

## What is OneMatch?

Over 800 Canadians and tens of thousands worldwide need of a bone marrow / stem cell transplant to survive diseases like leukemia, lymphoma, ovarian & testicular cancer, anaemia and dozens of other serious diseases. It is estimated that 25% of these patients are children. Without a transplant these people will almost certainly die.

OneMatch Stem Cell and Marrow Network, a part of Canadian Blood Services is dedicated to recruiting and finding healthy, committed volunteer donors for patients in need of stem cell and marrow transplants. OneMatch staff coordinates searches in Canada as well as internationally all towards a single goal -- helping patients get the stem cells or marrow transplant they need to survive. International cooperation results in over half of Canadian patients receiving stem cells from international donors.

OneMatch maintains a database of tissue typing results of all Canadian prospective donors. Whenever a patient requires a stem cell or marrow transplant, OneMatch is able to search this database to identify potential matching donors.

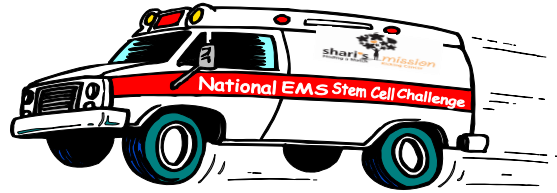
“ *OneMatch has access to more than 11-million registrants on 55 plus international registries* ”



Only 30% of people are able to find a match within their family, usually from a brother or sister. The other 70% must rely on the kindness of a total stranger, an unrelated donor, for their gift of life.

Joining the registry has never been easier, and advances in medicine mean that 80% of donations can be done using a non-surgical procedure that's similar to donating blood.

***You could be the one match that saves a life.***



## **Registering with OneMatch**

### ***Who can join?***

To register you must be between the ages of 17 and 50, be in good general health, fill out a health questionnaire, and have a health card issued by any provincial or territorial government or be a member of the Canadian Forces or Royal Canadian Mounted Police. You cannot join OneMatch if you have a disease that can be transmitted by blood such as HIV/AIDS or hepatitis or if you are a cancer survivor.

### ***What kinds of donors are needed?***

A person's best chance of finding a matching donor is within his or her own ethnic group. It is important that the composition of OneMatch reflect Canada's rich ethnic diversity. All eligible Canadians are needed.

### ***Does registering with OneMatch cost me anything?***

No. Joining OneMatch is free and you won't be charged for any part of the testing or donation process.

### ***How can I join?***

Participate in a Shari's Mission donation event such as the National EMS Stem Cell Challenge! Joining is as simple as providing a swab of the four quadrants of your cheeks.

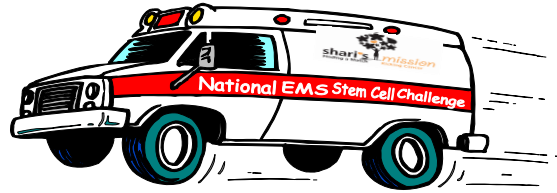
Swabs are sent to a Canadian Blood Services laboratory for analysis and the resultant HLA (Human Leukocyte Antigen) profile is put on the Canadian Stem Cell and Marrow Registry. When OneMatch receives a request to locate a stem cell and marrow match from a transplant centre the Canadian database is checked first. Should no match be found the HLA requirements are then broadcast to the other 64 registries worldwide hoping to locate a potential donor. If no match is located the search is performed again every twenty-one days until a match is found.

### ***What does it mean to be a potential donor?***

In the event that your name comes up as a likely match for a patient, OneMatch will contact you. At that point, it is up to you to decide whether you want to proceed to the next step.

Joining OneMatch represents a long-term commitment to donate stem cells or marrow to anyone in need anywhere in the world. This commitment is what enables OneMatch to do its work. It is extremely unlikely that you will match a particular individual in your community, and it may be years before you are called to donate. In fact, you may never be called.

