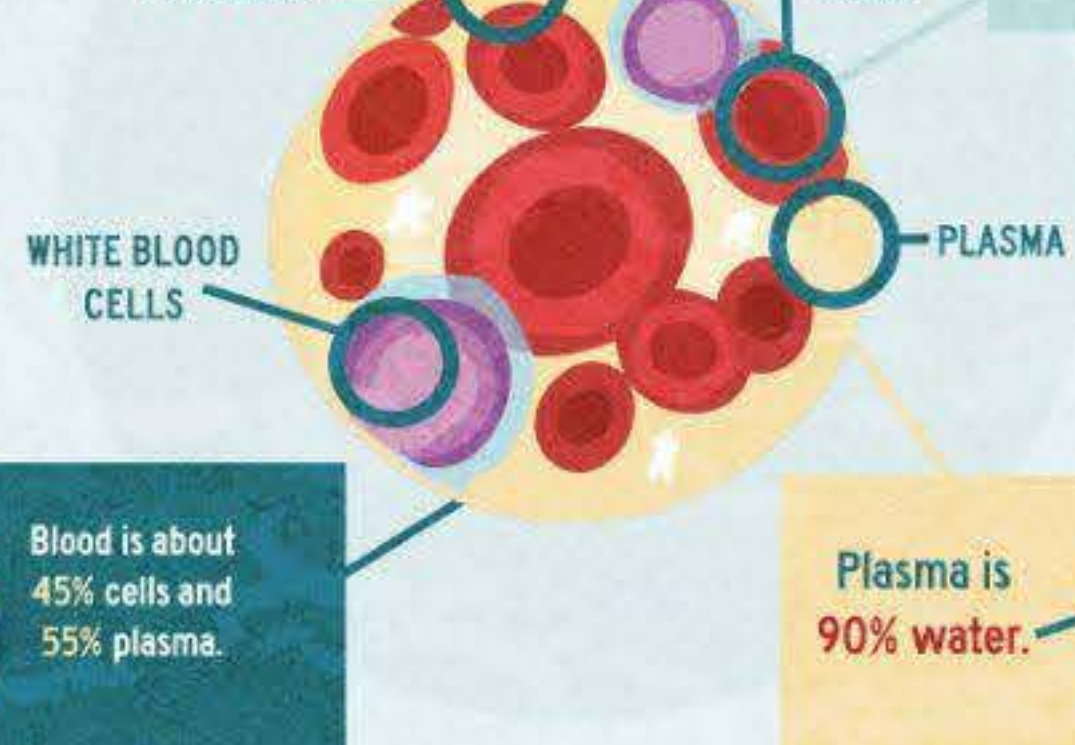


# BLOOD



You may not be a vampire, phlebotomist, or hematologist, or even know what all those words mean, but you can still learn about blood! You may know there are different types of blood – you may even know your own type – but did you also know that, according to the Japanese, your blood type determines your personality? Or that a girl was banned from school for bleeding? Check out these bloody facts!

## BLOOD IS MADE UP OF:



A red blood cell lives for about **120 days** within the body.

**CELLS**  
**PLASMA**

Blood is about 45% cells and 55% plasma.

Blood also contains nutrients, hormones, clotting agents, and waste products.

Plasma is **90% water**.

**WATER**

The other 10% contains things like protein molecules, immunoglobulins, vitamins, hormones, cholesterol, etc.

## FOUR TYPES OF HUMAN BLOOD:



THESE WERE IDENTIFIED BY DR. KARL LANDSTEINER IN 1901.

