



# The Impact of Blood Donation on our Lives A critical and comparative study on the importance of Blood Donation in today's era.

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**ABSTRACT:** This project explores the relevance of blood donation in contemporary society based on its life-saving abilities and the need to raise awareness and participation. Conducted using a formal survey involving 55 participants aged 18-65, this study examines public awareness, perception, and myths surrounding blood donation. Findings indicate positive identification with personal blood types and a general positive regard for donating but reveal gaps in knowledge regarding the amount of blood, frequency of donation, and requirements. This project emphasizes the importance of educational campaigns, the role of social media, and community programs in eliminating myths about blood donation and promoting it as an international act of solidarity. Through critical analysis, practical suggestions, and evidence-based representation of information, this study demands systemic changes and enhanced public engagement to support national blood donation initiatives.

**KEYWORDS:** Blood Transfusion, Donor Eligibility, Plasma and Platelet Donation

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## I. INTRODUCTION

In a world that seems to spin faster every day, medical emergencies arise without forewarnings, and hence the need for a reliable and consistent safe stock of donated blood stays in front and center. Blood donation is of paramount importance in global healthcare, with over 100 million blood units contributed annually. Blood donation is crucial for patients undergoing surgery, coping with trauma, managing chronic illnesses, and battling cancer. This essential procedure serves as a lifeline, sustaining and saving lives. Furthermore, donating blood serves as therapeutic phlebotomy for individuals with hereditary hemochromatosis, polycythemia vera, and other rare conditions.[1]

The demands for blood have begun to exceed supply, and the increase in complexity of donation has had a knock-on effect on recruitment of blood donors.[2]

## II. MATERIALS AND METHODS

To completely understand people's opinions, myths, and knowledge base about blood donation, I prepared a questionnaire with the help of Google Forms. I collected demographic data, and prepared questions related to different blood groups, amount of blood present in an adult human body, number of times an adult can donate blood, side effects of blood donation, whether a person can donate blood if he/she has travelled overseas in the past six months and various components of blood. This form was electronically sent to randomized males and female between the age group 18 – 65.

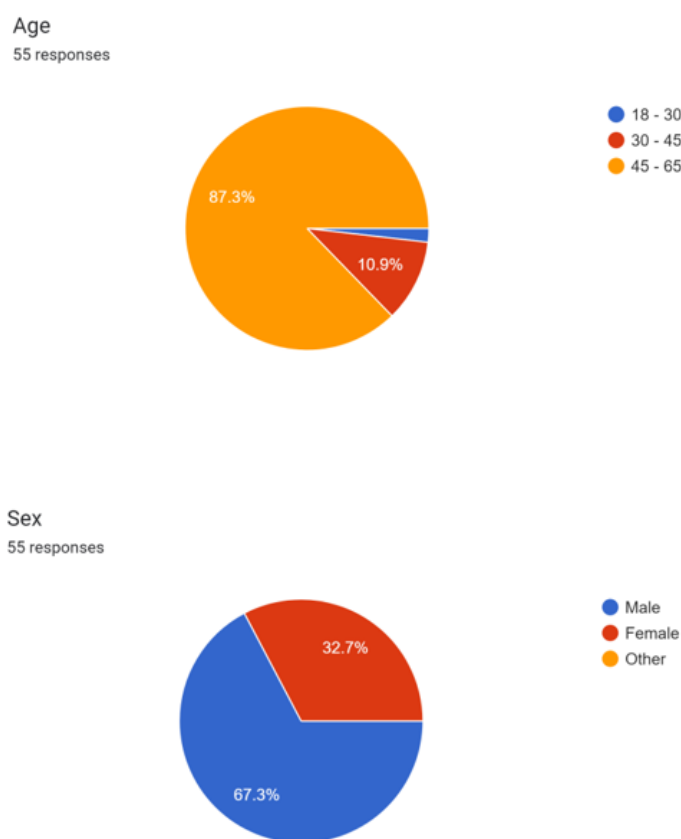
## III. RESULTS AND DISCUSSION

The responses of various participants were collected and analyzed in Excel. Percentages were determined and pie charts were created.

I received a total of 55 responses after sending the questionnaire to 60 people. 5 did not answer due to various reasons. Of the 55 responses, 87.3% were between the ages of 45-55 years. 10.9% were between the ages of 30-45 years. There were 67.3% males and 32.7% females in the cohort.