Even if you do not have the opportunity to donate stem cells, it doesn't diminish the value of your contribution in any way. By joining, you've made an extraordinarily generous commitment, one that gives many patients a better chance at survival and more hope for the future.



## **What Happens If I'm a Match?**

Being a match is an exciting experience. But it is still only a first step. Your blood needs to undergo additional testing to determine the full extent of your compatibility. And you will also need to be tested for transmissible diseases.

If you are selected to donate, you will be contacted by a registered nurse from OneMatch who will guide you through each step of the process. You will be required to complete a physical examination and routine medical tests. These tests may include a chest X-ray and electrocardiogram, as well as blood and urine analyses. They are intended to ensure that you are healthy and physically eligible to be a donor.

During this time you should address any concerns you may still have. If you agree to proceed, the patient will be notified and the elimination of his or her diseased bone marrow will begin.

### ***What if I change my mind?***

You are free to decline to donate at any point in the process and your decision will remain entirely confidential. You should be aware that there is a serious risk of death to the patient if you decide to withdraw after his or her radiation or chemotherapy treatment has begun. You will be told in advance exactly when the patient will start this treatment and given every opportunity to decline before that date.

### ***How do I donate stem cells or bone marrow?***

Approximately 80% of donations involve donating stem cells through your circulating blood. To increase the number of stem cells in your blood, you will receive injections of a drug called granulocyte colony stimulating factor (G-CSF) every day for four to five days. The stem cells are then collected using a procedure called apheresis in which your blood is passed through a centrifuge where the stem cells are separated out and the remaining blood is returned back into your body. This is a non-surgical procedure much like donating blood.

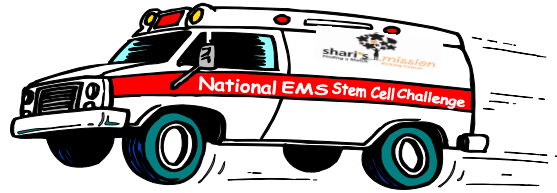
In approximately 20% of donations, donation is a surgical procedure performed under anaesthesia. The collection physician will use special, hollow needles to withdraw liquid marrow from the back of your pelvic bones. The procedure usually lasts from 45-90 minutes. The collection includes blood along with the stem cells from your bone marrow. You can expect to feel some soreness in your lower back for a few days or longer. Most donors are back to their normal routine in a few days. Your marrow is completely replaced within six weeks.

### ***What are the risks involved in donating bone marrow?***

Experience has shown that stem cell and bone marrow donation is a safe procedure. Any potential risks will be explained to you prior to donation.

### ***What will it cost me to be a donor?***

OneMatch will reimburse expenses you incur as a result of donating stem cells. For example, if you have to go to another city for the collection procedure, they cover travel and accommodation costs for you and a companion. While the procedure and subsequent recovery will take you away from work for a short time, experience has shown that most employers are willing to give sick time or paid leave to stem cell and marrow donors.



## Stem Cells

### ***What are stem cells?***

Stem cells are immature cells that can become either red blood cells (which carry oxygen), white blood cells (which fight infection), or platelets (which help to stop bleeding). OneMatch does not use embryonic stem cells.

Bone marrow is a rich source of stem cells, but stem cells can also be found in our circulating blood (also known as peripheral blood) and umbilical cord blood. OneMatch donors may be asked to donate either stem cells from bone marrow or peripheral blood depending on which product the patient requires.

### ***What is a stem cell transplant?***

In a stem cell transplant, a patient's diseased marrow is replaced with healthy stem cells from a matching donor. To prepare for the transplant, the recipient is usually given high doses of radiation and/or chemotherapy to destroy the diseased marrow. At this point, stripped of the ability to manufacture life-giving blood cells, the recipient is extremely vulnerable. They will not survive unless the donor proceeds with the donation. Once the healthy stem cells are collected from the donor, it is given intravenously to the recipient as soon as possible.

