



Clark County Medical Society

Speakers Bureau Series



BLOOD DONATION

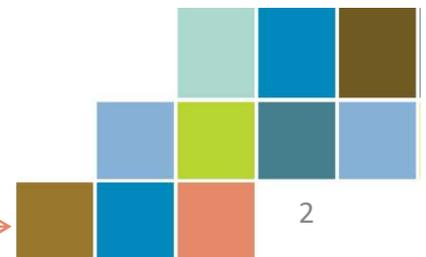
By Beata Kwiatkowska, MD – Blood Banking/Clinical Pathology
Regional Medical Director,
United Blood Services - Nevada



NATIONAL BLOOD DONOR MONTH

What is Blood?

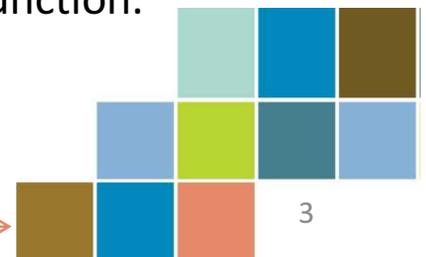
- Blood is a liquid that circulates through the body via a pathway of blood vessels, arteries and veins, carrying nutrients, oxygen, antibodies and other necessities of life to every cell and tissue throughout the entire body. Blood is also the means by which waste and waste byproducts are removed from the cells. Think of the circulatory system as a transportation system consisting of vehicles, roads and highways, similar to how we move goods and products throughout the world!
- Of course, we don't have little vehicles speeding through our veins, so how does blood do this? Whole blood is made up of red blood cells, white blood cells and platelets, all which are suspended in a fluid called plasma. Each of these components of our blood has a very specific and important job.





NATIONAL BLOOD DONOR MONTH

- **Red blood cells** contain hemoglobin, a type of protein that gives blood its red color, and are primarily responsible for carrying fresh oxygen throughout the body while removing spent carbon dioxide from the cells.
- **White blood cells** are very important to our immune system; they protect us from foreign invaders such as bacteria, viruses and fungi.
- **Platelets** are the smallest-sized components in whole blood, but they are mighty in importance. They are responsible for blood clotting, which helps stop bleeding should we suffer from a cut or other trauma to the circulatory system.
- **Plasma** is the fluid protein and salt solution in which the red blood cells, white blood cells and platelets are suspended. Plasma is 90 percent water and also contains several proteins that aid in blood clotting and the creation of antibodies. It is vital in providing blood volume, hydration, and mineral exchanges throughout the body, which are critical for proper cell function.



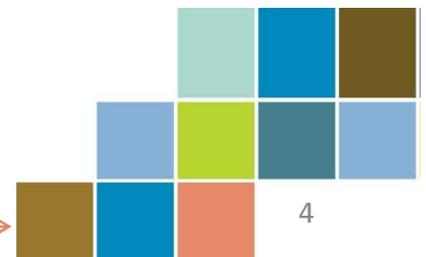


NATIONAL BLOOD DONOR MONTH

All blood is not the same! Different people have different blood types.

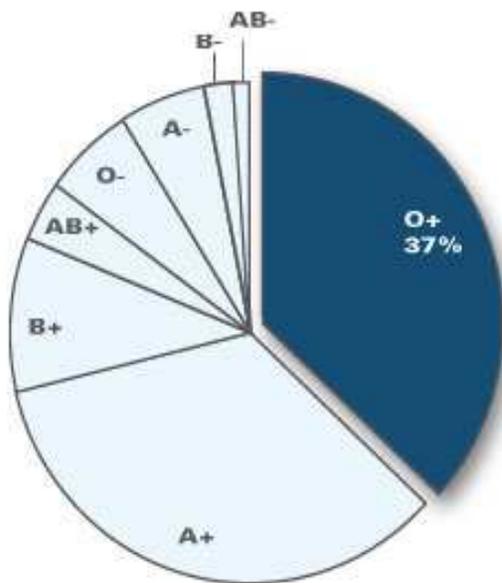
Human Blood Types -The Four Blood Groups

- Blood is grouped into four types: A, B, AB and O. Each type is also classified by an Rh factor – either positive (+) or negative (-). Your ABO blood grouping and Rh factor are inherited from your parents.
- When a blood transfusion is necessary, donor and patient blood must be compatible. If not, the patient's body will react to the incompatible donor cells, leading to complications, maybe even death.



NATIONAL BLOOD DONOR MONTH

Here's how blood types break down in our population. Which one are you? Whether you are in the majority with O-positive blood, or have rare AB-negative blood, hospital patients are counting on you, because it's different types for different folks.



Visit <http://www.unitedbloodservices.org/learnMore.aspx> to find out more about what makes your blood type special.

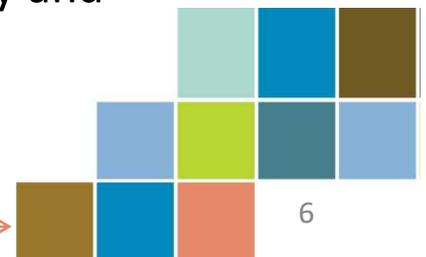




NATIONAL BLOOD DONOR MONTH

How is Blood Used?

