

But Why: A Podcast for Curious Kids

[Why do we donate blood?](#)

April 7, 2023

Jane 00:21

This is But Why: A Podcast for Curious Kids, from Vermont Public. I'm Jane Lindholm. On this show, we take questions from kids all over the world and it's our job to give you the information you're looking for. Lately, we've been thinking about blood. You sent us so many good and interesting blood questions for our last episode; I hope you got a chance to listen to it. Did you learn anything new, like where our blood is made? (Spoiler alert: inside our bones!) Or how much blood you have inside your body right now?

Jane 00:54

There's one really cool thing about blood that we didn't talk about in the last episode: we can share it with other people. Scientists have figured out safe ways to take the blood from one person and put it into another person. But why would that other person need blood from someone else? Well, doctors use blood to help people who've been in accidents and to help treat people with certain kinds of cancers, sickle cell disease and other medical issues. Doctors haven't figured out how to make blood and plasma in a lab, so the main way to help someone who needs more blood is to get it from another person. In the United States, an organization called the American Red Cross handles most blood donations. (That's taking the blood of the people who want to give some of it.) And then the Red Cross makes sure all of that blood is safe, and gives it to hospitals and other medical facilities where blood is put into the other person's body.

Jane 01:51

If this is the first time you've ever heard about giving away your own blood, and even watching it come out of your own body, this could sound pretty strange. So I thought it might be cool for you to come along with me while I donated some of my blood. So you can see what it's like. There's a Red Cross Blood donation center in Burlington, Vermont, about an hour from where I live. So I headed over there a few weeks ago.

Jane 02:13

Hi!

Person at the front door 02:13

Do you have an appointment?

Jane 02:15

We do.

Jane 02:16

The first step when you show up is to go over a lot of information so they can make sure you're healthy and able to donate blood, and so that they know who you are. I filled out a lot of the forms ahead of time online to make it go faster. Once I had signed in, I was taken to a private area where I had to answer even more questions from a nurse.

Linda Sweet 02:36

My name is Linda sweet. I'm a supervisor here in the fixed site in Burlington, and I'm about to do about 50 questions for Jane, to be able to donate. We have to just do like a medical screening to make sure that she's eligible to donate.

Jane 02:52

The questions were about my health. And they try to make sure that no one else is able to hear that conversation so you can be completely honest in answering the questions. So I didn't record that part. Next up, they had to prick my finger to capture a little drop of my blood.

Linda Sweet 03:07

[We're] testing the oxygen in your blood. So your hemoglobin, it's a different way of measuring. And it has to be 12.5 or higher for women to donate.

Jane 03:16

Hemoglobin is a big word that just means the amount of oxygen in your blood?

Linda Sweet 03:21

Yes, it's a way of measuring it, the oxygen in your blood. It's like a little pinch, kind of.

Jane 03:29

Already done. And you got a little slide with just a little tiny bit of my blood and you're putting it in a machine and that machine is going to tell you whether I have enough oxygen to donate today.

Linda Sweet 03:39

Yes, if you have enough iron in your blood. Yep. [BEEP] Alright and it's very good. Very good.

Jane 03:47

I passed the hemoglobin test so I was all cleared for them to take some of my blood. Out in the main area of the donation center are several reclining chairs. They're actually kind of a blend between a chair and a bed so you can lean back and relax. Some people even had little TVs to watch while they gave platelets. Remember from our last episode, platelets are like little band aids in your blood. Donating platelets takes a little longer than donating whole blood, which is what I was doing.

Linda Sweet 04:15

Which arm did you want to use?

Jane 04:17

I would prefer to use my right arm because I'm left handed. So will you describe what you're doing while you're doing it.

Linda Sweet 04:24

Yup. I have your collection set here to collect your your red cells in. I'm having this little handheld that keeps all the information in here about you and about your donation. So I'm just going to scan your whole blood number that we linked you to and now I'm gonna ask you your full name.

Jane 04:40

My full name is Jane Lindholm.

Linda Sweet 04:45

So we have three bags, but we're only collecting red cells in one bag. The other two bags are for separating the components of your blood, the white cells and the red cells. And then we have sample tubes that we have to scan as well, because we have to do different tests. When we take your blood, we test your blood type every time you come in, and there's different other tests that we do.

Jane 05:12

And so you're testing my blood, mostly to make sure that my blood is safe to give to somebody else who needs it.

Linda Sweet 05:19

Exactly. Yes, you're correct. All right, so I'm just gonna mark your name with a purple surgical marker.

Jane 05:29

How much blood do you take?

Linda Sweet 05:30

We take a pint. Actually, we take, some people we take a pint on, depending on your your weight, we take a little bit more. We take about 50mls more than a pint.

Jane 05:44

Now, some people really don't like needles. What would you say to reassure people who don't really like having a needle in them?

Linda Sweet 05:52

Um, it's very safe. And honestly, the finger stick is usually the worst part of it. Once the needle's in, you don't even feel it. And so if you think of the reason why you're doing it, you know, you're trying to save a life, you're trying to extend someone's life. It's so important. So important. It doesn't hurt once you get used to it. The first time you do it, you're a little nervous. But once you do it a few times, it's not. It's not as bad.

Jane 06:17

And they always give you snacks.

Linda Sweet 06:19

Yes, yes. And drinks. Right, and you can watch or look away.

Jane 06:27

Do most people watch or do most people Look away?

Linda Sweet 06:29

Look away. Good job.

Jane 06:34

So you couldn't hear it because it doesn't make any noise. But Linda put a needle into my vein and the blood is flowing through now into a bag. And you're gonna use those test tubes to collect a little bit of blood so you can test it and then the rest of it will flow into a bag until you've had about a little more than a liter of my blood, right?

