



# 2.2 ORGANISATION IN ANIMALS

Animal tissues, organs and organ systems

Main blood vessels of the heart: pulmonary vein, pulmonary artery, aorta, vena cava, coronary arteries

Pacemaker: controls resting heart rate

The heart

Blood vessels: arteries, veins, capillaries

Main components: plasma, white blood cells, red blood cells, platelets

Blood

Double circulatory system: right ventricle to lungs, left ventricle to body

Diet, exercise, drug/alcohol consumption, environment, stresses

Increase the chance of disease

Risk factors

The circulatory system

Oxygen enters blood vessels at alveoli and is transported to the heart via the pulmonary vein

Alveoli

Adapted for exchange: capillary network, large surface area, thin, moist

The lungs

The respiratory system

Diseases are caused by an interaction of different factors

Function: to break down and absorb food

The digestive system

e.g. heart disease

Health and disease

Aids lipid breakdown

Bile

Enzymes

'Lock and Key' theory

Non-communicable diseases

Communicable diseases

Bile is alkaline. It is used to neutralise stomach acid. Allows optimum pH

Work best at optimum temperature and pH

Carbohydrase (amylase), protease, lipase

Carcinogens: chemicals, ionising radiation, viruses

Cancer

Pathogens: viral/bacterial

Different types of diseases can interact, e.g. viruses can trigger cancers

AQA

