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ROBERT WOOD JOHNSON MEDICAL SCHOOL
University of Medicine & Dentistry of New Jersey

The Cancer Institute of New Jersey℠
NCI CCC
A Comprehensive Cancer Center Designated by the National Cancer Institute

November is National Marrow Awareness Month

You Can Be A Hero!!

What is Marrow?

Patients with life-threatening diseases such as leukemia, lymphoma, certain types of anemia and other conditions are sometimes in need of a "bone marrow transplant" if they are not responding to their standard treatment. Bone marrow is the spongy material that is found inside the bones. In the marrow are cells called stem cells. These cells are in the very early stages of development and will eventually become white blood cells, red blood cells, and platelets. White blood cells have several functions, including fighting infection. Red blood cells carry oxygen to all the other cells in the body, and platelets take part in forming clots after bleeding. In some cases, the patient's own stem cells are harvested (removed from the blood) and given back to the patient after receiving high doses of chemotherapy and sometimes radiation therapy. For some diseases, however, the patient needs to have a donor provide the stem cells. The donor can be a relative (related donor) or someone unknown to the patient (unrelated donor). The purpose of National Marrow Awareness Month is to encourage people who are in good health to volunteer to be placed in a special Registry coordinated by The National Marrow Donor Program. The more volunteers in the Registry, the more patients who can be helped. By volunteering to become a donor, you offer patients the hope for longer and healthier lives, for you are giving a gift of life.

What is the Registry?

This is a list of volunteer potential donors that is kept by the National Marrow Donor Program. At present, there are more than 5 million potential donors. The Registry is able to keep track of all three sources of stem cells: marrow, peripheral blood, and umbilical cord blood. If a patient needs a blood stem cell transplant, the patient's special stem cell type (HLA or tissue type) is keyed into the Registry that searches for a potential match. Because a patient's tissue type is inherited, it is important to have donors of all ethnic and racial groups.

What is Involved When You Decide to Donate?

There are several things to keep in mind when you decide to become a potential donor. By joining the Registry, you make a commitment to be a potential donor for any patient that your tissues match. Sometimes people want to donate just for one person that needs a transplant and for no one else. In this case, you would need to contact the patient's Transplant Center. Other things to consider when joining the registry are:

- Being listed until your 61st birthday, unless you ask to be removed.
- Paying for the cost of the initial tissue typing blood sample (generally about $45-$95) unless it is paid through a donor drive.
- Respond quickly if you are ever contacted as a match.
- Consider donating for any person who matches your tissue type.
- Stay in touch with your donor center or the National Marrow Donor Program to advise them of address changes, significant changes in health, or if you no longer wish to be a donor.

How to Join the Registry

Anyone of any race, gender, or ethnic group who is age 18 to 60 can join, as long as they meet the health guidelines of the National Marrow Donor Program. It is important to have all the information you need before deciding to join. Once your decision is made to join, you can contact the donor sites listed below. The first step of donating is making the commitment. The next is to make arrangements to have some blood samples taken. Your tissue type is identified, and this information is put into the Registry.

What Next?

If your tissue type matches that of a patient, you will be called for more detailed blood work. If these results show that you are a good match for a patient, the Transplant Center will make arrangements for your marrow donation. This can be done in two ways:

- Peripheral blood stem cells: after taking a medication for four to five days that increases the number of stem cells in the bone marrow and pushes them into the blood stream, the stem cells are collected by a process called apheresis. A sterile needle, like an IV, is placed in a vein in each arm. Your blood is then slowly removed, drawn through the apheresis machine where the stem cells are collected, then your blood is returned to your body through the second needle.
- Bone marrow: after general or regional anesthesia is started, the liquid bone marrow is drawn out of the big bones in the pelvic area. This is done through about eight to ten puncture sites. Because your marrow is made of quickly dividing cells, it is able to replace the donated marrow within several weeks.

Other Ways to Help

If you cannot become a volunteer donor, you can still help patients in other ways.

- Make a financial contribution through the National Marrow Donor Program's partner, The Marrow Foundation®: www.themarrowfoundation.org/
- Donate umbilical cord blood after a baby is born.
- Go to the National Marrow Donor Program web site for more details: www.marrow.org/

Expert Advice from The Cancer Institute of New Jersey

Arnold Rubin, MD, PhD is a medical oncologist at The Cancer Institute of New Jersey who specializes in caring for patients who need blood and marrow transplants. Here are his thoughts about donating blood and bone marrow:

> "There are many malignancies and other devastating diseases for which a bone marrow transplant offers the only effective treatment. Yet, only a small minority of patients will have a compatible brother or sister who can be a donor. The rest depend on finding a donor in the registry. So the registry needs a large number of potential donors. We especially need racial minorities, who are not well represented in the registry. To be a marrow donor is the purist form of personal generosity I can think of."

Where Can I Find Further Information?

The Resource and Learning Center
732-235-9639
www.cinj.org/rlc

Blood Center of New Jersey
45 South Grove Street
East Orange, NJ 07018
1-800-NJ-BLOOD
www.bloodnj.org/

HLA Registry Foundation
800 Kinderkamch Rd., Suite 300
Oradell, NJ 07469
1-800-336-3363
http://www.communitybloodservices.org/bm_bonemarrow.php

National Marrow Donor Program
1-800-627-7692
www.marrow.org

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