

**WHAT MAKES OUR BLOOD
DIFFERENT FROM OTHERS?**



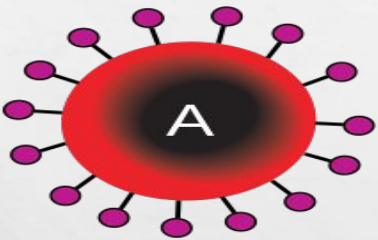
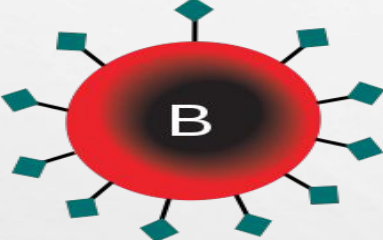
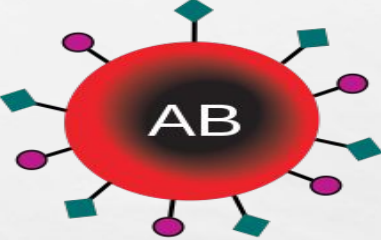
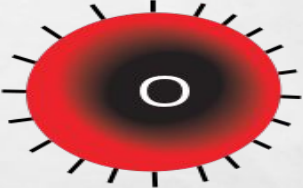
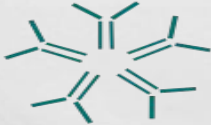

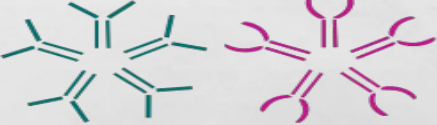



BLOOD TYPES



ABO SYSTEM BLOOD TYPES


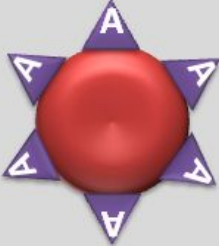
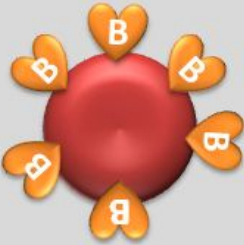
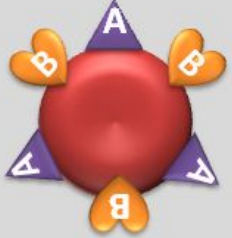
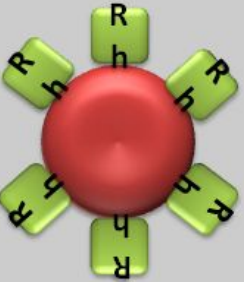
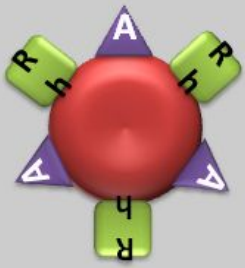
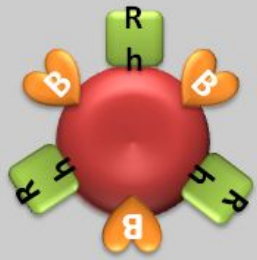
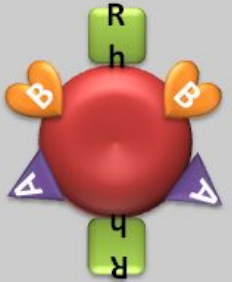
- **MICROSCOPIC MARKERS (ANTIGENS) MAKES ONE BLOOD TYPE DIFFER FROM ANOTHER**
- **OUR BODY USES ANTIGENS TO KNOW IF THE BLOOD CELL OURS OR NOT**

THERE ARE 4 MAIN BLOOD GROUP

| | Group A | Group B | Group AB | Group O |
|----------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Red blood cell type |  |  |  |  |
| Antibodies in Plasma |  Anti-B |  Anti-A | None |  Anti-A and Anti-B |
| Antigens in Red Blood Cell |  A antigen |  B antigen |  A and B antigens | None |

RH FACTOR

- SOME PEOPLE HAVE ANOTHER MARKER ON THEIR RED BLOOD CELL
- MARKER D OR RH FACTOR
- PEOPLE WHO HAVE THE RH FACTOR ARE **RH-POSITIVE**
- PEOPLE WHO DON'T HAVE THE RH FACTOR ARE **RH-NEGATIVE**

| | | | |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| O- | A- | B- | AB- |
|  |  |  |  |
| O+ | A+ | B+ | AB+ |
|  |  |  |  |

BLOOD TRANSFUSION

- **IF A PATIENT WITH A BLOOD TYPE IS GIVEN B BLOOD TYPE, PATIENT IMMUNE SYSTEM WILL RECOGNIZE B BLOOD AS ENEMY, AND PRODUCE ANTIBODIES AGAINST B ANTIGENS**
- **THIS PROCESS CAUSES AGGLUTINATION OF RED BLOOD CELLS**
- **AGGLUTINATION CAN BLOCK BLOOD VESSELS, AND THIS LEADS TO ORGAN DAMAGE OR DEATH**

RELATIONSHIPS BETWEEN BLOOD TYPES AND ANTIBODIES

| Blood Type | Antigens on Red Blood Cell | Can Donate Blood To | Antibodies in Cerum | Can Recieve Blood From |
|------------|----------------------------|---------------------|---------------------|------------------------|
| A | A | A, AB | Anti-B | A, O |
| B | B | B, AB | Anti-A | B, O |
| AB | A and B | AB | None | AB, O |
| O | None | A, B, AB, O | Anti-A and Anti-B | O |

- **WHAT IS THE UNIVERSAL DONOR OR RECIPIENT?**
- **WHY ITS SO DANGEROUS TO GIVE WRONG BLOOD TYPE TO APERSON?**
- **WHAT IS YOUR BLOOD TYPE?**