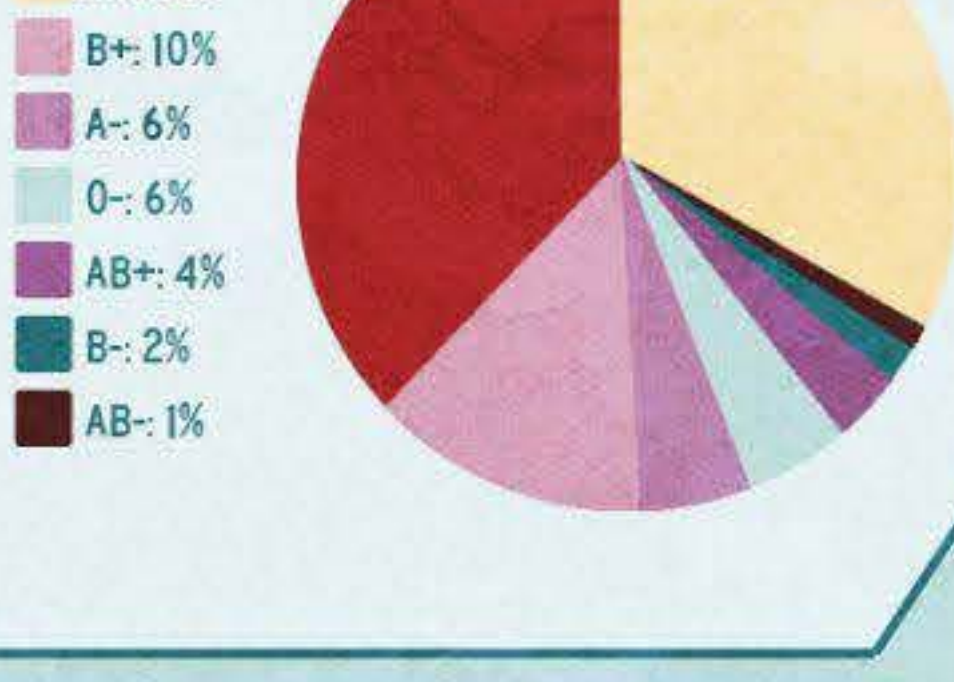
EACH TYPE CAN BE EITHER RH POSITIVE (RH+) OR RH NEGATIVE (RH-).

85% OF AMERICANS HAVE RH+ BLOOD.

## ANIMALS HAVE DIFFERENT BLOOD TYPES THAN HUMANS:



## BLOOD TYPE: % OF AMERICANS WITH THIS TYPE:

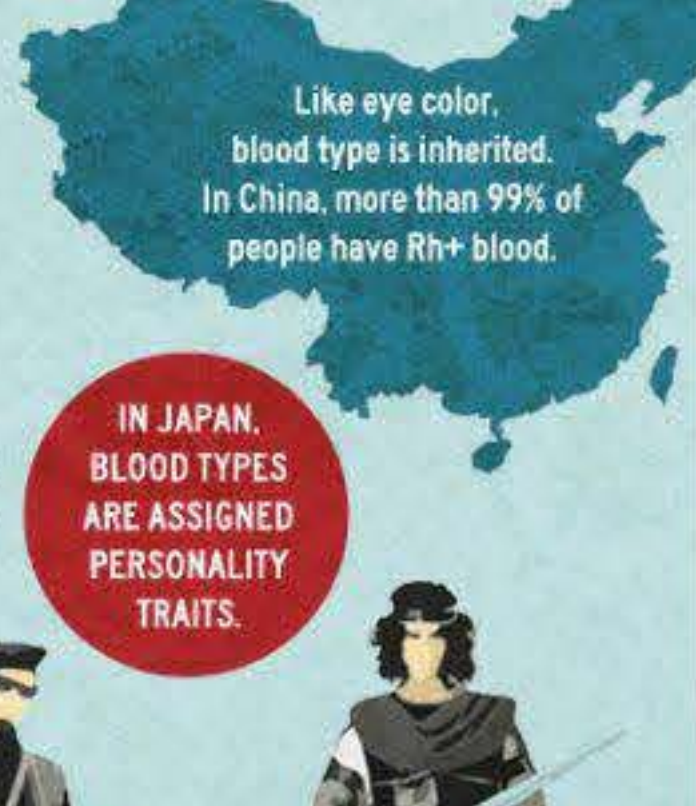


Different countries have different blood types that are more common.

**7%**

Blood makes up about 7% of your body weight.

THE AVERAGE ADULT HAS ROUGHLY 14 TO 18 PINTS OF BLOOD.



Asking "What's your blood type?" is like asking "What's your sign?"

IN JAPAN, BLOOD TYPES ARE ASSIGNED PERSONALITY TRAITS.

**TYPE A: THE FARMER**  
serious, calm, composed, level-headed, and trustworthy.

**TYPE B: THE HUNTER**  
curious, excitable, cheerful, bright, enthusiastic, unpredictable, and independent.

**TYPE AB: THE HUMANIST**  
unpredictable, distant, careful, considerate, efficient, and sensitive.

**Type O: THE WARRIOR**  
outgoing, expressive, clumsy, flexible, idealistic, natural leaders, carefree, and generous.

Human blood is red because it contains iron. Crabs have blue blood because theirs contains copper instead of iron. Leeches have green blood because theirs contains chlorocruorin.

Every **two seconds** someone in the U.S. needs blood.

More than **38,000** blood donations are needed every day.

Less than **38%** of the U.S. population is able to give blood.

Less than **10%** donate blood annually.



O- blood is the **universal donor**. It can be given to any blood type.

AB+ is the **universal recipient**. It can receive any blood type.



