

## Mission

The American Red Cross prevents and alleviates human suffering in the face of emergencies by mobilizing the power of volunteers and the generosity of donors.



**American  
Red Cross**



## Dr. Charles Drew: First Medical Director of American Red Cross Blood Services

Dr. Charles Drew was uniquely qualified to be the Medical Director of American Red Cross Blood Services. He was a pioneer in the development of the modern techniques of blood collection and plasma processing. And as an African American doctor in a time of legal segregation, he remains a groundbreaking figure in American history.

### Birth and Early Life



Dr. Charles Drew was born in 1904 in Washington, DC. A bright scholar-athlete, he received an athletic scholarship to attend Amherst College in Massachusetts. While at Amherst, he joined Omega Psi Phi Fraternity, Inc. After graduating in 1926, he worked at Morgan College in Baltimore, Maryland as an Instructor of Biology and Chemistry and as Director of Athletics.

### Young Doctor

In 1928, Dr. Drew enrolled in McGill University's Medical College in Montreal, Canada. He graduated in 1933 with both Doctor of Medicine (MD) and Master of Surgery (CM) degrees. In 1935, he taught pathology at Howard University's College of Medicine while also working as a surgical resident at Howard University Freedmen's Hospital. An outstanding resident and surgeon, he went on to become the first African American to be appointed an examiner of the American Board of Surgery.

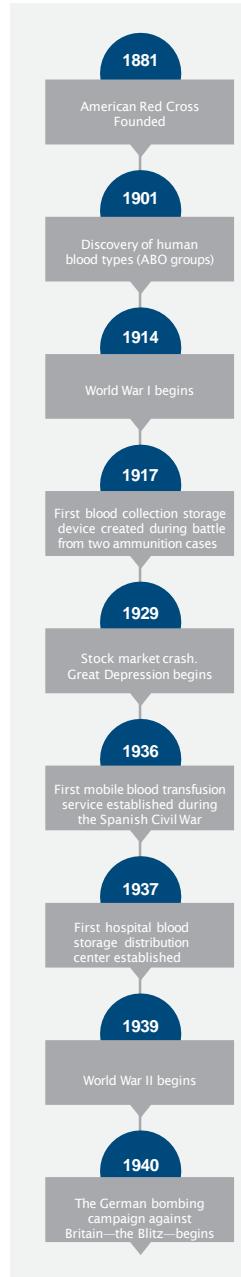


**“Excellence of performance will transcend artificial barriers created by man.”**

Attributed to Charles Drew by his trainees

### Research on Blood Preservation

In 1938 he became a resident of surgery at New York Presbyterian Hospital as well as a General Education Board Fellow in surgery at Columbia University in New York City. There, he studied blood preservation, and developed techniques for preserving plasma, a crucial blood component often given to trauma patients and burn victims.



Dr. Drew's Columbia dissertation had direct implications on the transportation and storage of blood during World War II. Dr. Drew's dissertation included details for establishing the experimental blood bank at the Presbyterian Hospital. He described the processes of drawing blood, typing donors and identifying the indications for transfusion. He compiled both donor and recipient statistics as well as the types of adverse reactions to transfusion. Many of these processes are still in use today.

## Called to Action at the American Red Cross

In 1940, the American Red Cross and its partners launched Blood for Britain. They planned to ship large quantities of plasma to England to help heal those wounded during the Blitz. Blood for Britain chose Dr. Drew to lead the project as its medical director.

In January 1941, Dr. Drew was named the first medical director of the American Red Cross Blood Services. He oversaw the first blood drives using bloodmobiles—refrigerated trucks serving as donation centers. The drives were a success, even though it was still quite uncommon for people to give blood for unknown recipients and without compensation. Bloodmobiles are still in use today by the Red Cross and other blood collection organizations for blood drives across the US.

It is often reported that Dr. Drew left the Red Cross over its compliance with US Army policy to segregate blood donations. However, the segregation policy was not implemented for some time after Dr. Drew left the Red Cross in April of 1941. As late as August 1941, Red Cross rules were in place to accept blood from people of all races. Later that year the Red Cross gave in to the demands of the strictly segregated US Army. The Army first refused, and then segregated, blood donations from African American donors. An official statement on Dr. Drew's rationale for leaving was never made. The Red Cross ended its policy on blood segregation in 1950.