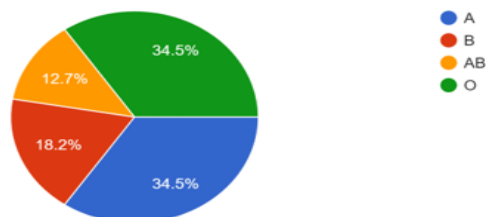
Of the 55 responses, more than one-third were of blood group O and another one-third were from blood group A. Blood group B and AB were 18.2% and 12.25% respectively. Thus, all participants were aware of their blood groups. Over half of the respondents (56.4%) were aware that the normal adult human body has 5 liters of blood. About 10% of the participants felt that there is only 3-4 liters of blood in the body. Over 40% of the respondents felt that blood can be donated only twice in a year. Almost all the respondents (94.5%) felt that blood donation is good for our body. Over half the participants were aware that blood donations cause some mild side effects like nausea, fainting and dizziness. About 65.5% of them felt that multiple lives can be saved by a single blood donation. Luckily, most of the respondents were aware that other blood products like plasma and platelets can also be donated. The majority of them (54.5%) were unaware that blood cannot be donated after overseas travel.

This study gave us a good overview of the current perceptions that common people have regarding blood donation. It was heartening to know that all the respondents were aware of their own blood groups. However, 4 out of 10 respondents were unaware of the total amount of blood present in the adult human body. This can lead to a lot of misconceptions about blood donation. Only 27% knew that blood can be donated only 6 times a year safely. Most of the respondents (70%) felt that blood can be donated 1 to 5 times a year.

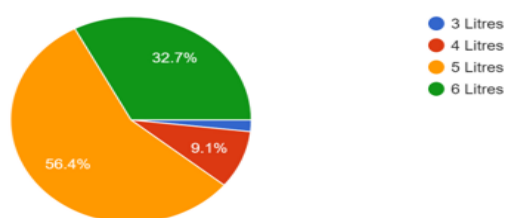


**Diagram 1**

Blood Group  
55 responses

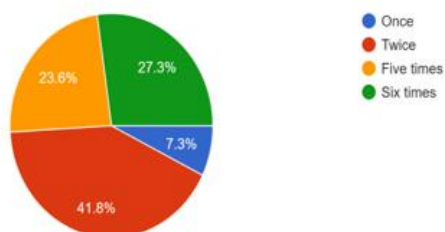


How much blood do you think is normally present in an adult human body?  
55 responses

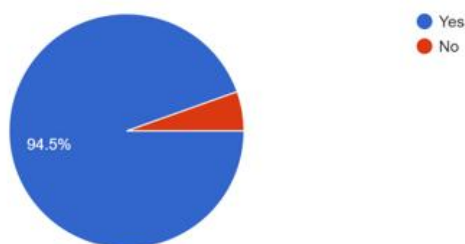


**Diagram 2**

What is the maximum number of times an adult can donate blood (PRC's) in a year in your opinion?  
55 responses



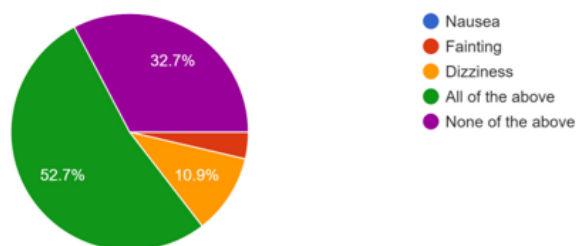
Do you think regular blood donation is good for your body?  
55 responses



**Diagram 3**

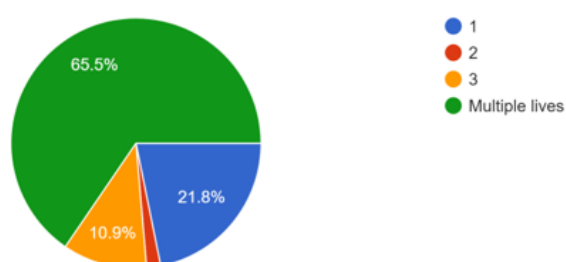
Are you aware of the side effects caused by blood donations?

55 responses



How many lives do you think one blood donation save?

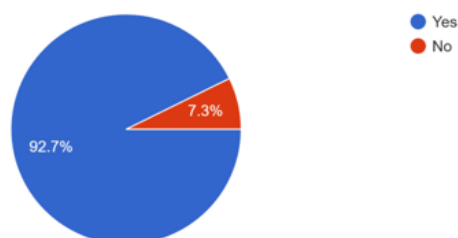
55 responses



**Diagram 4**

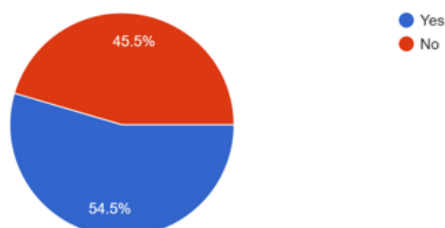
Can other components of blood like plasma and platelets be donated too?

55 responses



Can a person donate blood if he/she has travelled overseas in the last 6 months?

