

# BLOODLINE

THE *voluntary* BLOOD DONATION JOURNAL

2013 | 30

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Voluntary  
Blood  
Donation



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## The Open View

# A SNEAK PEEK INTO MY RESIDENCY YEARS...

With all the anxiety and perplexity of joining a newly emerged discipline did I join MD Transfusion Medicine course at Govt Medical College , Trivandrum. As my life in department progressed, I could recognize some familiar faces visiting every fortnight for transfusions. As any other medical professional those faces were marked in my mind as cases of Aplastic Anemia, Thalassemia or Hemophilia. As a Transfusion Medicine Expert, I was bothered about any alloantibody formation and cross match compatibility issues. As time passed those innocent little faces made me think a lot. They had no complaints to this world whatsoever. I began to recognize them by their name, Aadil, Athira, Safnaetc, I realized I was concerned about them also. They would come with their mother with IV canulainsitu, in their little world wanting to touch the BP apparatus, pick up the phone in the department and that would make their day. Those anxious mothers were concerned about whether they would get their required group cross match compatible product, getting it transfused and going home the same day.

As a transfusion Medicine consultant my challenge was to provide them with cross match compatible product ruling out any auto or alloantibody, administering safe products , monitoring complications of transfusion etc. A lot more could be done to these chronic transfusion dependent diseases. It is not at all their fault that a single genetic mutation gave them this life, which could happen to any one

of us. Our society is not at all aware of these groups of patients and what could be done by us.

As voluntary blood donor community we can have walk in donors for these types of children as they have small transfusion needs in the initial years which would definitely decrease the multiple donor exposure increasing blood safety and decreasing alloantibody development. Thalassemia imposes a significant intrusion in the lives of the patients and their families. The effects are many, sweeping from financial hardships and absence from school and work, to significant issues with self-image and self-esteem. All of these issues have a tremendous impact on the effectiveness of therapy and on the quality of life of the patients. We should provide essential life experiences such as play, school, peer-interaction, community events and activities. Culturally sensitive psychological services make up a critical part of all comprehensive care plans for these kids. Provision for adequate social and medical services and financial assistance would matter a great lot to the families. Genetic counseling is a pre requisite for parents and patients affected by this disease. A small effort from our part would impart a tremendous change in attitude of society towards them. Let us make it happen.

### Dr CHITRA JAMES

MD Transfusion Medicine  
Senior Resident  
Govt Medical College  
Kottayam



# POSTER CONTEST ON VOLUNTARY BLOOD DONATION



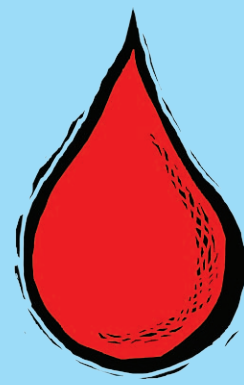
...organized by TERUMO  
PENPOL Limited, All Kerala  
Blood Donors and TEJUS as  
part of World AIDS Day



# WINNERS OF POSTER CONTEST RECEIVING THE PRIZE FROM MR.YOSHIHIRO KIMURA, CHAIRMAN, TERUMO PENPOL LTD



# 117 Units Of Blood Collected at Chhatrapatisahujimaharaj University (CSJMU) Donation Camp



Blood donation and free health check-up camp marked the third day of Health Awareness Campaign organised by the University Institute of Paramedical Sciences (UIPS) at ChhatrapatiSahujiMaharaj University (CSJMU) on Saturday. According to the authorities, 117 units of blood was collected during the campaign while 482 people were checked by the renowned city specialists. The event was attended by senior administrative and health department authorities. Mayor, Jagatveer Singh Drona inaugurated the event. Chief medical officer, Dr R P Yadav, Dr Rahul Mishra, Ex member of HIV and AIDS Society of India and event coordinator of HIV and AIDS Congress-2014 were also present on the occasion.

Dr Rahul, while addressing the students about HIV and AIDS, said information and education was the only key to dispel myths about the disease. He also urged the people

go to the ART centers and get themselves tested, counseled and medicated in case of any doubt or if they are suffering with the disease.

