## A LINE ON LIFE 2/27/85, Updated 11/5/01 History of Donating Blood David A. Gershaw, Ph.D.

Even in earliest times, primitive people understood that a great loss of blood from an injury results in death. Therefore, *blood* became closely connected with *life*.

In pagan times, blood was prominent in various rituals. In ancient mythology and the Bible, there are many references to the power of blood. In ancient Egypt, princes took baths in blood to gain strength and spirit. Ancient Romans rushed into the arena to drink the blood of dying gladiators for the same reason. In Middle Ages, drinking blood was still thought to restore health and strength.

Blood was considered by many people to be the sea within which the soul resided. This "*sea*" could also harbor disease-causing demons that could only be released by **phlebotomy** (drawing blood). For this reason, *bloodletting* was a common practice in medicine through the centuries.

Our respect and awe of this mysterious fluid is reflected in legends about blood through history. Remainders of this blood lore are evident even today. We still use expressions such as "blood will tell" or "blood is thicker than water." In addition, blood is described at various times as "royal," "red," "blue," "hot" or "cold." (In some TV commercials, it was even "tired.")

When Columbus was first crossing the Atlantic (1492), the *first blood transfusion* was recorded. Pope Innocent VIII was dying. Although blood transfusions had only been experimented on with animals, three youths donated their blood to the Pope. Unfortunately, the three youths and the Pope died. (Although the story is described as a transfusion, it is most likely that the Pope *drank* the blood.)

Many more experiments were performed with animal transfusions. Finally, in 1667, a lamb's blood was successfully transfused into a sick, young French boy. He recovered, as did a second patient. However, the next two patients died a few hours after their transfusions. Even though a human-to-human transfusion was successfully done in 1818, the cure remained about as dangerous as the disease.

The real breakthrough came in 1900, when Dr. Karl Landsteiner, an Austrian, discovered different types of human blood  $\tilde{N}$  A, B, AB and O. This made practitioners realize that the donor's blood type had to be matched to that of the recipient to insure a safe transfusion.

Even with this breakthrough, the donor's blood had to be transfused *directly* into the patient. Otherwise, it would **coagulate** (clot) and be useless. In 1914, a way was found to

store blood for 4 days, before it would coagulate. Further improvements have increased blood life to more than 35 days.

## **Donating** "*the gift of life*" is now safe and easy to do.

Currently, donating blood is an easy and safe process, which takes about 45-60 minutes. (Less than 10 minutes of that time is actually spent in drawing the blood.) To donate, you will have to be at least *17 years old*, weigh over *110 pounds* and not have donated within the last eight weeks.

Before you donate, they recommend eating a well-balanced meal, preferably free of fatty or fried foods. When you arrive, you will be asked for personal data. For example, you will be asked if you have any disorders or have engaged in any activities that would disqualify you as a donor. Persons who have ever had *hepatitis, cancer* (other than skin cancer) or been *HIV positive* are not permitted to donate. (Since a new, sterile needle is used for each donation, *you cannot be infected by giving blood.*) In addition, people with recent surgery (within the last six months), anemia, or some other current health problems are asked to postpone giving blood until a later date.

In addition to the questioning, you are given a "*mini-physical exam*." They take your temperature, pulse and blood pressure. Your finger is lightly pricked to obtain a few drops of blood to measure your blood's **hemoglobin**. (This is the material in the red blood cells that allows them to carry oxygen to your body.) If all the information and tests are satisfactory, you will be allowed to give your blood.

To actually donate the blood, you are asked to recline on a version of a lounge chair. The phlebotomist feels your arm to find a good vein. After thoroughly swabbing the area to sterilize it, she gives you a small plastic tube to grip and puts a thin, rubber tourniquet on the upper part of that arm. Then she inserts the needle. (For those of you who have some anxiety about this, most of the time you don't even feel the needle. If you do, it is like a quick pinprick.) For the next 5 minutes or so, you are asked to repeatedly squeeze the plastic tube to help the flow of blood. After you have contributed your pint, the needle is removed, a Band-Aid is put over the spot, and you can have all the cookies, juice or coffee you want. (Although the cookies and juice are nice, what I like better is the knowledge that I have made an important contribution toward saving someone's life.)

If you want to make the effort to help others, now is the time. If you do not know when or where to contribute blood in your area, call **1-800-GIVE-LIFE**.