“There must always be the continuing struggle to make the increasing knowledge of the world bear some fruit in increased understanding and in the production of human happiness.”

Charles Drew, inscription on his headstone

## Later Life and Death

After Dr. Drew left the Red Cross in April 1941, he joined Howard University as chair of their Department of Surgery and as Chief Surgeon at Howard University Freedmen's Hospital. Dr. Drew received numerous awards for his research and contributions to medical education. In recognition of his work with plasma, he was awarded the Spingarn Medal in 1944 by the National Association for the Advancement of Colored People (NAACP). The Spingarn Medal is the NAACP's highest honor given to an individual of African descent and American citizenship, who has made a significant contribution in any field. As Dr. Drew had envisioned, one of his greatest achievements was that he taught more than half of the African American surgeons receiving certification from the American Board of Surgery between 1941 and 1950.

In 1950, Dr. Drew and three other physicians were traveling to an annual medical conference at the John A. Andrew Hospital in Tuskegee, Alabama when they were involved in a terrible car accident. Dr. Drew died just a few months shy of his 46th birthday. His leadership in blood banking, the American Red Cross, and the larger medical community and country was legendary and remains a shining example for others. It is impossible to count the extraordinary number of lives saved because of techniques Dr. Drew developed, but a grateful nation cherishes his memory.

# We Impact Lives Every Day

Over 24,000 people are assisted by the American Red Cross daily.

**170**

times a day,  
we help  
a family affected  
by a **disaster**.



**12,500**

**blood donations** are  
needed every day to  
help patients in  
need.



**807,000**

**weather alerts** are  
sent by Red Cross  
apps every day.



**1,400**

times a day, we  
provide services to  
**military members**,  
veterans and their  
families.



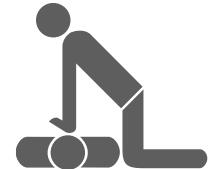
**683,000**

children receive a  
measles or rubella  
**vaccination** each day  
from the Red Cross  
and our partners.



**13,000**

times a day, a person  
receives lifesaving  
Red Cross **training**.





American Red Cross

# Your local American Red Cross

## Local Biomedical Services profile

The American Red Cross Northern California Blood Services Region covers:

- **54,000** Volunteer blood and platelet donors
- **89,070** Red cell donations
- **9,889** Platelet donations
- **392** Blood Program Leaders
- **4,155** Blood drives



# Blood Services – The Need

- Every **two seconds** someone in America needs blood.
- **82 percent** of donations are **collected at blood drives** close to where people work and live.
- Chances are you will know someone who will need blood.
- **Blood drive partners are a crucial link** in the lifesaving chain of getting blood from donors to patients who need it.

## Blood is needed for:

- ✓ Cancer treatments
- ✓ Leukemia
- ✓ Sickle cell disease
- ✓ Mothers giving birth
- ✓ Premature babies
- ✓ Accidents/trauma victims
- ✓ Open heart surgeries
- ✓ Hip replacements
- ✓ Prostate cancer surgeries
- and many others...*

# 500 Blood Drives, Daily

We collect about **40 percent of the nation's blood supply**. Annually, that adds up to:

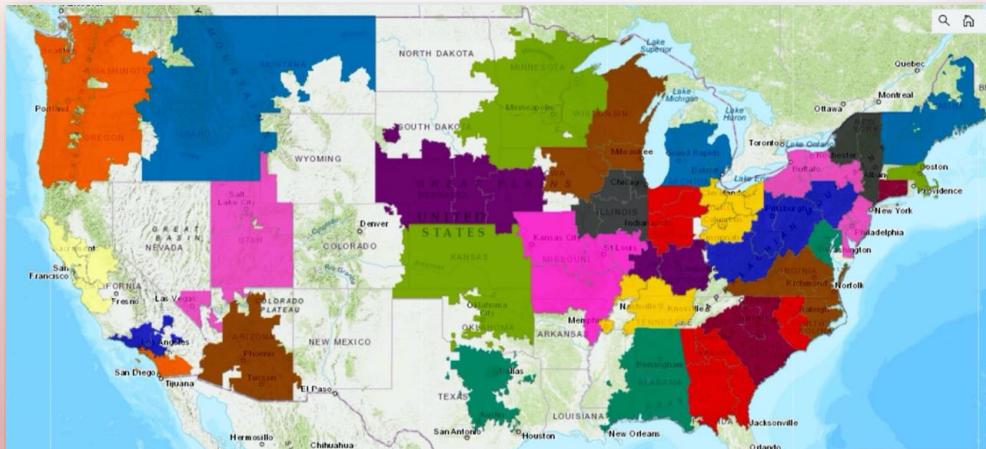
- More than 4.5 million blood donations
- Nearly 1 million platelet donations
- From nearly 2.6 million volunteer donors



