Enzyme fix could end blood shortages

A simple method of converting blood from one group to another could end shortages of blood around the world. Scientists have discovered enzymes that can efficiently convert blood groups A, B and AB into the universal O group, which can then be safely transfused into anyone

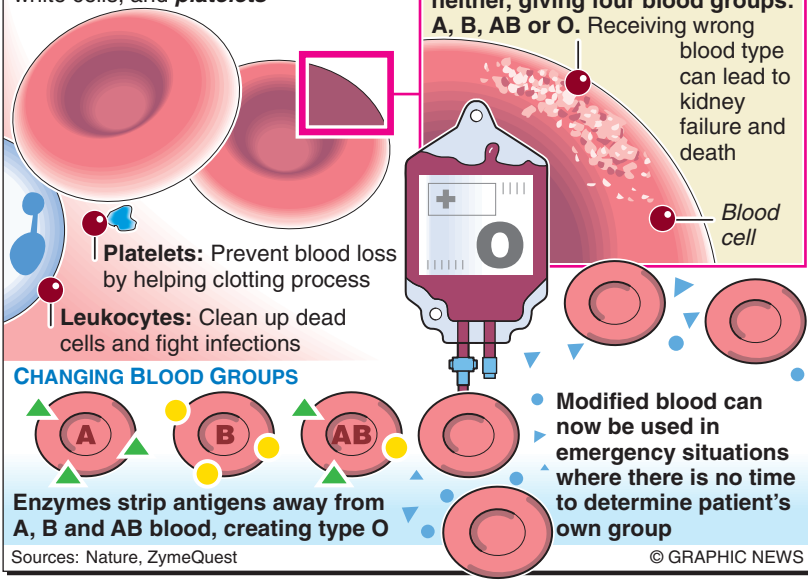
BLOOD

Blood is composed of a straw-coloured liquid called ***plasma*** which contains ***erythrocytes*** – red cells which carry oxygen around body – ***leukocytes***, or white cells, and ***platelets***

ERYTHROCYTES

Cell membrane: Contains ***A*** or ***B antigens*** which stimulate antibody generation. **Red blood cells carry one of these antigens, both or neither, giving four blood groups: A, B, AB or O.** Receiving wrong blood type can lead to kidney failure and death

Blood cell



CHANGING BLOOD GROUPS

Enzymes strip antigens away from A, B and AB blood, creating type O

Modified blood can now be used in emergency situations where there is no time to determine patient's own group

Sources: Nature, ZymeQuest