The ART centre is a place where tests for HIV are conducted and people are counseled regarding the disease. ART centres provide HIV testing with pre-test and post-test counseling, drugs for opportunistic infections, free distribution of condoms and follow-up counseling for HIV positive cases through field visits.

The centres also provide testing, pre-test and post-test counseling to pregnant mothers who come for ante-natal check ups. Those who test positive are provided psycho-social support and linked to treatment and care.

After the informative lecture, the university authorities started the voluntary blood donation camp. Around 51 people donated blood

in the mobile blood donation van called from SGPPI, Lucknow. Also, 71 people donated blood in the camp under the care of blood bank authorities of Ganesh Shankar Vidyarthi Memorial Medical College. University teachers and students also donated blood during the camp.

Free health check-up camp was also organised by the university people during which 482 people were tested by 14 specialists of the city. The locals also got their blood sugar, haemoglobin, bone mineral density and body fat scanning tests conducted for free during the camp.

"The fourth day of the camp will be dedicated to the AIDS awareness and counseling. Massive rally will be taken out from the university to Kamla Nagar on Sunday to mark World AIDS Day and last day of our mega health camp," said Dr Praveen Katiyar, event coordinator, CSJMU.

Source: Times of India



## A SPECIAL **LIFESAVER** : AN **APHERESIS** DONOR

### WHY BE AN APHERESIS DONOR?

Many patients including cancer and heart surgery patients, can't produce enough platelets to stop bleeding or white blood cells to fight infection. These blood parts are essential for life. An apheresis donor can help to give these critically ill patients another chance at life.

### WHAT IS APHERESIS?

(a - fur - e' - sis)

Unlike a "whole blood" donation in which a unit of whole blood is removed from your body, the apheresis process connects you to a machine that removes only one or two components from your blood, and then returns the rest of the blood back to you.

It takes about one and a half hours for platelet apheresis and two and a half hours for white cell apheresis. Donations can be done every 2 weeks.

The collection process is absolutely sterile so the risk to you, the donor, is no greater than when you donate a unit of whole blood.

### WHO CAN BE A SPECIAL DONOR?

Apheresis donors must meet the following requirements:

- Must be at least 18 years of age.
- Weight must be at least 60 kg
- Be willing to spend one and half hours for a platelet donation (slightly longer for white blood cell donation).

You will be given a mini-physical including a blood pressure, pulse, temperature, and hemoglobin check. Platelet donors need to be aspirin free for 36 hours, also plavix and ticlid free for 14 days, and have not taken any non-steroidal anti-inflammatories in the last 24 hours before donating. White blood cell donations may require medication prior to the donation.

Every time you donate blood, someone benefits. You can be sure that your apheresis donation is helping a person with very special health care needs.

**BE AN APHERESIS DONOR**  
**- IT'S SAFE - IT'S EASY**  
**- IT SAVES LIVES !**

## Letters To The Editor



Dear Baby,

Thanks for creating and sending your latest blood line journal.

I was pleased to learn that there is a determined effort in India to increase the rate of voluntary donation. It was encouraging to see that blood donation is promoted in secondary higher education school, or high schools as we call them in the USA.

In our area, NGOs conduct voluntary blood drives in many high schools twice every year. Children age 17 and older are allowed to donate (16 yrs. with parental permission). This encourages young people to continue donating throughout their lives.

Promoting repeat donations is very important to maintaining the blood supply. As I described in the article I wrote for your blood line journal earlier this year, our Rotary Club sponsors 4 blood drives every year. At each blood drive, donors are asked to sign up to donate at a specific date and time at the next blood drive. Then, those who have signed up are telephoned and sent a postal card as a reminder several days before the next event. Additionally, records are maintained listing every donor in the area, and the date of their last donations. Telephone calls are made to persons on this list, to recruit. These steps result in a very high percentage of repeat donors.

In the USA, there is no upper age limit for voluntary blood donation. We have many donors over 70 years old. I am 79, and I donate 5 times every year.

Keep up the good work, Baby!

**RONALD MCMAHON, Vineland Rotary Club, Vineland, New Jersey USA**

Dear Ms. Baby,

Thank you for the latest issue of Blood Line Journal. The issue is more colorful and quite informative.