# Blood Services | Unique Role of Red Cross

As the largest single blood supplier in the U.S., the Red Cross:

- Collects and distributes blood in **49 states** (35 operational regions)
- Provides expert testing and other services that help ensure the best match donor>patient
- Ensures blood when and where it's needed, including rare blood products
- Is uniquely present in every community to offer other beneficial services, including disaster relief, service to the armed forces, certified medical training and more





# The Multiplier Effect

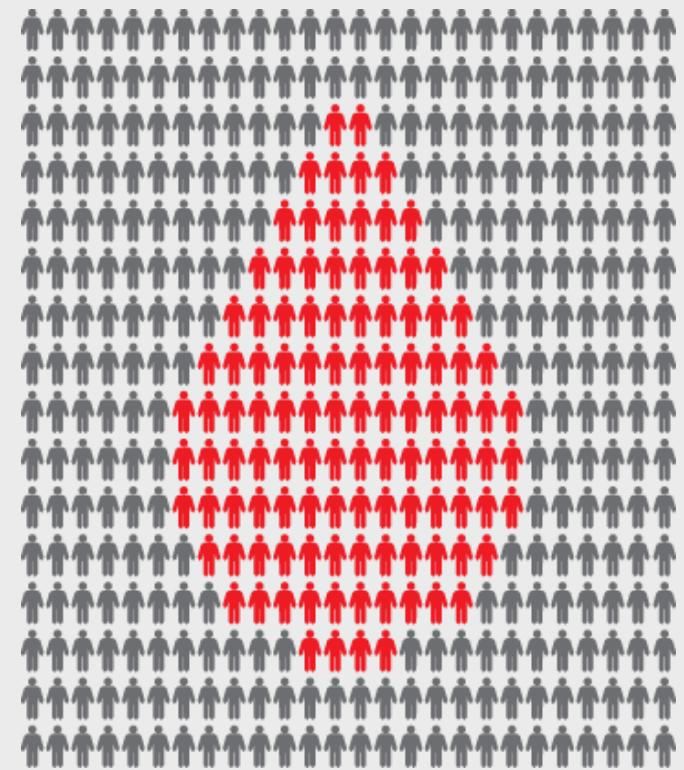
One partner's decision to host a blood program could touch hundreds of patients.

One donation can help save more than one life!

  
**YOUR**  
decision  
to sponsor a  
blood program



Recruit 40 to 50 donors  
at each drive



Three to four drives per year means that over 500 lives could potentially be saved

# Sickle Cell Disease

**Black donors are important in supporting treatment of patients with sickle cell disease.**

- Most common genetic blood disease in the U.S.\*
- Affects approximately 100,000 Americans\* – 1 of every 365 Black or African American births
- A single sickle cell patient can require up to 100 pints of blood each year to treat complications from sickle cell disease
- May require patients to receive lifelong blood transfusions



# A Diverse Blood Supply is Important

- A **diverse blood supply is crucial** to the health and safety of diverse communities.
- Why? **Not all blood is the same**. There is more to a blood type than just A, B or O. There are more antigens whose prevalence varies by race and ethnicity.
- Generally, the best blood match for a patient requiring frequent transfusions comes from donors of the **same ethnic or genetic background**.
- The Red Cross is working to increase the number of closely matched blood products available for patients with sickle cell disease by **increasing the number of Black donors** who are most likely to provide that closely matched blood donation.



# Sickle Cell Disease

The American Red Cross has launched a national initiative to grow the number of blood donors who are Black to help patients with sickle cell disease and improve health outcomes.

