

What prompted me to donate blood?

The year was 1977. Hong Kong. I was in grade 10 in St. Joseph's College when I signed up for the 1st Hong Kong Venture Scout Unit, established in 1914, the first Boy Scout Troop in Hong Kong. It was the most prestigious group because it has won the Prince of Whales Banner Competition 40 years in a row, one of which I took part of. In the inauguration ceremony, I took an oath to "do one good deed a day 日行一善". However, about a year into the program, I found that it focused too much on teaching survival techniques and competition training, so I enrolled in another club at the college - The Interact Club - which is still very active today. There, I found my true passion: social services. We either organized or participated in many fundraising activities (at least 3 to 4 a year), visited an orphanage regularly, and spent many hours entertaining children at the children's hospital for the handicapped. There, I met many liked-minded volunteers and registered social workers. Those were the happiest days of my life.

I was eager to donate blood, so I waited patiently until I was old enough to qualify for it. The Hong Kong Red Cross (HKRC) was established on in 1950 as a branch of the British Red Cross Society and didn't provide blood collection service until 1952. I have no recollection if re-usable or disposable hypodermic needles was back then. It was before the HIV era, and at that age, I was more intrigued by the process than safety concerns. When not doing social services, I've always been a loner, so I went to the HKRC donation center that day by myself, in 1979. If my memory serves me right, somehow, the needle shaft looked much bigger then; intimidating but satisfying. I don't recall any emotional reaction to my first donation. No fanfare. Nobody else knew about it. But, I was determined to do it again. Unlike today, there were no reminder calls, and I vaguely remembered that I was allowed to donate no more than twice a year. So, I ended up donating blood just twice in Hong Kong before I left for Vancouver in 1981.

During the first two years in Vancouver, my focus was on school work. Then, one day, to my elation, the Canadian Red Cross had set up a mobile clinic at the SFU campus! The "do one good deed a day" seed in me had re-germinated. The blood donation routine was re-established, and I chose to go to the Oak Street donation center for convenience.

In 2018, by chance, I glanced over to the other side of the donor center and saw donor watching TV while in the donor chair. Out of curiosity, I asked what were they donating. The nurse said, "blood platelets". Almost immediately, I went online to sign up for it to see how it works. I qualified. Not only that, I was tested CMV negative. "*Cytomegalovirus (CMV) is a common virus. Once infected, our body retains the virus for life. Most people don't know they have CMV because it rarely causes problems in healthy people.*" (Ref: Mayo Clinic) Without being infected by CMV, my body doesn't have the antibody for it, so my platelets were suitable for infants as well.

Collecting platelets is a totally different procedure. It takes more than an hour and a half to complete. That's why movies were supplied since we are not allowed to take a nap for safety reasons. "*Through centrifugation, the apheresis instrument extracts only the donor's platelets which are collected in a sterile bag. The rest of the blood flows back through the tubing to the donor.*" (Ref: Hema QQuebec) I donated platelets for a few months, going there every 2 weeks. Then,

the organization decided to upgrade the apheresis machine to shorten the donation time in order to reduce risks for donors. With the time cut in half, that means my platelet volume has to double to qualify. Nothing can boost platelet production. It's a genetic thing. Unfortunately, my platelet volume did not meet the requirement, so I was booted out of the program and got back into blood donation every 56 days (84 for a female) (Ref: Canadian Blood Services - CBS).

On July 10, 2023, I hit the milestone of 100 donations. Blood type is O+. Usually about 480ml. Shortest donation time: 6 minutes. At one time, it took me 13 minutes, thanks to low hydration and cold weather. Hemoglobin level fluctuates between 131 to 145 grams per liter. "*Hemoglobin level requirement is 125g/L for donors registered as female and 130g/L for donors registered as male.*" (Ref: CBS)

Have my hemoglobin level ever dipped below 130? Yes, once. Being a vegetarian for 34 years, I do have to pay attention to eating a diet rich in iron and iodine. I also take a B12 supplement once in a while because B12 analogs found in plants are not usable by humans. How does my body react right after donation? I haven't felt anything different all these years. Some people might get dizzy or even throw up, but the latter is rare.

One of the benefits for donating blood is that, often, people found out that they have certain diseases through donation testing. According to CBS, these are the viruses, bacteria, and parasite they test for:

- Human immunodeficiency virus 1 and 2 (HIV)
- Hepatitis B virus (HBV)
- Hepatitis C virus (HCV)
- Human T-cell lymphotropic virus I and II (HTLV)
- Syphilis (bacterium)
- West Nile virus (WNV)
- Chagas' Disease (parasite)

Another benefit is that "*much of the iron in our bodies is in our red blood cells, so removing blood from the body helps get rid of some of the iron. But it can also help remove some of the excess iron that has accumulated in other organs.*" (Ref: CBS) The dark side of iron: too much is harmful. Since excess iron is toxic to organs, its absorption is tightly controlled a hormone called hepcidin, which regulates iron levels by adjusting the rate of iron absorption from the digestive tract. Not just people who have hepcidin disorder are at risk of iron toxicity. "*As red cells break down over time, the iron in the hemoglobin is released. Your body has no natural way to rid itself of excess iron, so extra iron is stored in body tissues.*" (Ref: Moteflore Medical Center)

Other long term benefits, according to OneBlood.org:

- *Studies reveal many possible benefits of regular blood donation.*

- *According to the American Journal of Epidemiology, 88% of blood donors are less likely to suffer a heart attack. This may be partly because donating blood helps blood flow, giving it a lower viscosity (resistance) and thus making it less damaging to blood vessels.*
- *Blood donation also helps regulate iron levels in the body. Too much iron can be damaging to blood vessels, and a regular decrease of iron-rich blood and subsequent replenishment due to blood donation can lead to a more beneficial lower iron level.*
- *Men tend to store more iron in their bodies than women, which is why iron deficiency is rare in men.*
- *How do blood donations impact your heart? OneBlood Medical Director, Dr. Richard Gammon, M.D., writes "There have been studies published that show blood donors enjoy better health (Transfusion 2007) and blood donation reduces blood pressure (Transfusion 2016) and cholesterol (Am J Epi 1998)."*
- *High iron stores can increase a person's risk of heart attacks. When you give blood it depletes your iron stores and helps your body to create new blood. About 500ml of whole blood is taken during each blood donation, which removes 225-250 mg of iron.*

Beyond these technical benefits, I think CBS sums it well in two words: **Give Life**. And it doesn't cost us anything.

According to Cedars-Sinai.org, *"the gift of blood helps save lives, and the demand for blood and blood products is great. Every 2 seconds, someone in the U.S. needs blood, and more than 50,000 units of blood are needed each year at Cedars-Sinai alone..."*

One donation can save multiple lives. Here are the facts:

- *Just 1 donation can save up to 3 lives.*
- *The average red blood cell transfusion is 3 pints (or 3 whole-blood donations).*
- *More than 1 million people every year are diagnosed with cancer for the first time. Many of them will need blood—sometimes daily—during chemotherapy.*
- *More than 38,000 blood donations are needed every day.*
- *While 38% of the American population is eligible to give blood, only 2% actually donates."*

According to CBS, *"1 in 2 people are also eligible to donate blood and plasma, yet only one in 81 does. There are over 17.5 million eligible donors in Canada, but less than 2% donate blood or plasma."*

Saving lives is deeply gratifying...I started when I was 17. Now in my early 60s, I've seen quite a few instances where blood transfusion was needed. I'm fortunate that I haven't needed one myself so far. One day, I might need it. When that time comes, it will be YOUR blood. For that, I thank you in advance.