Kind regards, **DILIP VARMA, HR Consultant**

Bloodline is more attractive with more photos and additional pages with refreshing valuable informations.

Efforts behind to bring out such an issue deserve appreciation on all counts.

Keep it up. Regards,

**MALIPPURAM KHALID, The Institution of Engineers (Kerala State Center)Kochi**

Amazing job as always

Should post this on face book as well

Regards, **DR. NISHA, Endocrinologist, Toronto General Hospital, Canada**

# MAD

(MAKE A DIFFERENCE) ORGANIZED  
BLOOD DONATION  
CAMPS IN ASSOCIATION WITH ROTARY  
TTK BLOOD BANK ON  
WORLD AIDS DAY, 1  
DECEMBER

MAD have been conducting blood donation camps every 3-4 months at Rotary TTK Blood Bank, Thippasandra, Bangalore for the past 4 years and this is their 5th year running. Rotary TTK is providing free blood to Thalassemia patients. Thalassemia patients require blood transfusion every month, lifelong. MAD initially started with not more than 20 people coming forward. They were never worried about the number of donors but continued to conduct the blood camp and do whatever possible irrespective of how much. Currently at least 50-60 people participate in every blood camp conducted by MAD.



Blood donation  
camp on 26th  
Nov 2013 held  
at Oracle,  
Trivandrum





# EVERY BLOOD DONATION IS A GIFT OF LIFE

In an attempt to promote voluntary blood donation among masses, the health department of Allahabad has come up with a fresh theme: "Every blood donation is a gift of life -- Donate blood and give a gift of life." The department has drafted month-long activities inviting government, non-government, voluntary organizations, NSS, NCC, corporate sector, clubs, SantNirankariMandal, etc., to promote voluntary blood donation. Youngsters living in rural and urban sectors are being targeted to encourage voluntary blood donation.

Nodal Officer, District Aids Programme Control Unit (DAPCU) and District Tuberculosis Officer (DTO) Dr O P Shahi told TOI: "We have been organizing a series of events to promote voluntary blood donation and outreach voluntary blood donation camps are being organised at block and tehsil levels. People are being motivated for voluntary blood donation and we are apprising them about its importance and that their donated blood could save life of others." Major (Dr) B P Singh, Joint Director, Health, said: "We will focus on the value of donated blood for a needy person, not only in saving life, but also in helping people live longer and a healthy life."

He added that the goal of World Health Organisation (WHO) is to obtain 100% of blood supplies from voluntary unpaid donors by 2020. "WHO data reveals that of the 107 million blood donations collected globally, about 50% are collected in the high-income

countries," he added. In low-income countries, up to 65% of blood transfusions are given to children under five years of age. Whereas in high-income countries, the most frequently-transfused patient group is over 65 years of age, accounting for up to 76% of all transfusions.

Dr (Major) Singh said: "Blood donation rate in high-income countries is 39.2 donations per 1,000 population, 12.6 donations in middle-income and only 4.0 donations in low-income countries. In low- and middle income countries, more young people donate blood than in high-income countries."

Dr (Major) Singh maintained that there are three types of blood donors - voluntary unpaid, family/replacement and paid donors. Voluntary unpaid donors are safest group of donors, as the prevalence of blood-borne infections is lowest among this group. WHO recommends that all blood donations should be screened for infection prior to use. Screening should be mandatory for HIV, hepatitis B, hepatitis C and syphilis. However, 24% blood donations are not screened properly in low-income countries. The WHO guideline says that blood can be used more effectively if it is separated into its components namely RBC, plasma and platelet concentrates. In this way, it can meet needs of more than one patient. In low-income countries only 40% of the blood collected are separated into its components while in middle-income countries, it is 78% and in high-income countries about 97% of the blood collected is separated into its components.

A global survey conducted by WHO revealed that 96% of people rely on the other 4% to give blood.

The fact is that just three teaspoons of blood can save life of a premature baby. Blood donations benefit not just the person receiving the blood, but also the donor. The donor gets health check-up done free, giving blood lowers the risk of heart diseases, as it off loads the excess iron in the blood stream; too much iron may actually damage the heart circulatory system and there by reducing the heart attack to one-third. Donating blood stimulates the bone marrow to produce new red blood cells and refreshes the system.