Throughout Lydia's life, she has received more than 600 units of blood to help her manage her disease thanks to the generosity of blood donors.



[>>watch her story](#)

# The Need is Constant

Blood products are **perishable** and **cannot be manufactured**.

With your support, the Red Cross continues to fulfill its **lifesaving mission**—providing the **safest and most reliable** blood products from volunteer donors to patients in need.



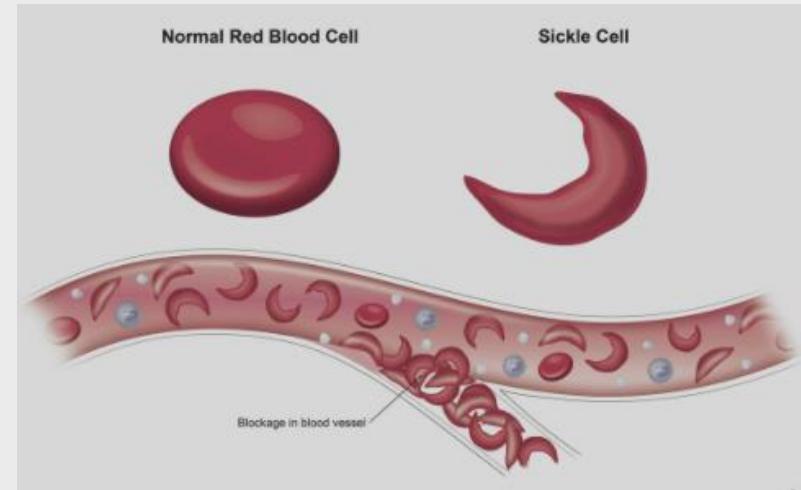


# Most Common Genetic Disease in U.S.

Sickle cell disease affects about 100,000 people—largely Black and African Americans.

Sickle-shaped blood cells cause symptoms including:

- Extreme pain
- Acute anemia
- Tissue and organ damage
- Strokes
- May require up to 50-100 pints of blood each year to support a single patient
- May require patients to receive lifelong blood transfusions



Frequent blood transfusions—as many as 10 units a month—help prevent or reduce the symptoms. Unfortunately, there are frequent shortages of the right type of blood to meet this need.

# Sickle Cell Trait Testing

- Sickle cell trait is inherited, and many individuals are not aware that they carry this trait.
- The Red Cross is screening donations from self-identified African American blood donors for Hemoglobin S, a key indicator of sickle cell trait. This screening, which may provide our donors with valuable health insights, will be part of the blood donation testing process and free of charge to donors.
- In a recent survey, 16% of African American donors indicated sickle cell trait testing as their top motivator for giving blood

# About Blood Types

- Blood types are inherited. They are determined by ‘antigens’ – there are over 600 known antigens, some unique to racial or ethnic groups.
- Well-matched blood can decrease the risk of complications related to transfusion therapy, especially in patients who receive lifelong transfusions. It is critical to increase the number of available blood donors from all racial and ethnic groups.

|      | Caucasians | African American | Hispanic | Asian |
|------|------------|------------------|----------|-------|
| O +  | 37%        | 47%              | 53%      | 39%   |
| O -  | 8%         | 4%               | 4%       | 1%    |
| A +  | 33%        | 24%              | 29%      | 27%   |
| A -  | 7%         | 2%               | 2%       | 0.5%  |
| B +  | 9%         | 18%              | 9%       | 25%   |
| B -  | 2%         | 1%               | 1%       | 0.4%  |
| AB + | 3%         | 4%               | 2%       | 7%    |
| AB - | 1%         | 0.3%             | 0.2%     | 0.1%  |

| <u>African-American Ancestry</u> | <u>European-American Ancestry</u> |
|----------------------------------|-----------------------------------|
| 73% C neg                        | 32% C neg                         |
| 78% E neg                        | 71% E neg                         |
| 98% K neg                        | 91% K neg                         |
| 67% Fy(a-b-)                     | 0% Fy(a-b-)                       |
| 52% Jk <sup>b</sup> neg          | 26% Jk <sup>b</sup> neg           |

- The C-E-K antigen-negative combination is most frequently needed to support patients with sickle cell disease.

