# Blood Types

American Red Cross



## What is blood typing?

Blood typing refers to the presence or absence of antigens, or protein substances found on the surface of red cells. Blood groups (A, B, AB, and O) and Rh types are descriptions of certain antigens. In the following chart the ✔ indicates the antigen is present.

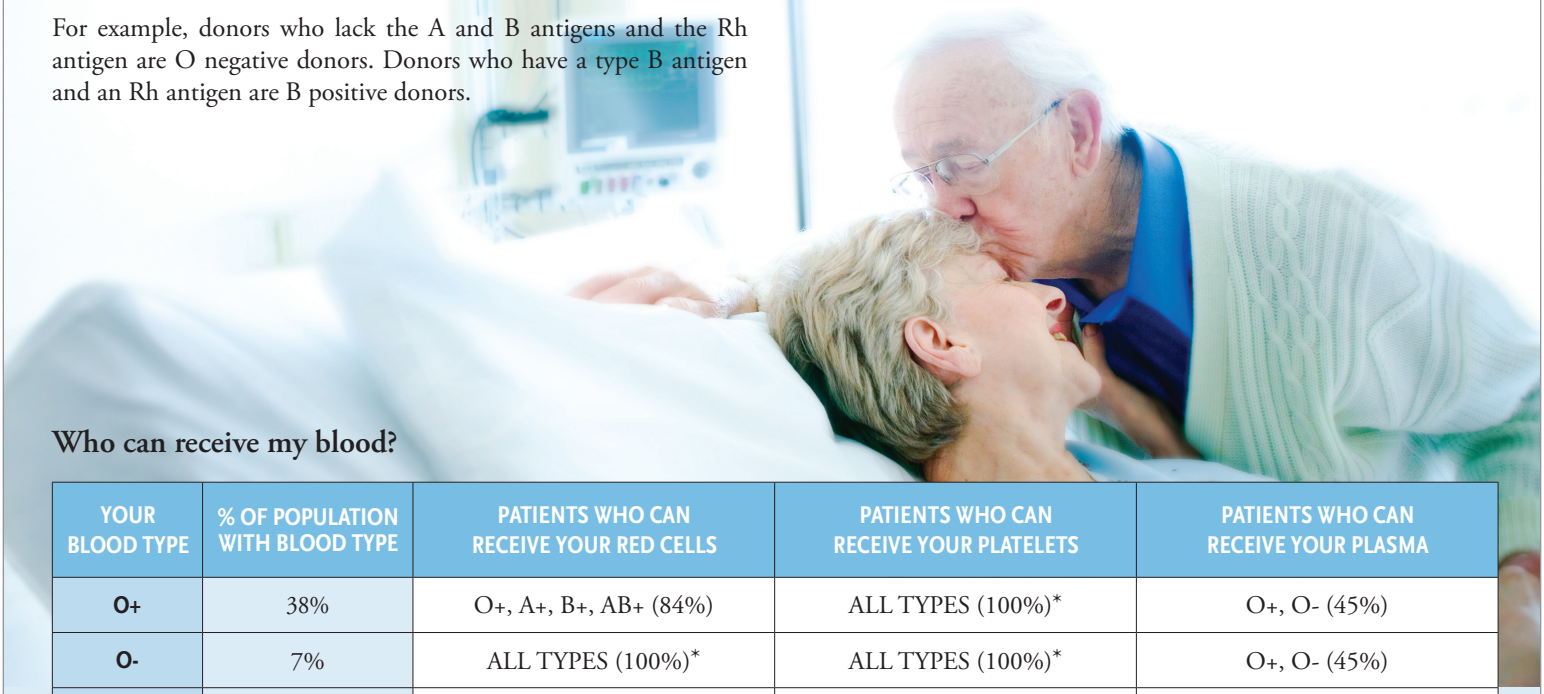
| BLOOD TYPE | A Antigen | B Antigen | Rh Antigen |
|---|---|---|---|
| A- | ✔ | | |
| A+ | ✔ | | ✔ |
| B- | | ✔ | |
| B+ | | ✔ | ✔ |
| O- | | | |
| O+ | | | ✔ |
| AB- | ✔ | ✔ | |
| AB+ | ✔ | ✔ | ✔ |

For example, donors who lack the A and B antigens and the Rh antigen are O negative donors. Donors who have a type B antigen and an Rh antigen are B positive donors.

## How did I inherit my blood type?

Your blood type is determined by the blood types of your parents. The following chart illustrates the possibilities for children who have parents with certain blood type combinations.

| FATHER | MOTHER | O | B | A | AB |
|---|---|---|---|---|---|
| O | O | ✔ | | | |
| O | A | ✔ | | ✔ | |
| O | B | ✔ | ✔ | | |
| A | A | ✔ | | ✔ | |
| A | B | ✔ | ✔ | ✔ | ✔ |
| B | B | ✔ | ✔ | | |
| AB | O | | ✔ | ✔ | |
| AB | A | | ✔ | ✔ | ✔ |
| AB | B | | ✔ | ✔ | ✔ |
| AB | AB | | ✔ | ✔ | ✔ |



## Who can receive my blood?

| YOUR BLOOD TYPE | % OF POPULATION WITH BLOOD TYPE | PATIENTS WHO CAN RECEIVE YOUR RED CELLS | PATIENTS WHO CAN RECEIVE YOUR PLATELETS | PATIENTS WHO CAN RECEIVE YOUR PLASMA |
|---|---|---|---|---|
| O+ | 38% | O+, A+, B+, AB+ (84%) | ALL TYPES (100%)* | O+, O- (45%) |
| O- | 7% | ALL TYPES (100%)* | ALL TYPES (100%)* | O+, O- (45%) |
| A+ | 34% | A+, AB+ (37%) | ALL TYPES (100%)* | A+, A-, O+, O- (85%) |
| A- | 6% | A+, AB+, A-, AB- (44%) | ALL TYPES (100%)* | A+, A-, O+, O- (85%) |
| B+ | 9% | B+, AB+ (12%) | ALL TYPES (100%)* | B+, B-, O+, O- (56%) |
| B- | 2% | B+, AB+, B-, AB- (15%) | ALL TYPES (100%)* | B+, B-, O+, O- (56%) |
| AB+ | 3% | AB+ (3%) | ALL TYPES (100%)* | ALL TYPES (100%)* |
| AB- | 1% | AB+, AB- (4%) | ALL TYPES (100%)* | ALL TYPES (100%)* |

* Depending on the patient's condition, type-matched blood products are often better for the patient and are transfused at the physician's discretion.

Call 1.800.GIVE.LIFE or visit givebloodgivelife.org to learn more about the need for blood or to schedule your next appointment.