All the most, anybody between the age of 18 to 60 years and in good health can donate blood, if his/her weight is not less than 50 kg. Also, blood can be donated on regular interval of at least three months.

Some Facts

- # Just 3 teaspoons of blood can save life of a premature baby
- # WHO to obtain 100% of blood supplies from voluntary unpaid donors by 2020
- # WHO says 96% of people rely on the other 4% to give blood
- # Of the 107 million blood donations collected globally, 50% are collected in high-income countries
- # Donation rate in high-income countries is 39.2 donations per 1,000 population, 12.6 donations in middle-income and only 4.0 donations in low-income countries.

## BLOOD DONATION CAMP ORGANIZED AT INTERNATIONAL INSTITUTE OF FASHION DESIGN(INIFD), CHANDIGARH

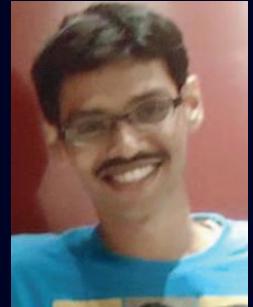
The campus of International Institute of Fashion Design(INIFD) wore a different look as the students council organized the blood donation camp. As many as 61 students of graduate and undergraduate courses of fashion designing, textile designing and interior decoration donated blood during the camp organized in sector 8 here.

The INIFDIans also took the pledge to volunteers for the service of unattended patients in PGIMER Chandigarh. A team of doctors headed by Dr Suchet-Sachdev, an associate professor from the department of blood transfusion, PGIMER Chandigarh collected the blood units during the camp that lasted for three hours. Anil Khosla, the Managing Director of the

INIFD group inaugurated the camp coordinated by Saurab, a student of B.Sc first year. Amit Gigoo and Nikita Mahajan supervised the event. "This is part of the social responsibility campaigns carried out by student council. Besides this we have planned to organize the community kitchens as well as health check up camps in slums," Amit said.

# BLOODLINE APP : A LABOUR OF LOVE

From top:  
SIDDHARTH,  
SHEEBA  
AND  
PRIYANKA



**They have developed an app which can connect users to blood donors within half an hour of placing their request**

What would you do if someone you knew was in dire need of blood for a surgery? Call up friends, post on social media, call blood banks? The process can be slow and frustrating.

Now, thanks to the efforts of a group of engineering college and architecture students, there is an app which can improve the efficacy of this process many times over. The app - Bloodline - developed by Ashwin Krishnamoorthy, Vasant Sridhar and S. Siddharth of IIT Madras; Priyanka Gopalan from MEASI (Muslim Educational Institution of Southern India) Academy of Architecture and R. Sheeba of Sri Venkateswara College of Engineering provides a quick and efficient way of entering your request and getting results within thirty minutes.

The app is currently made for use on Android phones and the Web, with plans to extend it to phones with iOS and MS Windows. You just log on to the website (bloodlinelabs.com) or use the Android application Bloodline to place your request - where you are located, the blood group needed and number of units needed. The app then pings the donors in its database with these details, and they just have to say "accept" or "reject" to get connected or passed over.

The database also has information on whether the donor is actually available, for example, whether they have donated blood recently and hence are not in a position to donate, or whether they are located too far from the origin of the request and hence cannot

practically donate, etc.

Those donors, not in a position to donate, are not disturbed. The app also respects privacy settings, which you can activate if you do not want to be disturbed, say, when travelling, and so on.

How it was developed.

"It all originated in August 2012 when we were hunting for an idea for a business plan competition (Transform Urban India) hosted by Indian Institute of Human Settlements, Bangalore," says Ashwin. Winning the competition was a big deal, for they even defeated some prime business schools in the process.

After that, they thought it would be good to stick together and actually develop the app and this year in August, they were ready to launch Bloodline .

Now it is two months since the launch and they have 1100 people in their network, both Web and Android, and have saved 31 lives!

"It is a completely free service and meant to be kept that way," says Ashwin, "The kicks for us were in being able to bring together people, address a real-life problem and find a solution that would help people."

