capacity of your freezer.



POOLING DONATIONS

Héma-Québec mixes your donations with those of other donors.



MICROBIOLOGICAL TESTS

Héma-Québec tests the milk to make sure it is safe for the recipients; if the results are acceptable, the milk is stored in the freezer.



PASTEURIZATION

The milk is pasteurized to eliminate viruses and bacteria.



A product that is sought after

Since it was created in 2014, Héma-Québec's Public Mothers' Milk Bank has distributed more than 10,250 bottles of milk to Québec hospitals offering specialized neo-natal care.

In order to respond to the growing demand, Héma-Québec has extended the recruiting of mother's milk donors to the territories of the Montréal and Québec metropolitan communities. Despite everything, in December 2016, the

Bank was only able to provide milk for the most vulnerable premature babies, born at 29 weeks or less, whereas the objective is to help very premature babies born at 32 weeks and less... More donors are needed.

Healthy, non-smoking mothers who want to donate their surplus milk can help the most fragile newborns on a voluntary and unpaid basis.

MOTHER'S MILK

New donors needed!

Breastfeeding is a completely natural gesture for France Desjardins. Since the birth of Marie-Soleil, who is now 10 months old, she has been one of the donors who contribute to Héma-Québec's Public Mothers' Milk Bank.

The mother of five children, France Desjardins, chose to give birth at the Cité-de-la-Santé hospital in Laval, so that she could register and contribute to Héma-Québec's Public Mothers' Milk Bank. Since she has been a breastfeeding coach, she is aware of the importance of mother's milk for the development of newborns and helping very premature babies recover their health is a great source of pride for this resident of the Mirabel region.

Accompanied by her daughter, France visited the premises of the Public Mothers' Milk Bank last October. She said that she was very touched by the warm welcome the personnel gave her and she told us that this visit motivated her to contribute more to the bank.

Her contribution, however, is coming to an end. In fact, studies show that the make-up of mother's milk changes

throughout breastfeeding and, after a certain time, the quantity of the nutrients that are essential for the very premature babies who receive milk from the bank decreases. For this reason, France will only be able to contribute to the Bank until Marie-Soleil reaches the age of 12 months. She is pleased, however, that more mothers will be able to contribute to the bank as a result of the expansion of the recruiting zone and invites women to find out how they can be donors. •

France,
mother's milk
donor

For more information about donating mother's milk:
www.hema-quebec.qc.ca, *Mother's milk* > Donors section



VOLUNTEERS NEEDED

The ABDV recruits donors throughout the year for its various activities.

GIVE SOME TIME... AND HELP SAVE LIVES!

The Association of Blood Donation Volunteers (ABDV) has represented close to 500 active volunteers per year since 1998 and is made up of 13 regional chapters throughout the province. These men and women dedicated to the cause of blood donation are an essential part of the Québec blood supply structure.

The mission of the ABDV is to promote blood donation and support the recruitment of donors through activities such as:

- information booths in cegeps, universities and other institutions;
- ABO—Do you know your blood type? booths;
- stem cell donation information booths;
- greeting blood donors in mobile blood collection units;
- raising awareness about plasma donation.



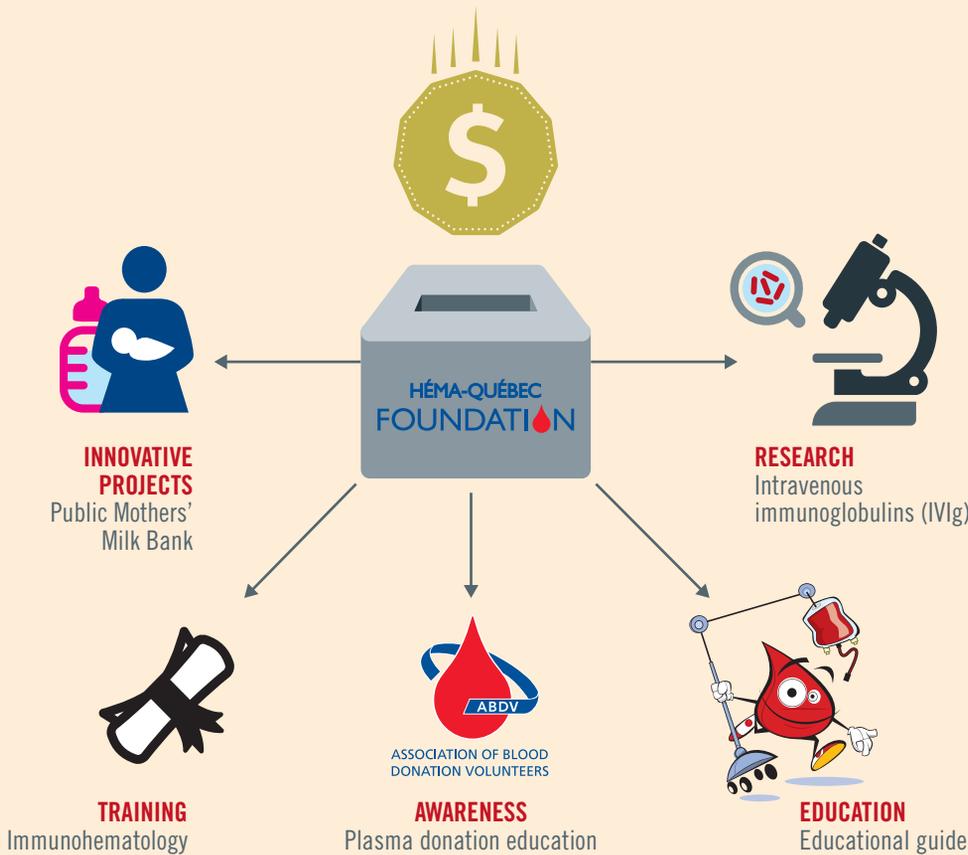
ASSOCIATION OF BLOOD
DONATION VOLUNTEERS

FOR MORE INFORMATION OR TO BECOME A VOLUNTEER:

1-888-666-4362, ext. 5223 • florentina.costache@hema-quebec.qc.ca • abdsdondesang.com

Join a dynamic team: **you too can save lives!**

You can give your **time...**
You can give your **blood...**
Did you know that you can also give **money?**



By supporting the Foundation, you allow Héma-Québec to do more, do it better and do it faster.

Every dollar counts and make a difference.

HOW TO HELP?

- Donate money
- Donate products or services
- Organize a fundraising event
- Establish an endowment fund, named for you or a loved one
- Plan a bequest or life insurance donation

For more information or to make a donation:

fondation.hema-quebec.qc.ca

HÉMA-QUÉBEC FONDATION

Do more, do it better and do it faster.

inf
HÉMA-QUÉBEC

Winter 2017

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