(Music)

Joan Cartan-Hansen, Host: Your HEART IS THE KEY TO YOUR BODY’S CIRCULATORY SYSTEM, BUT YOUR BLOOD IS EQUALLY IMPORTANT. SO, LET’S FIND OUT MORE ABOUT BLOOD.

Student 1: I want to drink your blood.

Student 2: Wait a minute. My blood? Why would he want to drink my blood?

Cartan-hansen: Cut! What’s wrong?

Student 2: I don’t understand. Why would he drink blood? I mean after all, what is blood?

Cartan-hanseN: What is blood? Well let’s find out!

Blood is the fluid that carries oxygen to all the cells in your body and takes away the cells waste products. Blood flows through your body’s circulatory system. Arteries carry blood away from the heart and toward the lungs and other organs in your body. Inside organs and tissues arteries branch off into smaller capillaries. Blood moves through these microscopic capillaries dropping off oxygen and nutrients and picking up carbon dioxide and other waste products. Blood then moves into the veins. Veins carry blood from the body back to the heart. Blood picks up oxygen and gets rid of carbon dioxide in your lungs as you breathe in and out. Blood gets rid of other waste products as it flows through your liver and kidneys, but your heart is the key. Your heart pumps blood through the circulatory system and keeps the whole process going.

Your blood is made up on blood cells and plasma. Plasma contains water, salts, proteins and other substances and is what makes your blood a liquid. About half of your blood consists of plasma. The rest of your blood is made up on three types of cells: about 47 percent of your blood consists of red blood cells. Red Blood cells are shaped like flattened basketballs. They carry a chemical called hemoglobin which gives blood its red color. Red blood cells also contain iron. That mineral helps red blood cells absorb oxygen. The other type of cells in your blood are white blood cells and platelets. They only make up about 1 percent of your blood. White blood cells fight infections. They make antibodies and other chemicals that fight the germs that can get into your body and make you sick. Platelets are cells that help mend wounds. When you cut yourself platelets start building up along the edges of the gash. They form a web across the wound which hardens and stops the blood loss.

Your blood cells are created in the marrow, or center of your bones. And blood cells are pretty small. A drop of blood the size of a pin-head contains five million red blood cells, 15 thousand white blood cells and 250 thousand platelets.

Student 2: that’s amazing! Is that all blood does?

Student 1: Just watch, there is more.

Cartan-hansen: your blood does more than just move oxygen around your body it carries chemicals called hormones that control growth, energy use, and water levels in your body. Your blood helps keep you and your insides at a fairly constant temperature by carrying heat away to the skin in hot weather and by keeping you warm internally when it’s cold. And your blood keeps you healthy. It helps fight infections and other diseases. And when you get a cut, your blood helps you to heal. Doctors can test your blood to look for signs of disease, and they also check your blood pressure. Your blood pressure is the force your blood is pushing on the walls of your blood vessels. High blood pressure can cause strokes or heart attacks. And if your blood pressure is too low you could faint. When doctors test your blood they often determine its type. Different people have slightly different types of blood called blood groups. Doctors have assigned a letter to each group depending upon the type of antigens found on the surface of the red blood cells. There is A, B, AB and O. The groups are further divided into rh positive and rh negative. About 72 percent of Americans are either a+ or O+. Only 1 percent of Americans are AB- that makes it the most rare blood type. Knowing your blood type is important because if you get hurt and need a blood transfusion, that is blood from someone else to make up what you have lost, then you need to be given blood of the same type. If you get a different blood type you could get very sick. Many adults donate blood. That is give some of their own blood. You have to be at least 16 or 17 years old to donate. Organizations like the red cross collect blood. Trained staff examine the blood to make sure it’s safe and then store it until someone needs it. And in the world someone needs a blood transfusion every two seconds. So giving blood saves lives.

Student 1: So Your blood is really important for your health.

Student 2: So take care of your body and your blood will take care of you!

Student 1: um hmm

Student 2: Okay, I think I’m ready for another take.

(countdown beeps)

Student 1: I want you to donate your blood.

Student 2: Okay, let’s go organize a blood drive. I bet your teachers and parents would be willing to help.

Student 1: Good idea, Let’s go!

Cartan-Hansen: TO LEARN MORE ABOUT BLOOD AND THE HEART

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