

Transport in animals

Circulatory systems

Heart, vessels, valves

one-way flow

Blood vessels

Artery

thick wall narrow lumen high pressure

Vein

thin wall wide lumen valves

Capillary

one cell thick

The heart

Structures

atria, ventricles coronary arteries

Pumping action **Supplement**

atria contract first ventricles contract valves prevent backflow

Monitoring

ECG pulse rate valve sounds

Exercise

heart rate rises returns to resting rate

Coronary heart disease **Supplement**

blocked coronary arteries risk factors diet and exercise

Blood

Components

red cells white cells platelets plasma

Red cells

haemoglobin carry oxygen

White cells

phagocytosis antibodies

Plasma transports

ions, nutrients, urea hormones, carbon dioxide

Clotting roles **Supplement**

stops blood loss stops pathogens entering