### ***What diseases are treated with stem cell transplants?***

A variety of diseases and disorders are treated with stem cell and marrow transplants including blood-related diseases such as leukemia, aplastic anaemia and inherited immune system and metabolic disorders.

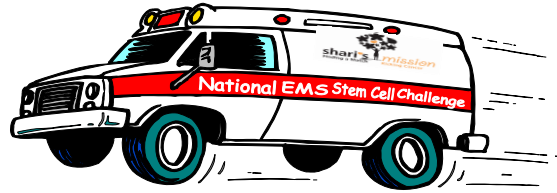
### ***How are a donor and patient matched?***

Stem cell matches are determined according to markers called *Human Leukocyte Antigens (HLA)*. When a person joins OneMatch, a sample is collected and tested for six of these antigens known as HLA-A, HLA-B and HLA-DR. These antigens are inherited from both your mother and father; therefore a sibling represents the best potential match. However, most patients only have a 30% chance of a sibling match. The rest rely on a donor from outside their family.

HLA antigens differ from person to person. Some antigens appear more frequently in certain populations and ethnic groups. When a donor and patient have matching antigens, the donor is considered a candidate. The transplant centre may use up to 12 HLA antigens to determine compatibility. If more than one donor is found to be an HLA match, the transplant physician may consider other factors such as the donor's age, gender or blood type when determining who should be asked to donate.

### ***Is there a matching donor for every patient who needs a stem cell transplant?***

Even with millions of donors on registries worldwide, a perfect stem cell match isn't always available. Some patients have uncommon antigens that may be very difficult to match. In these instances, even with everyone's best efforts, it may be impossible to find a donor. It is for this reason that we are committed to building the diversity of the database by increasing the number of potential donors who possess unusual antigens.



## **Frequently Asked Questions**

### ***I'm pregnant. Can I register?***

Yes. The registration process involves a simple cotton swab of your mouth. It causes no harm to you or your baby. If you receive a call to donate while you are pregnant you can simply decline at that time.

### ***I take a lot of medication. Can I register?***

Yes. If you are a match more tests will be done to see if you are a viable match.

### ***Is donating stem cells or marrow dangerous to the donor? Is it painful? Will I have to have surgery?***

Experience has shown that stem cell and marrow donation is a safe procedure. Approximately 80% of donations can now be done using a non-surgical procedure that's similar to donating blood. 20% of donations require out-patient day surgery under general or regional anaesthesia. In these cases, the donor can expect to feel some soreness in their lower back for a few days or longer, but this can be treated with regular Tylenol or Advil. Most donors are back to their normal routine in a few days. The type of donation process and any potential risks will be explained to you prior to donation.

### ***Are stem cells and marrow taken from the spine?***

No. The donor's spinal cord is unaffected during the donation process. Approximately 80% of donations can now be done using a non-surgical procedure that's similar to donating blood. 20% of donations require out-patient day surgery under general or regional anaesthesia. In these cases, the marrow is taken from the iliac crest, which sits at the back of the pelvic bone.

### ***Will the stem cells I donate be replaced?***

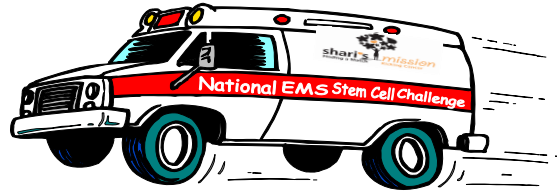
Yes. Your body replaces the stem cells within six weeks.

### ***Will donating cost me anything?***

No. OneMatch will reimburse expenses you incur as a result of donating stem cells. For example, if you have to go to another city for the collection procedure, they cover travel and accommodation costs for you and a companion.

### ***If I donate, will I miss work?***

While the procedure and subsequent recovery may take you away from work for a short time, experience has shown that most employers are willing to give sick time or paid leave to stem cell donors. Most donors are back to their normal routine in a few days.



***If I provide a swab of my mouth, will the police have my DNA?***

No.

