

# Blood Transfusion



**Prof/ DR . Alaa El Suity**

# Blood transfusion

- Blood transfusion frequently are lifesaving in many situation in pediatrics. However, transfusions are usually associated with risks and they should be given only when true benifits are likely



# Contents



**1** Blood groups

**2** Collection & Storage of blood

**3** Blood product & indication

**4** Complication of blood trans fusion

**5** How to avoid complication of blood trans fusion

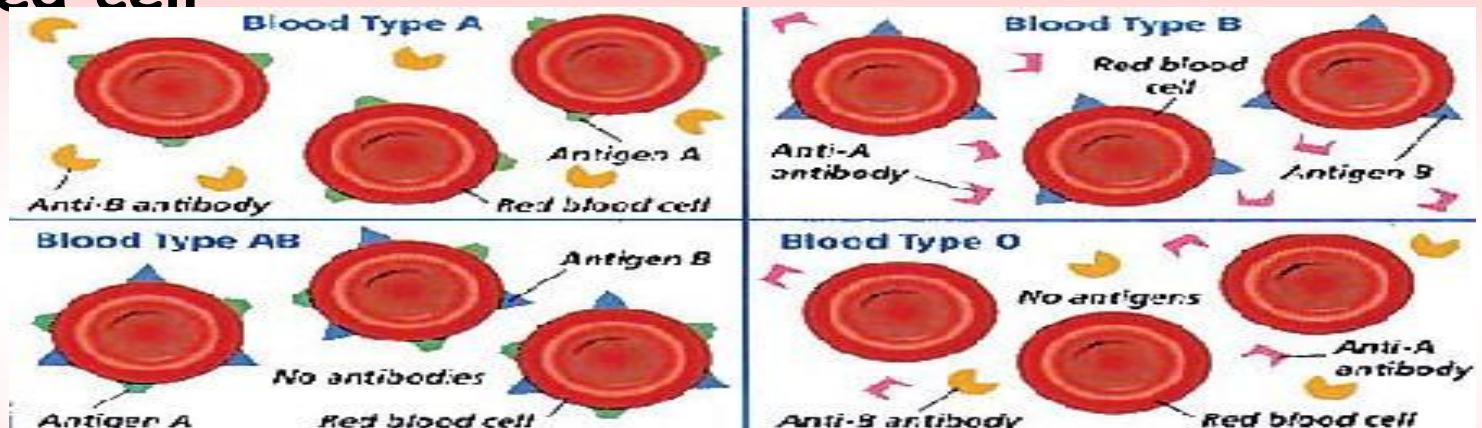


1

# Blood groups

- The blood groups are determined by antigens on the surface of red cells (more than 400 blood groups have been found).
- The ABO and Rh systems are the two major blood groups, but incompatibilities involving many other blood groups may cause haemolytic transfusion reactions and/or haemolytic disease of the newborn.

- This blood group system involves naturally occurring Igm anti-A and anti-B antibodies which are capable of producing rapid and severe intravascular haemolysis of incompatible red cell



## BLOOD GROUPS

Phenotype	Genotype	Antigens	Antibodies
O	OO	None	Anti-A and anti-B
A	AA or AO	A	Anti-B
B	BB or BO	B	Anti-A
AB	AB	A and B	None

# Contents



**1** Blood groups

**2** Collection & Storage of blood

**3** Blood product & indication

**4** Complication of blood trans fusion

**5** How to avoid complication of blood trans fusion



## Collection & Storage of blood

- Previously it was collected on acid citrate (anticoagulant) dextrose (to preserve viability of RBCs)
- The simplest solution is acid dextrose solution (ADS).
- A better anticoagulant is citrate phosphate dextrose.
- One blood bag:
  - 70 - 100 ml anticoagulant (citrate).
  - 400 - 450 ml of blood.
- Blood must be stored at 2 - 6°C during storage
- The frozen blood, plasma is removed from freshly collected blood and glycerol is added
- The frozen blood doesn't have coagulation factors, platelets or white cells







# Blood Bank