55 responses



**Diagram 5**

#### IV. SURVEY REPORT RESULTS

The following images are the report of the questionnaire electronically sent to a randomized collection of people.

	A	B	C	D	E	F	G	H	I	J	K
	Timestamp	Age	Sex	Blood Group	Q1	Q2	Q3	Q4	Q5	Q6	Q7
1	8/22/2023 0 01:07	30 - 45	Female	A	5 Litres	Six times	Yes	All of the above	3	Yes	No
2	8/22/2023 0 07:07	45 - 65	Male	A	5 Litres	Six times	Yes	All of the above	3	Yes	No
3	8/22/2023 0 13:29	30 - 45	Male	O	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	No
4	8/22/2023 1 17:06	45 - 65	Male	O	5 Litres	Six times	Yes	All of the above	Multiple lives	Yes	No
5	8/22/2023 1 24:41	45 - 65	Male	B	5 Litres	Twice	Yes	All of the above	1	Yes	No
6	8/22/2023 1 57:44	45 - 65	Male	O	6 Litres	Twice	Yes	All of the above	Multiple lives	Yes	No
7	8/22/2023 2 49:36	45 - 65	Male	O	5 Litres	Twice	Yes	Fainting	1	Yes	Yes
8	8/22/2023 3 18:47	45 - 65	Male	O	5 Litres	Five times	Yes	Dizziness	3	Yes	Yes
9	8/22/2023 3 29:33	45 - 65	Male	O	6 Litres	Twice	Yes	Dizziness	Multiple lives	Yes	No
10	8/22/2023 3 30:07	45 - 65	Male	A	6 Litres	Six times	Yes	All of the above	Multiple lives	Yes	Yes
11	8/22/2023 3 32:37	45 - 65	Male	B	6 Litres	Five times	Yes	None of the above	Multiple lives	Yes	Yes
12	8/22/2023 3 24:42	45 - 65	Male	A	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes
13	8/22/2023 4 34:42	45 - 65	Male	A	6 Litres	Twice	Yes	All of the above	1	Yes	Yes
14	8/22/2023 4 39:28	45 - 65	Male	O	5 Litres	Six times	Yes	All of the above	Multiple lives	Yes	Yes
15	8/22/2023 4 55:15	45 - 65	Male	B	5 Litres	Five times	Yes	Dizziness	1	Yes	Yes
16	8/22/2023 4 55:24	45 - 65	Male	A	5 Litres	Twice	Yes	All of the above	Multiple lives	Yes	Yes
17	8/22/2023 5 04:38	45 - 65	Male	B	6 Litres	Once	Yes	None of the above	Multiple lives	Yes	Yes
18	8/22/2023 5 07:11	45 - 65	Male	O	6 Litres	Six times	Yes	None of the above	Multiple lives	Yes	Yes
19	8/22/2023 5 10:11	45 - 65	Male	O	5 Litres	Twice	No	None of the above	1	Yes	No
20	8/22/2023 5 10:13	45 - 65	Male	O	4 Litres	Twice	Yes	All of the above	Multiple lives	Yes	Yes
21	8/22/2023 5 40:28	45 - 65	Male	O	6 Litres	Twice	Yes	None of the above	Multiple lives	Yes	No
22	8/22/2023 5 53:19	45 - 65	Male	O	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	Yes
23	8/22/2023 5 53:19	45 - 65	Male	O	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	Yes

