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# Candor. Compassion. Competence.

Aging Life Care Management for the Metro Atlanta Area Assisting medically frail seniors, disabled adults, & their caregivers

#### Blood - What you should know?

The blood circulatory system is part of our body's vascular system. It involves the intricate pathways by which our blood flows through the body to support life and to work hand-in-hand with other organs supporting breathing, digesting food, and regulating body temperature.

Our blood is transported through a series of vessels including arteries (carrying blood loaded with oxygen away from the heart), veins (carrying blood from the body back to the heart), and capillaries (the tiny blood vessels between the two that distribute oxygen-rich blood to the body). Their primary function is to supply all organs and tissues with oxygen and nutrients – while removing waste and balancing fluid levels.

This system can be damaged and diseased and this is evidenced within the vessels by plaque build up or blockages such as through debris or clots, weakened blood vessels, inflammation, or injury. Because the system inter-connects all parts of the body – there are multi-systemic effects of this damage that can be seen through conditions such as heart attack, stroke, dementia, aneurysm (a weakened bulging area), kidney issues, or impotence.

The approximately 10 pints of blood our bodies carry is our body's transport system. Think of it like a long line of armored delivery trucks on a set of pre-determined highways. The main function of this specialized red fluid is to provide a delivery system; but, it also plays a major part in defending against infection. Blood is made up of 4 components including red blood cells, white blood cells, platelets, and plasma.

Just over half of our blood's volume is plasma – which is the yellowish liquid portion transporting water, hormones, proteins, and nutrients while flushing wastes. The other almost half is made up of the other cellular components – which are produced in the bone marrow.

Red blood cells pick up and carry oxygen to tissues – and then pick up carbon dioxide to remove it. These cells are shaped like flattened basketballs and are most of the cells seen in blood. They also carry around a chemical called hemoglobin – which gives blood its color.

The white blood cells are the body's main defense against infection. They are primarily seen in low volumes while one is healthy. When sick or injured, they swoop in to help clean up, heal wounds, and prevent infection by killing germs.

Platelets are small round cells that respond quickly if there is a cut or scrape. They idenfity the injury and start sticking together and working with other mechanisms to form a plug to keep the blood inside the vessel.

For each person, their blood will be one of eight specific types: A negative, A positive, B negative, O negative, O positive, AB negative, or AB positive. The letters stand for the certain protein found on the red blood cells of that person. The positive or negative label notes whether someone's blood has a specific protein called Rh.

Due to its specialization, human blood cannot be made or manufactured. So, if one does not have the blood that is needed – donor blood from another human is the only source. There are very specific ways that blood types must be matched for a safe transfusion from the donor to the recipient. Whole blood can be donated approximately every 8 weeks by healthy adults that pass a physical and health history exam, can positively answer a few questions, and meet age and weight requirements.

A blood test called a CBC (or Complete Blood Count) can be used to evaluate the three types of cells in one's blood. It can also be used to screen for or diagnose a wide range of conditions or diseases (both blood based or elsewhere) and to monitor prescribed treatments for effectiveness or effects. It is a common test that can be performed during routine health examinations or during periods of illness. High or low levels of blood cell counts could signal issues such as infection, autoimmune disorders, poor clotting risks, cancers, or dehydration.

#### **Resources Available**

### **Blood Donation - AABB**

http://www.aabb.org/tm/donation/Pages/Blood-Bank-Locator.aspx

AABB is an international, non-profit that encourages eligible individuals to donate blood regularly to help ensure that this life-saving resource is readily available to patient when needed.

#### <u>American Society of Hematology – Patient Groups</u> http://www.hematology.org/Patients/Groups.aspx

List of websites containing information about blood diseases and related disorders

#### **About SeniorCare Options**

SeniorCare Options provides Certified Aging Life Care Management throughout the Metro-Atlanta area. Our team consists of Master's level clinicians in the fields of counseling, social work, therapeutic recreation, and registered nursing. Our backgrounds are vast and specific to the current clinical needs of our clients and their families who may be in transition, have chronic or difficult-to-manage conditions, and who require increased guidance. Our interdisciplinary focus, extensive experience, and heightened sensitivity to their specific needs prove to be an invaluable asset to families faced with the maze of options and care needs. For more information regarding Aging Life Care Management services, our support groups, or to inquire about requesting services for someone under your care, please contact us at: 770-579-9177 or brandih@seniorcareopt.com.