- *Blood is Used to Save Lives!*
- Blood transfusions save more than 4 million lives each year. It is estimated that blood is needed every two seconds, and that 1 out of 7 people entering the hospital will need blood. Since blood cannot be manufactured or harvested, it can only come from Heroes like YOU – the volunteer blood donor!
- Depending on patients' needs, your blood donation may be separated into several different components that may be used to treat a variety of medical conditions or illnesses. In fact, the majority of blood is not used by accident victims, but for everyday needs such as cancer treatments, orthopedic surgeries, organ and marrow transplants, cardiovascular surgery and blood disorders such as anemia or sickle cell disease.



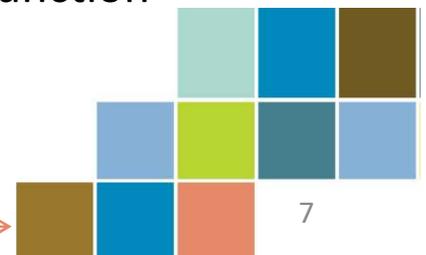


NATIONAL BLOOD DONOR MONTH

Blood Components

Blood is separated into components so that several patients may benefit from one blood donation. These are the most common uses for the different blood components:

- **Red Blood Cells:** The most frequently transfused component. Treatment of chronic anemia resulting from disorders such as kidney failure, malignancy or gastrointestinal bleeding. Congestive heart failure. Treatment to raise the hematocrit or hemoglobin levels without raising blood volume (such as with elderly patients). Replenish acute blood loss resulting from accident or surgery.
- **Platelets:** Treatments for leukemia and other cancers. Used for conditions in which patient has a shortage of platelets or abnormal platelet function (thrombocytopenia). Learn more about Platelet Pheresis.

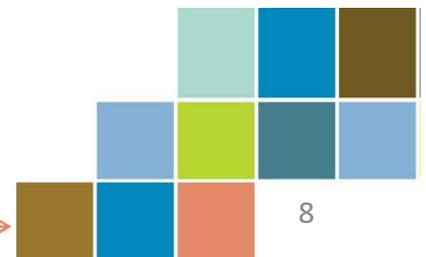




NATIONAL BLOOD DONOR MONTH

Blood Components continued...

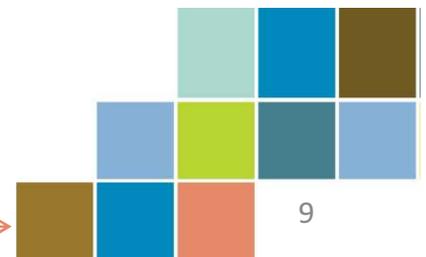
- **Plasma:** The liquid portion of blood that contains proteins that help treat severe bleeding problems. Plasma isn't transfused as often as red blood cells or platelets, so once patient needs are met, plasma can be sent to manufacturers that make other treatment products such as albumin and immune globulin.
- **Cryoprecipitate:** A component of plasma that contains blood clotting proteins. It is used to treat or prevent bleeding and disorders such as hemophilia or von Willebrand disease. It may also be used as a hemostatic preparation in surgery.
- **White Blood Cells:** Granulocytes are a type of white blood cell that can be collected through apheresis and used for infections that are unresponsive to antibiotic therapy.





NATIONAL BLOOD DONOR MONTH

- A whole **blood donation** can be separated into its different components and used for specific treatments for cancer or other illnesses, bleeding disorders or traumatic injury. In fact, since a single **blood donation** can be separated into components, your donation may help three different transfusion patients!
- Medical advances and modern surgical techniques, (such as cancer treatments, organ transplants and open heart surgery), have increased the need for blood. In addition, the advancing age of the Baby Boomer generation has caused stress on the blood supply. Our national blood supply must be ready for everyday needs as well as the unexpected, such as accidents, natural or manmade disasters. Volunteer **blood donors** are needed year-round.



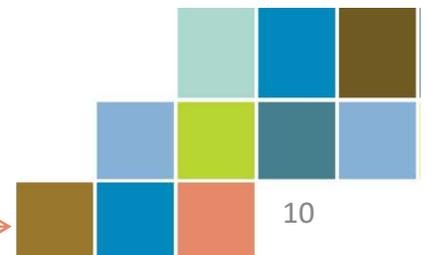


NATIONAL BLOOD DONOR MONTH

January is National Blood Donor Month

- It takes 250 blood donations every day to meet the needs of area patients. Approximately 15 percent of hospitalized patients receive blood as part of their treatment: that's 4 million patients in the US each year.
- FIND THE HERO IN YOU: **Give Blood** 3 times a year.

➤ **Make your appointment now:**
www.bloodhero.com or 877-827-4376





NATIONAL BLOOD DONOR MONTH

The CCMS website is updated daily.

Save us to your Favorites!

www.clarkcountymedical.org

Call 702.739.9989 for more info.