## YOU ARE NOT ABLE TO GIVE BLOOD IF:

- You have certain illnesses.
- You've had **unprotected sexual contact**.
- You've gotten a recent **tattoo or piercing**.
- You've had recent **surgery**.
- You've had an **extended stay in certain countries**.

The Red Cross supplies about **40%** of the entire U.S. blood supply.

Statistically, **about 1 in 4** people will require a blood transfusion at least once in their lifetime.

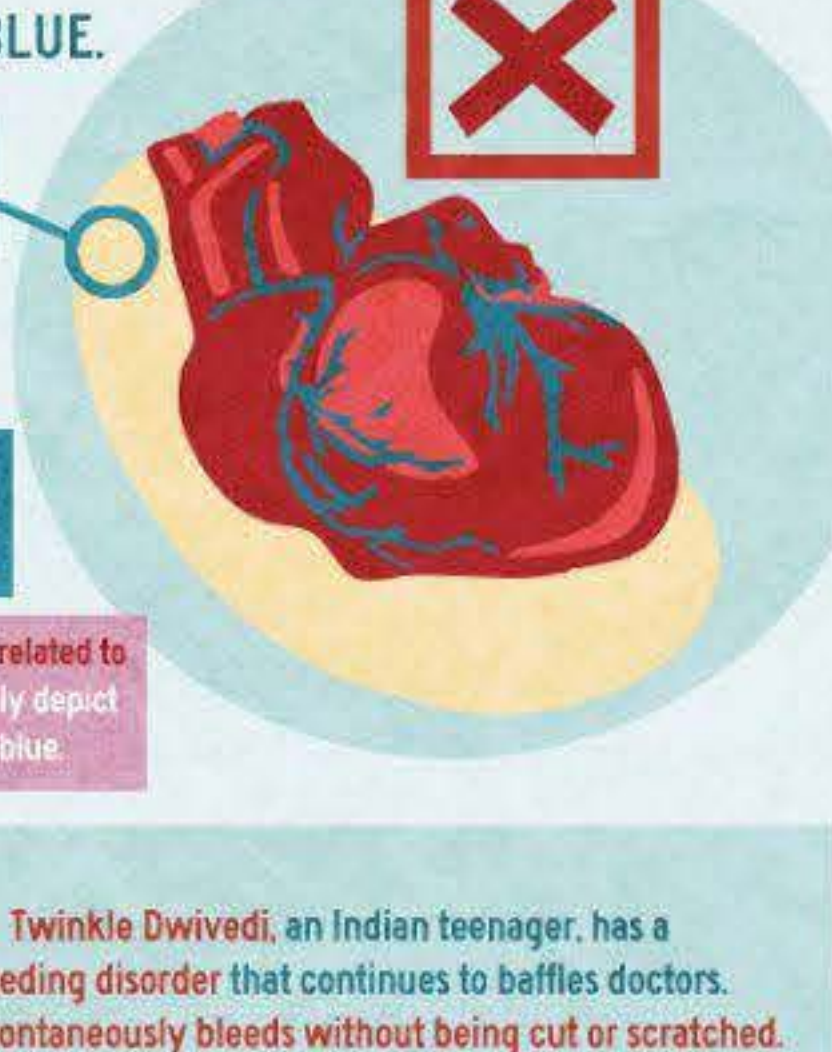
## DESPITE POPULAR BELIEF, BLOOD INSIDE THE BODY IS NOT BLUE.

Veins look **bluish** due to surrounding tissues.

Exposure to oxygen **does not turn blood red** – blood carries oxygen, so that doesn't even make sense.

Arterial blood (oxygen-rich blood) is brighter, while venous blood (carbon dioxide-rich blood) is darker. **Both are still red.**

The myth of blue blood may be related to medical diagrams, which usually depict arteries in red and veins in blue.



Twinkle Dwivedi, an Indian teenager, has a **bleeding disorder** that continues to baffles doctors. She spontaneously bleeds without being cut or scratched.

About 50 times a day, she blood seeps through the skin on her hands, feet, neck, and scalp. She also bleeds through her eyes, nose, and ears. All without bruising or injury.

Medical tests have shown she has a **mild clotting disorder**, but that doesn't explain the bizarre bleeding.

Her school has **banned her** from attending due to her condition.

## THERE ARE ABOUT 40 DISEASES AND CONDITIONS THAT CAN BE TREATED WITH CORD BLOOD.

Cord blood is the blood from the **umbilical cord** of a newborn. It can be collected and saved after the cord has been cut.

It contains stem cells, which can be used to **treat illnesses** in the baby, as well as members of the baby's immediate family.

Bone marrow diseases, blood disorders, cancers, immune system disorders, metabolic conditions, and other disorders can be treated, but not necessarily cured, with cord blood cells.

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