

The Safety of Blood

A five-year old girl is riding down the street, on her way to her best friend's house. She doesn't have a care in the world and is quietly humming to herself. Suddenly a car whips around the corner and swerves to avoid the child, but he loses control and squarely hits the girl, causing her to fall and get trapped between the car and her battered bicycle. A main artery in her leg has been severed and blood fills the gutter of the street. As she gets rushed to the hospital in the ambulance, a pint of blood is given to her to attempt to replace some of the life giving fluid that is pouring out of her leg. In the end she received four pints of blood and made a full recovery.

Although everything turned out all right for the girl, things could have been much different. What if that blood hadn't been there because the nation's blood supply was low? What if the blood that she received had been infected with a deadly disease such as Syphilis or HIV? These are pressing concerns for today's society. Even though one in every five people will need a blood transfusion and the risk of contracting a disease such as AIDS is practically negligible, people are still concerned that the blood that they receive may have harmful or deadly diseases and that today's blood supply is not "safe."

However, "safe" means different things for different people. For some, safe is an absolute security from any danger. This is an extreme viewpoint, though, because most people realize that one can never be completely safe. Another, and more popularly held connotation of "safe," is the probability of not getting hurt. This is a much more reasonable and plausible definition and therefore will be used throughout this paper. However, even though the overwhelming probability is that nothing will go wrong, people still fear that the nation's blood supply is unsafe. They are incorrect in this belief, though, because much is done to assure that the nation's blood supply is, in fact, safe.

One requirement to having a safe blood supply is to have an extensive reserve, because this allows for the option of discarding any blood that is potentially unsafe. The assurance of an ample blood supply begins with the donation process. Most of the people in this country have the capability to donate blood. However, only 4 percent of the eligible population actually donates.¹ There are few restrictions and the reason why there are blood shortages is because people don't want to donate as opposed to can't donate. For most blood centers, the physical criteria that a donor must meet are as follows: person must be at least 17 years of age, weigh 110 pounds, and be in good physical health. However, if so many people can donate blood why do so few choose to?

Most people are afraid of giving blood. There are many misconceptions about the process of donating blood and receiving transfusions. For example, people believe that there is a danger of contracting diseases, especially AIDS, from the needles used during the process. However, these chances are zero, and a person has less of a chance of contracting a disease while giving blood than he has in any other ordinary situation.

Actually, people have little to fear about giving blood. Many precautions are taken to assure that the process is safe for the donor, and the blood that is received is safe for the recipient. Before the donor even gets close to the bed or the needle, he first must complete a thorough survey asking about his past and potentially risky behavior. The survey asks about recent sexual encounters, focusing on homosexual situations. It also asks about drug use, body piercing, and prostitution, which are all considered to be "at risk behaviors." If the donor has participated in such behavior he will not be allowed to donate until a time when it is safer for everyone involved. If the donor passes the screening, his blood is collected in a new, plastic bag with a brand new needle. The needle and everything used during the process, from the finger lancet to the cotton swabs, are disposed of instead of being reused, which eliminates the possibility of something not being properly sterilized. Also, if by chance, the nurse misses the vein and must

reinsert a needle, he will start over with a new needle, to assure sterility. After the blood is drawn, it is sent to certain laboratories, where it is tested for diseases such as HIV. If there is a problem, the donor will even be notified to assure that he or she doesn't put anyone else at risk. At any point in this process, blood that does not reach the proper standards will be removed from the supply, assuring safety. In fact, two to ten percent of the units of blood that are received end up being removed because of uncertainty. 2

Another reason why people may be hesitant to donate is because they don't know the benefits of giving blood. First, because of the screening process, the donor receives a sort of mini-physical every eight weeks. This lets a person keep a check on his or her blood pressure, pulse, temperature, weight, and iron reading. It is a good way to assure that one is remaining healthy. Also, not only does the blood that is given help someone in desperate need of it, the donor feels good about himself, too. The donor can walk out of the center with a firm sense that he has helped someone in need.

After the blood is drawn, many tests are performed on it, providing another way to insure that the blood supply is safe. Testing is done for Syphilis, Hepatitis B and C, abnormal liver function, and Human T-Lymphotropic Virus type I and type II. All of these diseases are blood-borne and have the potential of being extremely harmful if not fatal. However, the main fear that people have regarding a blood transfusion is that they may contract AIDS. This is a result of a lack of understanding about what AIDS is or how it is tested.

AIDS, an acronym for acquired immunodeficiency syndrome, is a blood-borne disease that attacks one's immune system, leaving him susceptible to lesser diseases that may not be a threat to a person with a healthy immune system. It is caused by a virus known as HIV (human immunodeficiency virus) and over a few years develops into AIDS. The only ways to contract HIV are through bodily fluids: blood, semen, vaginal fluid, or breast milk. It is because blood is one of the means of contracting the disease, many people are afraid of donating and receiving blood. However, HIV is also one of the diseases thoroughly tested for in the testing process. Two HIV related tests are performed, one for the HIV antigen and the other for the HIV antibody. The purpose of testing twice is to assure that the presence of the disease is noticed. If a person tests positive for either the HIV antigen or antibody, he is permanently deferred, meaning that he will never be allowed to donate.1

The main reason why people are concerned about the safety of the blood supply is because they are afraid of contracting a disease in the event that they need to receive blood. However, precautions are also made to insure the safety of blood transfusions. For example, all of the blood used for transfusions either comes from the blood center or is drawn by the same methods. This insures that the level of sterility and testing for harmful diseases is as high as it is for donation. In the hospital, sterile one-use needles are also used as they are in the blood center. Also, careful screening is done to make sure that the blood types match and that the donor blood is compatible with the a patient's blood, preventing diseases such as jaundice. In both the blood center where the donations take place and the hospital where the transfusions occur, the staff is highly trained and knowledgeable. Each nurse or assistant must have basic medical training to get the job, and although human error exists, it is minimal.

Due to the many safeguards and precautions taken, the blood supply in America is safe. The risk of contracting a disease from the donation process is quite minimal and there are more reasons to give blood than not to give blood. It is my opinion that if a person can give blood, they should. Donating blood is noble, safe, and painless, and when blood is given, the donor gets a wonderful feeling of doing good for someone and can be confident that he or she may have saved a life. So when that little girl arrives at the hospital, unconscious and bleeding, she can be sure that the blood she receives will be safe.

Works Cited

The Blood Center of Southeastern Wisconsin, "Testing Performed on All Blood

Donations" 5/96

2 The American Association of Blood Banks, " Recieving Blood" 1995