

Blood Donation- One of the Best Ways to Stay Healthy

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Scientifically, blood is a connective tissue that serves several vital biological functions. One of them is to carry and deliver oxygen to the cellular level of each organ of every system to yield a functional body, and thus living a healthy life. Hemoglobin (iron plus globulin protein) is the main player in terms of the oxygen carrying issues. In order for the cells to conduct normal oxidative metabolic process, a constant availability of oxygen is required. Mostly this process is utilized in energy generation mechanism which the body requires for daily life. In addition to this function, blood helps maintain immune level, stop bleeding, control infection, and carry nutrition.

Like everything in the universe, blood also has a half-life. Depending on the cellular types in the blood as a whole, the half-life of each cell differs. However, the dynamics of forming a new one and getting destroying the old one is a regular phenomenon. One does not even have to donate blood, the old blood gets replaced by the new one within a certain period of time. However, if the blood is donated and transfused to the recipient, it may save lives. A single pint (473.176 mL) of whole blood is sufficient enough to save the lives of three people. A single pint of blood refers to only about 1/10th of the volume of blood in the body. One should be 17 years old with at least 110 lb (50kg) body weight to donate blood, and one can donate until 76 years of age in general. Blood donation is so uniquely important because it is the core principle of life, and even with the greater expansion of medical technology, there is no replacement to blood. As a result blood donation is a vital part in saving lives.

Blood donation is important everywhere including first and third world countries. The most prominent areas of blood transfusion requirements are to help: premature births, accidents, burn victims, cancer patients, sickle cell patients, heart surgery patients, organ transplant patients, and bone marrow transplant patients. Broadly there are four groups of blood-A, B, AB, and O. In horrific emergencies the need for O negative blood cannot be overstated; with its unique nature of being accepted by every other blood group, even unknowns, makes it-without a doubt- an important factor in saving lives in desperate times.

Blood donation is important to stay healthy, live long, and is the best way to gain and maintain a positive quality of life. The leading cause of death in US is heart diseases, 1 death out of 4, whereas malignant cancer and lower respiratory problems all account to more than 50% death. Stroke is the 5th and diabetes be the 7th leading causes of death. Heart attack and stroke are mainly due to blockade of artery possibly because of higher level of cholesterol or increased viscosity due to elevated level of triacylglycerol. Although the causes of primary hypertension

(increased force to arterial wall) is yet to clearly specified, increased level of low density lipoprotein and triacylglycerol may play roles for this. When one donate blood, the total amount of these components are reduced in blood and the lost volume is recovered by water.

There are multiple diseases like diabetes that may significantly reduce the quality of life. All these and additional ones can be controlled by blood donation to some extent. Peer reviewed scientific papers suggest blood donors have significantly less chances of hypertension and heart attack compared to non-donors. All these are because of huge amount of glucose, cholesterol, and triacylglycerol in the blood. Excessively higher amount of iron in the blood is considered unhealthy because it induces oxidative biological reactions that may lead to cancer. When you regularly donate blood, you will reduce the amount of those things.

Food habits and life style (ignoring physical exercises) are other factors that cause heart diseases and hypertension. Nepalese people love to eat fried foods and as a result majority of them suffer from hyper triacylglycerol and cholesterol. Higher the values of these fatty components in the blood higher the risk of heart attack and hypertension, which may also lead to ventricular hypertrophy or heart failure. These components either increase the viscosity of blood flow or help reducing the lumen of artery. Either way puts stress on the heart while pumping out blood. Regular whole blood donation in the interval of 56 days (in USA) help to reduce those scenarios in the blood and promotes a healthy life style.

At the time of blood donation, about 50 questions are asked to the donor before the donor is considered eligible for blood donation. On top of that, the phlebotomist will take your blood pressure and temperature before venipuncture and will ask you if you are feeling good on that very day. They prick and use oozed out blood sample by using a kit to measure your hemoglobin level immediately. Once the blood is donated, your blood samples are challenged against 13 different diseases including HIV and other life threatening diseases before it is transfused to the recipient. If your sample reacts positive, you will be confidentially informed from where you will get time to be treated.

Research suggests about 25% percent of donors are first time donor where as 50% of donation is covered by regular donors. Females (53%) are the major recipient of the donated blood than male (47%). Potential donors refuse to donate blood for a simple cause that they want to avoid an affiliation with a needle. However, once the comfort of the environment is soaked in, and they donate the feeling of fear vanishes, for they have just contributed to saving a life. There are minimum risks factors involved with blood donation, it is almost 100 % safe. All these research findings suggest that blood donation is very useful and important to both donors and recipients. Thus let's practice to save life of others and stay healthy oneself.

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