

The Blood Typing Game

Website: <http://www.nobelprize.org/educational/medicine/bloodtypinggame/>

Directions:

1. Select "Quick Game"
2. Choose "Main Menu"
 - a. Browse through the **three** tutorials and answer the questions below.
 - b. This should be the majority of your time.
 - c. Note – The tutorials open as tabs within the browser to make it easy to go back and reference information.
3. Then, play "the game".

Problem: When a patient needs a blood transfusion and their blood type isn't available, what other options do you have?

Tutorial 1: What is a blood type?

1. What determines an individual's blood type?
2. What are the 8 different blood types?
3. What are the 8 different blood types describing?
4. How is an antibody different than an antigen?
5. What does an A antibody (a.k.a. "Anti-A Antibody") attach to?
6. Complete the table...

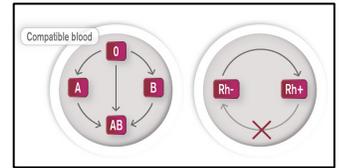
<u>Blood Type</u>	<u>Antigens present on RBC</u>	<u>Antibodies in Blood Plasma</u>
A-		
A+		
B-		
B+		
AB-		
AB+		
O-		
O+		

Tutorial 2: How do you determine a patient's blood type?

7. What is the first rule of giving blood transfusions?
8. How many reagents are necessary to determine a patient's blood type?
 - a. List them.
 - b. What does each of the reagents contain?
9. What do you look for when you mix the reagents with the patient's blood?
10. Why does that occur? Why doesn't it occur?
11. When clumping occurs, what does that tell you about the patient's blood?
12. Read the following results. Clumping within reagent A. Clumping with reagent B. No clumping with reagent Rh.
 - a. What type of blood does this patient have?
 - b. Draw a picture that shows an RBC with appropriate antigens and plasma with appropriate antibodies.
13. Why do clumps form when the antibodies match the antigens?

Tutorial 3: How do you perform safe blood transfusions?

14. When does an immunological reaction occur?
15. Using the compatible blood chart, complete the following table...



Blood Type	Can receive transfusions from...	Can donate to...
A-		
A+		
B-		
B+		
AB-		
AB+		
O-		
O+		

16. What blood type is known as a universal receiver?
17. What blood type is known as the universal donor? Why is their blood so valued by the Red Cross?