The costs of developing the app were borne by the five students, who pooled in money they had earned from internships and the like, with the main overheads being the cost for hiring the server and the publicity.

Whenever there is a blood donation event or some such get together, they go and put up a stall and promote Bloodline . And they are in talks with blood banks to adopt the technology.

The work has not gone unnoticed - In January 2013, Nasscom, for their Social Innovation Honour, identified Bloodline as one of the top three socially relevant ideas. In December 2012, the app was projected at the Stanford Innovation Expo. "The expo really helped us fine tune the idea and find out where we were lacking and to trim the app. It encouraged us to launch the app," says Ashwin. Soon after the launch, on August 2, they were featured on Wired U.K. for being an innovative startup, and much more.

Now they are a team of eight people, with Junaid, Abdeali and Arun

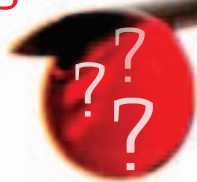
from IIT-Madras who have joined them.

Ashwin attributes their success to the IIT-Madras's schooling method - "IIT is not just about classrooms, they are into making global leaders," he says. **In Jan 2013, Nasscom, for their Social Innovation Honour, identified Bloodline as one of the top three socially relevant ideas.**

## Blood donation camp held @ naval dockyard

Stressing on the need to build awareness about voluntary blood donation, King George Hospital (KGH) medical officer Dr K Syamala Devi said there is a 30-40% shortfall of blood every year and that each unit of blood can be fractionated and used for up to four different patients, thus helping in saving lives. She further added that any healthy adult can safely donate blood three to four times a year. Speaking on the occasion of blood donation camp organised by the Eastern Naval Command (ENC) in collaboration with KGH, INHS Kalyani and AS Raja Voluntary Blood Bank as part of Navy Day celebrations at the Naval dockyard dispensary here on Wednesday, she urged defence personnel to donate blood to give life to others. The camp was inaugurated by Naval Dockyard Admiral Superintendent Rear Admiral A K Saxena. The overwhelming response to the camp necessitated a second camp to be held on November 30 at the Station Health Organization near INHS Kalyani. Close to 600 individuals, including women, volunteered and donated blood. The collected blood was donated to the KGH Blood Bank. Dr A Sugandhi, Medical Director, A S Raja Voluntary Blood Bank highlighted various facts on the blood donation scenario in the country and lauded the efforts of the Navy in encouraging voluntary blood donation.

## FREQUENTLY ASKED QUESTIONS ABOUT BLOOD DONATION



### **Who can give blood?**

Anyone between 18 and 60 years of age and in normal health having a body weight of 45 kg. or more and a hemoglobin content no less than 12.5 gms/hundred ml can be a donor.

### **Does it take long time to donate blood?**

It should take up not more than 20 minutes of time including time for rest and taking refreshment.

### **How much blood do you take?**

Blood banks take 450ml of blood.

### **Why is my finger pricked before donation?**

To estimate "haemoglobin" content in blood. This is the component of the red cells which transport oxygen in the human body to all the organs and tissues. If the level is low, it is not wise to give blood.

### **What is the liquid in the bag into which the blood is taken?**

It is called anti-coagulant and prevents the blood from clotting. It also helps to preserve the blood cells. It is known as CPDA (Citrate, Phosphate, Dextrose, and Adenine) solution.

### **How often can one give blood?**

Not more than once in 90 days.

### **Is blood donation very painful?**

No. Not more than a prick of an injection needle.

### **Will I feel all right after donation?**

Yes, you can go back to your normal work after 30 minutes.

### **I have heard of people fainting. Is that common?**

Very occasionally a donor may faint. The most common reason is psychological and often due to rushing to get up too soon after donating. Relax and rest a little and you will be fine.

### **You wouldn't want my blood, would you? I am of a common group.**

We constantly need donors of all blood groups.

### **Nobody has ever asked me to donate blood.**

Consider yourself invited!

### **I am too old!**

If you are between 18 and 60 years and in good health you can donate blood.

### **But I am underweight!**

Not, if you are 45 Kg. or more, and in good health you can donate blood.

### **Oh! But I am anemic!**

We test for anemia before every donation.

