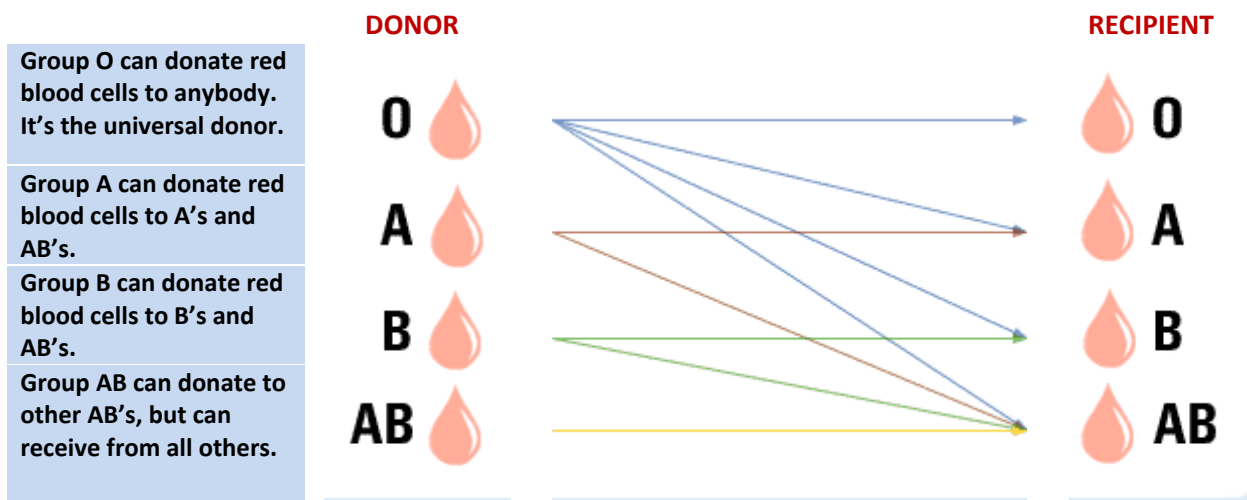




Blood Types

All human blood may look alike but when it is tested using special agents, differences become apparent. The main red blood cell groups are A, B, AB, and O. The letters stand for two antigens (chemical substances that can be targeted by one's immune system) labeled A and B. Group A blood has only the A antigen, group B has only the B antigen, group AB has both, and group O has neither.

You cannot donate red blood cells to just anyone and you can't receive blood from just anyone – blood groups need to be matched.



Blood groups further classified as Rh-positive or Rh-negative are called blood types. Blood is Rh-positive if the blood antigen labeled “D” is present and it is Rh-negative if the “D” antigen is absent.

O+ is the most common blood type. Not all racial and ethnic groups have the same mix of these blood types. Hispanic people, for example, have a relatively high number of O's, while Asian people have a relatively high number of B's. The mix of the different blood types in the U.S. population is:

| | White | 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% |

Some patients require a closer blood match than that provided by the ABO +/- blood typing. For example, sometimes if the donor and recipient are from the same racial or ethnic background, the chance of a reaction can be reduced. That's why an African-American blood donation may be the best hope for the needs of patients with sickle cell disease, 98% of whom are of African-American decent.

Blood Type Inheritance

Like eye color, blood type is passed genetically from parents to children. Whether your blood type is A, B, AB, or O, is based on the blood types of your mother and father.