Figure 1

	A	B	C	D	E	F	G	H	I	J	K
	Timestamp	Age	Sex	Blood Group	Q1	Q2	Q3	Q4	Q5	Q6	Q7
23	8/22/2023 5 53:12	45 - 65	Male	O	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	Yes
24	8/22/2023 6 02:40	45 - 65	Male	AB	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	No
25	8/22/2023 6 04:32	45 - 65	Male	O	6 Litres	Five times	Yes	None of the above	Multiple lives	Yes	Yes
26	8/22/2023 6 08:29	45 - 65	Male	O	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes
27	8/22/2023 6 10:32	45 - 65	Male	AB	6 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes
28	8/22/2023 6 14:55	45 - 65	Male	AB	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	No
29	8/22/2023 6 34:23	45 - 65	Male	A	6 Litres	Six times	Yes	None of the above	1	Yes	Yes
30	8/22/2023 6 49:59	45 - 65	Male	O	3 Litres	Twice	Yes	All of the above	Multiple lives	Yes	No
31	8/22/2023 7 25:44	45 - 65	Male	B	5 Litres	Five times	Yes	Dizziness	Multiple lives	Yes	Yes
32	8/22/2023 10 29:10	45 - 65	Male	A	6 Litres	Six times	Yes	None of the above	Multiple lives	Yes	Yes
33	8/22/2023 10 37:19	45 - 65	Male	O	6 Litres	Six times	Yes	None of the above	Multiple lives	Yes	Yes
34	8/22/2023 13 05:55	45 - 65	Female	AB	5 Litres	Six times	Yes	Dizziness	1	Yes	No
35	8/22/2023 14 25:46	45 - 65	Male	AB	6 Litres	Once	Yes	All of the above	Multiple lives	No	No
36	8/22/2023 15 21:33	18 - 30	Female	A	5 Litres	Six times	Yes	All of the above	3	Yes	No
37	8/22/2023 15 29:52	45 - 65	Male	A	6 Litres	Twice	No	All of the above	Multiple lives	Yes	Yes
38	8/22/2023 15 30:47	45 - 65	Female	AB	4 Litres	Twice	No	Dizziness	1	No	No
39	8/22/2023 15 35:14	30 - 45	Female	A	5 Litres	Six times	Yes	All of the above	2	No	No
40	8/22/2023 15 41:28	45 - 65	Female	AB	6 Litres	Once	Yes	All of the above	1	Yes	Yes
41	8/22/2023 15 51:06	45 - 65	Male	A	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	No
42	8/22/2023 15 56:55	45 - 65	Female	A	5 Litres	Twice	Yes	All of the above	Multiple lives	Yes	Yes
43	8/22/2023 16 03:01	30 - 45	Female	A	5 Litres	Five times	Yes	All of the above	1	Yes	Yes
44	8/22/2023 16 13:31	30 - 45	Female	A	5 Litres	Twice	Yes	All of the above	Multiple lives	Yes	No
45	8/22/2023 17 00:35	45 - 65	Female	B	5 Litres	Five times	Yes	All of the above	Multiple lives	Yes	No
46	8/22/2023 17 50:55	30 - 45	Female	O	5 Litres	Once	Yes	All of the above	Multiple lives	No	Yes
47	8/22/2023 19 26:50	45 - 65	Male	B	6 Litres	Six times	Yes	All of the above	1	Yes	No
48	8/22/2023 19 44:14	45 - 65	Male	B	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes

Figure 2

	A	B	C	D	E	F	G	H	I	J	K
	Timestamp	Age	Sex	Blood Group	Q1	Q2	Q3	Q4	Q5	Q6	Q7
48	8/22/2023 19:44:14	45 - 65	Male	B	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes
49	8/23/2023 6:03:29	45 - 65	Female	A	6 Litres	Twice	Yes	None of the above	Multiple lives	Yes	Yes
50	8/23/2023 6:07:49	45 - 65	Female	B	5 Litres	Six times	Yes	All of the above	3	Yes	Yes
51	8/23/2023 6:24:50	45 - 65	Female	A	4 Litres	Five times	Yes	Fainting	1	Yes	No
52	8/23/2023 7:06:50	45 - 65	Female	O	5 Litres	Twice	Yes	None of the above	Multiple lives	Yes	No
53	8/24/2023 7:00:49	45 - 65	Female	A	4 Litres	Twice	Yes	None of the above	3	Yes	No
54	8/24/2023 19:22:27	45 - 65	Male	O	5 Litres	Five times	Yes	All of the above	Multiple lives	No	Yes
55	8/24/2023 21:15:11	45 - 65	Female	AB	4 Litres	Twice	Yes	None of the above	Multiple lives	Yes	No
56	8/24/2023 21:25:27	45 - 65	Female	A	5 Litres	Six times	Yes	All of the above	Multiple lives	Yes	Yes

Figure 3

## V. CONCLUSION

This study has provided a holistic and comprehensive insight into the current perspectives and awareness levels regarding blood donation amongst the general population. It is reassuring to note that all respondents were well aware of their blood groups. However, many respondents were unsure about how much blood the human body actually contains, which could easily lead to confusion or hesitation when it comes to donating.

Only 27% of them were aware that six times a year blood can be donated safely, while the majority believed it was less. Further, many of them had no idea that one donation was only 300–350 milliliters of blood, which would be replaced naturally in 55–60 days. Mild and transient nature of side effects was also not known to most individuals.

These findings point to the need for special awareness and educational campaigns. Social media can be optimally utilized for the dissemination of proper information and myth-busting that is so endemic. Apart from this, governments must have robust and sustainable national blood donation systems in place and also encourage voluntary participation actively. Donor appreciation functions, cultural performances, and symbolic gestures such as illuminating landmarks with red color can go a long way to achieve this end.[2]

Moreover, blood transfusion services are facing major changes. In developed countries, new technologies are prompting a rethink of how blood systems are organized.[3] In essence, donating blood is a profound act of solidarity that overcomes differences and serves the public interest. Holidays such as World Blood Donor Day on June 14 put everyone's mind at ease regarding the essentiality of this life-saving practice.[4]

## REFERENCES

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