Linda Sweet 06:53

Yes, yeah. And it's it takes about five to 10 minutes. Some people are faster. Some people are a little slower, depending on the size of the vein placement of the needle. But Jane has a great vein and she's flowing very well. It's probably going to take about five minutes.

Jane 07:08

Coming up. Where does my blood go after I've donated? And should I choose the Nutter Butter Cookies or some cheesy crackers as my snack after I'm done.

BREAK 07:18

BREAK

Jane 07:19

This is But Why! I'm Jane Lindholm and today you're going on a little adventure with me as we learn more about blood donation while I give some of my blood at the American Red Cross Blood donation center in Burlington, Vermont.

Jane 07:31

To give blood, remember, I had to answer lots of questions to make sure I was actually able to give it. And then they put a hollow needle in my blood vessel and the blood traveled through the needle into a tube attached to a storage bag below, where my blood was kind of jostled about and mixed with some anti-clotting liquid to make sure it didn't turn into one giant gloopy scab inside the bag before they could give it to someone else. It didn't really hurt at all for the needle to be put in--only for one tiny second. And then it didn't hurt at all at all while my blood was flowing out. I couldn't even feel it. Linda said it would take about five minutes for one pint or 500 milliliters to flow into the bag. Let's see if she was right.

Linda Sweet 08:17

It took five minutes and 16 seconds.

Jane 08:19

Is that fast or normal?

Linda Sweet 08:21

That's about normal. Yeah, five minutes is about average.

Jane 08:25

After the blood is in the bag, they have an hour to put it on ice. Where will my blood go after this?

Linda Sweet 08:31

Right, yes. Your blood is going to go and your test tubes will go to Dedham, Massachusetts. That's where they have a lab there and they do all the testing there to make sure that your blood is safe, and then it'll go out to wherever it's needed. It typically stays in the New England region. Sometimes it goes out a little bit further if it's needed. But yeah, I don't think I've seen it go too far out of New England. But yeah, it's pretty much stays where it's needed.

Jane 08:57

So when you give blood you don't get to find out who gets your blood, but you do know that your blood has probably gone to somebody who desperately needs it.

Linda Sweet 09:03

Actually you do get an email that tells you where your blood went, what hospital it went to.

Jane 09:07

Not to the individual person.

Linda Sweet 09:08

Not the individual person, just what hospital it went to. Alright, so I match this to the number here on the little label that we have. And then I have to scan that in and then I have to scan the sticker that goes with the bag, and it says your blood type on it. So Jane's blood type is O neg, and she can give to everyone. She is the universal blood donor, and, but she can only receive O neg.

Jane 09:09

Do you remember from last episode when we talked about blood types? We all have the same things in our blood: the liquid called plasma, red blood cells, white blood cells and platelets. But then there's something called blood groups. And those can be different from person to person. The blood groups you'll most often hear people talking about or what they call your blood types. There are eight main blood types: A positive and A negative, B positive and B negative, AB positive and negative, and O positive and negative. Linda mentioned that my blood type is O negative. People with O negative blood type can donate their blood to almost everyone. O negative blood will be accepted by people who have

A blood, B blood, AB blood or O type blood. But if I ever need to get someone else's blood, I'll have to get blood from another person with O negative so my body won't reject it.

Jane 10:28

Don't worry if you don't know what blood type you have. If you're ever in a position where you need to know, a medical professional will be able to find out. And if you ever do give blood, you'll find out in that process.

Linda Sweet 10:39

All right, everything matches. Looks good.

Jane 10:41

Thanks, Linda.

Linda Sweet 10:42

Yeah, you're all set!

Jane 10:43

That didn't take long at all! My blood was put into a refrigerator and sent off later that day to a bigger location where lots of people's donated blood is tested and processed, and eventually then sent to medical facilities to be used by the people who need it.

Jane 10:58

After you give blood your body gets right to work replacing it. Did you know your body produces more than 2 million red blood cells every second?! It takes your body a little over a month to replace the red blood cells you gave away in a blood donation. The plasma--that liquid part that carries the rest of the good things in your blood--is replaced even faster, within 24 hours. And in eight weeks, you can give blood again.

Jane 11:22

Other than knowing you're doing something to help people in need, the best part of giving blood is the snacks. They usually want you to stick around for 15 minutes or so after you're done to make sure you don't feel dizzy or something. And then: snacks. I had a juice box and some cheesy crackers and a little slice of cheese too, because after our episode about how cheese is made, it was fun to be able to eat that slice knowing exactly how it was created.

Jane 11:48

Now if you want to give blood, first of all, that's fantastic! There's a big need for more blood donors. Less than 5% of the people who are able to donate their blood actually do. But you may have to wait a few more years if you're a kid listening today. Most states require you to be 17 years old before you can give blood. In a few you can be 16 If you have permission from your parents or guardians. And in some countries, the starting age is actually 18. And even if you are that old, you usually have to weigh about 110 pounds before you're going to be able to give blood. But if you do think about giving blood when

you're a little bit older. I hope this episode will have helped you understand what it's like, so it doesn't feel scary or confusing.

Jane 12:31

That's it for today. Thanks to the American Red Cross of Northern New England and especially Linda Sweet for helping us out. But Why is produced by Melody Bodette and me, Jane Lindholm. Our team also includes Kiana Haskin and Kaylee Mumford. We're based at Vermont public and distributed by PRX. And our theme music is by Luke Reynolds. We'll be back in two weeks with an all new episode. Until then, stay curious!