# With Lifesaving Blood, Tymia Thrives

By just age 10, Tymia McCullough had been hospitalized a remarkable 40 times. Her spleen and her gall bladder have already been removed.

**She has sickle cell disease, and blood transfusions are the most common treatment.**

Tymia receives blood transfusions every few months. They let her live a normal life, which she never takes for granted.

***“You can be anything or do anything – you just have to put your mind to it.”***

Crowned Miss South Carolina Jr. Pre-Teen, Tymia is a cheerleader, dancer and honor roll student. “Without the Red Cross,” she told us, “I would not be who I am today.”





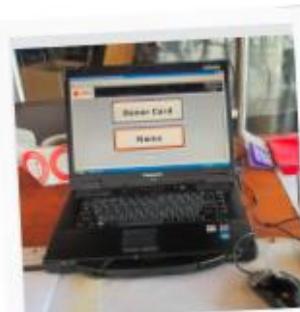
# The Donation Process

## Giving whole blood is simple.

The donation process, from the time you arrive until the time you leave, takes about an hour. The donation itself is only about 10 minutes. And the satisfaction you get from knowing you've helped change a life? Timeless.

### Step 1: Registration

- You will read information about donating blood.
- You will be asked to complete a form with demographic and basic health information.
- You will be asked to show an American Red Cross donor card or positive ID.



### Step 2: Health history and mini physical

- A trained staff person will ask you some health history questions during a private and confidential interview.
- You will have your temperature, iron level, blood pressure and pulse checked to protect your health and well-being.



### Step 3: Donation

- Staff will cleanse an area on your arm and insert a needle for the blood drawing procedure.
- The actual process of donating blood takes approximately 7-10 minutes.
- When about a pint of blood has been collected, the staff will remove the needle and place a bandage on your arm.



### Step 4: Refreshments

- You will spend a few minutes enjoying refreshments so your body can adjust to the slight decrease in fluid volume.
- Enjoy the feeling of knowing you've done something good.



## How to prepare for a **Great Donor Experience**

The American Red Cross wants your donation to be as safe and successful as possible. The following suggestions may help you prepare for your blood donation.

### Between donations

Give your body plenty of iron. When you donate whole blood or double red cells, your body loses some iron contained in red blood cells. Eat plenty of iron-rich food to replace these cells between donations. Foods rich in iron include:

- red meat
- beans
- spinach
- fish
- iron-fortified cereal
- raisins
- poultry
- broccoli
- prunes

Also, foods rich in Vitamin C (such as citrus fruit) help your body absorb the iron you eat. But avoid drinking tea, coffee and other caffeinated beverages with meals since caffeine can reduce iron absorption.



# Blood Services | The Journey of Donated Blood



**Step 1**  
**The Donation**



**Step 2**  
**Processing**



**Step 3**  
**Testing**



**Step 4**  
**Storage**



**Step 5**  
**Distribution**

- Takes about 1 hr.
- Donor registers, goes through health history and gets a mini physical
- 1 pint of blood and several small test tubes are collected and labeled with identical bar codes
- The donation is stored in iced coolers until it is transported to a Red Cross center

- Donated blood is scanned into a computer database
- Most blood is spun in centrifuges to separate components—red cells, platelets, plasma
- Red cells are then leukoreduced
- Platelets are leukoreduced and bacterially tested
- Test tubes are sent for testing

- Steps 2 and 3 take place in parallel
- A dozen tests are performed on each donated unit – all donated blood is tested for HIV, Hepatitis B and C, syphilis and other infectious diseases
- If a test result is positive, the unit is discarded and the donor is notified
- Test results are confidential

- Suitable for transfusion units are labeled and stored as follows:
- Red Cells in refrigerators at 6°C for 21-42 days
- Platelets in an agitator at room temperature for up to 5 days
- Plasma and cryo are frozen and stored in freezers for up to 1 year

- Blood is available to be shipped to hospitals 7 days a week, 24 hours a day



[Watch a Video](#)

**Note:** Steps 1-2 describe whole blood donations; the process is a little different for apheresis donations

\*Leukoreduction is the process of removing white blood cells



Thanks!  
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We look forward to partnering with you.