***There's a question on the questionnaire that I'm not comfortable answering at this time. Can I leave it blank and still register?***

Yes. Although we strongly prefer that you complete the entire questionnaire at the time of registration, you can leave a question blank. A registered nurse from OneMatch will call you to complete the questionnaire.

***I'm a gay man. Can I register?***

Yes. OneMatch welcomes all eligible potential donors to register. To be eligible to register you must be between the ages of 17 and 50, be in good general health, fill out the Health Assessment questionnaire, and have a health card issued by any provincial or territorial government or be a member of the Canadian Forces or Royal Canadian Mounted Police. No person, regardless of sexual orientation, should apply to join OneMatch if they have a disease that can be transmitted by blood such as HIV/AIDS or hepatitis.

***Can I be tested specifically for my friend or relative?***

Your relative's transplant physician is responsible for identifying potential matches within your family and arranging for this testing. It is highly unlikely that two friends will share the same genetic profile. The best hope for any patient lies with the potential donors who are already listed worldwide. However, as long as you are willing to donate to any patient, and you meet the program's eligibility requirements, you can be tested and join OneMatch.

***What about transmissible diseases?***

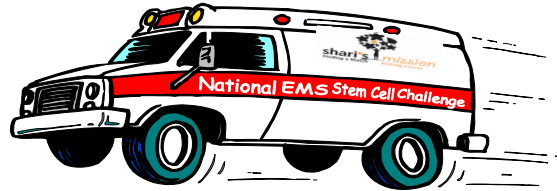
You should not apply to join OneMatch if you have a disease that can be transmitted by blood such as HIV/AIDS or hepatitis. If you have any questions about whether you might have a transmissible disease, we urge you to go to a public health clinic or to your physician for testing. Canadian Blood Services does not test for transmissible diseases in the first stages of matching. This testing only takes place if and when you are in the final matching stages.

***Do people on OneMatch ever get to know the individuals they are helping?***

Exchange of information between donor and recipient is not permitted for at least one year after transplant. After a year, some registries will allow correspondence, while others never permit any exchange of information. OneMatch will let you know about the policy in your recipient's country one year following the transplant.

***What if I move?***

It is critically important that you let OneMatch know when your contact information changes. This can be done by calling their toll-free 1-888-2-DONATE (1-888-236-6283) or visiting their web site ([www.onematch.ca](http://www.onematch.ca)). They also appreciate being advised if your health status has changed in a way that may affect your eligibility to donate.



## **National EMS Stem Cell Challenge Frequently Asked Questions:**

### ***Why The National EMS Stem Cell Challenge?***

EMS workers witness pain and suffering daily and often find themselves wanting to do more. The fire and police service have national causes they rally behind. But what about EMS?

The National EMS Stem Cell Challenge is just that cause for EMS. By participating in the Challenge EMS workers provide much needed hope to those urgently waiting for a stem cell / marrow transplant. And, it gives EMS a national media story to be proud of.

### ***Is this really a challenge?***

Yes. Participating EMS agencies will compete against to get Canadians on the National Stem Cell and Marrow Network. Awards for the service that registers the most Canadians, per capita, will be awarded in three categories: Urban, Rural, and Dispatch.

### ***What type of event will we have to run?***

The goal is to get Canadians on the National Stem Cell and Marrow Network. Host a registration drive in your dispatch centre, in your service, at your station or in the community you serve. You decide what is best for your community.

### ***I'm a Paramedic or Dispatcher or Student how can I help?***

Encourage your agency to join the challenge. Get involved and volunteer your time to help organize the event or to get people swab. Ensure that you, your family, and friends are on the registry.

### ***How do we get more information?***

Visit us on the web at [www.sharismission.com/ems](http://www.sharismission.com/ems). Contact [rob@sharismission.com](mailto:rob@sharismission.com) (EMS services) or [sue@sharismission.com](mailto:sue@sharismission.com) (dispatch).

**Don't wait — Join today!!!**