### **But it will make me weak.**

Blood donation has no ill effect on the body. You can resume your routine duties immediately after blood donation. The amount of blood donated is a small part of your surplus blood and is recouped by the body in twenty one days and you can donate blood again after 3 months.

### **I am too busy and it is too inconvenient!**

The entire procedure of blood donation takes

about 15-20 minutes whereas the actual Blood Donation is just 5 minutes job!

### **How long does it take to transfuse a unit of blood?**

This depends on the condition for which transfusion is being given. If the patient is being transfused to replace blood for sudden massive blood loss, one unit of blood may be given rapidly in about 10-15 minutes. However, if the blood transfusion is being given for anemia, it may take over 3-4 hours. Normal rate of transfusion is 28 drops per minute.

### **Can I develop a serious reaction to blood transfusion with blood from another person?**

Not usually. People differ from each other with respect to their blood groups and blood of compatible group is only transfused. Before blood transfusion, a sample of the blood is tested, and cross-matched with a suitable donor unit. These tests reduce the risk of any serious reactions. Of course, no medical procedure is absolutely hundred percent safe. Most blood transfusion reactions, if they occur, are mild.

### **Why blood is not collected from a person having a haemoglobin content of less than 12.5 gm/100ml?**

The stipulated hemoglobin content of 12.5 gm./100 ml for a donor is the standard for a healthy person. Persons having less HB content than the prescribed one cannot be treated as healthy donor having sufficient HB for donations and hence are not allowed to donate blood. Further, blood weak in Hb content does not help the patient much in carrying oxygen to cells.

### **What physical tests are performed before blood donation?**

Weighing, HB estimation (copper sulphate solution method) Measurement of blood pressure Checking heart beats, condition of liver, lung and spleen.

### **What laboratory tests are performed in blood bank for each bag of collected blood?**

Jaundice (Hepatitis B & C) • Malaria • HIV (AIDS) test • Venereal disease (STD) • Blood Group • before issuing blood, compatibility tests (cross matching) are done.

### **Why the above laboratory tests are not performed before donation?**

They are time consuming tests, and if performed in camp before donation, there will be excessive delay in disposal of donors, and the disgusted donors may leave the camps and refrain from donating blood forever. Besides, post donation tests are mandatory.

### **Is there any chance of contracting blood communicable disease by donating blood?**

No, since sterilized disposable bleeding sets are

used.

### **What is AIDS? Is there any chance of contracting AIDS by donating blood?**

AIDS is an abbreviation for Acquired Immuno Deficiency Syndrome, which reduces the inherent power of the defense mechanism of human body. As a result, the affected person suffers from other ailments, which may be fatal. No. there is no chance of contracting AIDS by donating blood, since disposable bleeding sets are used.

### **Will my blood group be the same as that of either of my parents?**

May or may not be exactly. But there should be a sort of relationship. We inherit our blood group from our parents by random combination of one gene from each of the parents. Dominant genes (A, B) prevails over recessive gene (O).

### **Does the blood group of a particular person change with time?**

No.

### **What is Rh factor?**

Rh factor indicates the presence or absence of an organic compound in the membranes of red cells of human blood, similar to that present in the membrane of the red cells of Rhesus Macacus Monkey. Those having the compound are denoted as Rh positive and those without such compound are denoted as Rh negative.

### **How long can blood be preserved in a blood bank?**

In India blood is normally preserved in blood bank for 35 days using CPDA or CPDA1 solution as anticoagulant. The maximum life span of RBC is 120 days.

### **Why blood is then is preserved in blood bank for only 35 days?**

Donated blood contains cells ranging from 1 to 120 days' life span. Naturally, cells having such varied life spans cannot be preserved for 120 days in the bag since in that case there will only be a few living cells present. In order to get a considerable number of living cells present in the blood for transfusion, 35 days shelf life has been found to be optimum with CPDA and CPDA1 solution on the basis of various experiments. Furthermore, cells which can remain alive for 120 days within the human body cannot survive for such period in an artificial environment.

### **Will there be any good if blood is transfused to a patient on the 34th day after collection from the donor?**

It will serve the purpose of volume expander. There will still be a considerable number of living red cells present in the bag which will be able to carry oxygen to the cells and bring back carbon dioxide.