

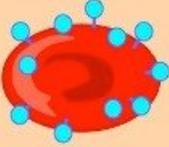
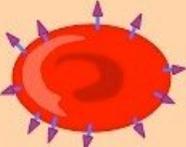
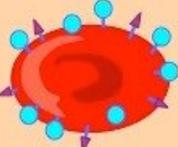
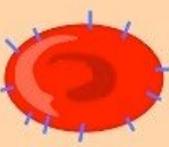
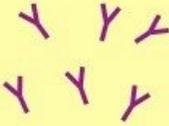
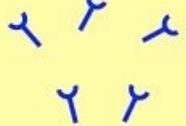
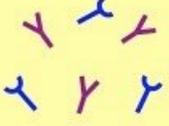


Bombay Blood Group

 drishtiias.com/printpdf/bombay-blood-group

Recently there has been a spike in demand for a rare blood type called **Bombay blood group**.

- Under the ABO blood group system, blood groups are classified into **four common blood groups i.e. A, B, AB and O**.
- **Each red blood cell has antigen over its surface**, which helps determine which group it belongs to.
 - For instance, in the AB blood group, both antigens A and B are found. A will have A antigens; B will have B antigens. In O, there are no A or B antigens.
 - The A, B, and O blood groups were **first identified by Austrian immunologist Karl Landsteiner in 1901**.
- The Bombay blood group (**also called hh**), is **deficient in expressing antigen H**.
 - It means the RBC of hh blood group has no antigen H.
 - Often the hh blood group is confused with the O group. **The difference is that the O group has Antigen H, while the hh group does not.**
 - The rare Bombay blood group was **first discovered in Mumbai (then Bombay) in 1952 by Dr Y M Bhende**.
- Globally, the hh blood type has an incidence of one in four million. However, this blood type is **more common in South Asia** than anywhere else because of inbreeding and close community marriages.
 - In India, **one person in 7,600 to 10,000** is born with this type.
- Due to the rarity of hh blood type, patients face problems during a blood transfusion, often leading to death due to non-availability of hh blood.
 - The individuals with Bombay blood group can only be transfused blood from individuals of Bombay hh phenotype only which is very rare.
 - Rejection may occur if they receive blood from A, B, AB or O blood group.
 - In contrast, hh blood group can donate their blood to ABO blood types.
- This group is generally not stored in blood banks, mainly because it is rare and the shelf life of blood is 35-42 days.

	Type A	Type B	Type AB	Type O
Antigen (on RBC)	Antigen A 	Antigen B 	Antigens A + B 	Neither A or B 
Antibody (in plasma)	Anti-B Antibody 	Anti-A Antibody 	Neither Antibody	Both Antibodies 
Blood Donors	Cannot have B or AB blood Can have A or O blood	Cannot have A or AB blood Can have B or O blood	Can have any type of blood Is the universal recipient	Can only have O blood Is the universal donor

Source: IE