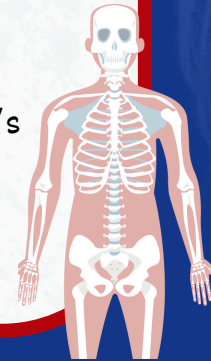
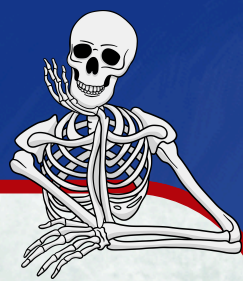


Key Terms - Applied Anatomy and Physiology

Skeletal System

- Articulating Bones** - Where two or more bones meet to allow movement at a joint.
- Tendons** - Fibrous tissues that join bone to muscle.
- Ligaments** - Strong, flexible fibre that connects bones to other bones.
- Flexion** - Movement decreasing the angle between body parts (bending).
- Extension** - Movement increasing the angle between body parts (straightening).
- Dorsi-Flexion** - Flexing the toes so that they move closer to the shin.
- Plantar-Flexion** - Extending the toes down, away from the shin.
- Adduction** - Movement of a body part toward the body's midline.
- Abduction** - Movement of a body part away from the body's midline.
- Rotation** - The action of rotating around an axis or centre.



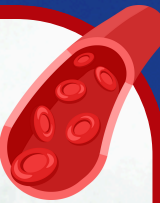
Effects of Exercise

- DOMS** - Delayed onset of muscle soreness. This occurs 24-72 hours after strenuous activity.
- Cardiac Hypertrophy** - Increase in the size and strength of the heart.
- Heart Rate** - The number of times the heart beats each minute.
- Stroke Volume** - The amount of blood ejected from the heart each beat.
- Cardiac Output** - The amount of blood ejected from the heart each minute.
- Breathing Rate** - The amount of breaths taken per minute.
- Breathing Depth** - The amount of air taken in per breath.



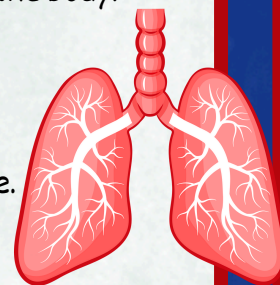
Cardiovascular System

- Cardiovascular system** - The system formed by the heart, blood and blood vessels. AKA the circulatory system.
- Blood Vessels** - Responsible for transporting blood; arteries, veins and capillaries.
- Blood Pressure** - The pressure of the blood against the walls of the blood vessels.
- Systole** - The phase of the heartbeat when the heart contracts and pumps blood from the chambers into the arteries.
- Diastole** - The phase of the heartbeat when the heart relaxes and lets the chambers fill with blood.
- Arteries** - Blood vessels that take blood away from the heart.
- Veins** - Blood vessels that take blood back to the heart.
- Capillaries** - Tiny blood vessels that link arteries with veins.
- Redistribution of blood** - The process that increases blood flow to active areas during exercise by diverting blood away from inactive areas.
- Vasodilation** - When blood vessels get bigger (dilate), which cools you down.
- Vasoconstriction** - When blood vessels get smaller (constrict), which warms you up.
- Haemoglobin** - A type of protein found in every red blood cell. Attaches to oxygen and transports it around the body.



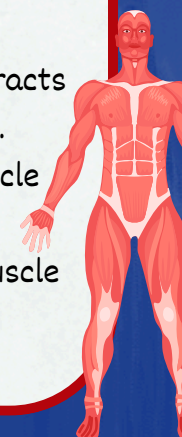
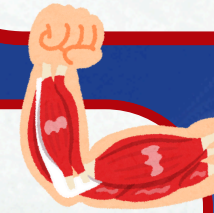
Respiratory System

- Respiratory system** - The system of organs and vessels that gets oxygenated blood to the body tissues.
- Vital Capacity** - The greatest amount of air that can be made to pass into and out of the lungs.
- Tidal Volume** - The amount of air inspired and expired with each normal breath.
- Respiration** - The movement of air from outside the body into the cells within tissues.
- Diaphragm** - A dome-shaped muscle that separates the chest from the rest of the body.
- Trachea** - The tube that takes air into the body. AKA the windpipe.
- Bronchus** - Tube along which air passes from the trachea to the lungs.
- Bronchioles** - Smaller branches coming off the bronchi.
- Alveoli** - Tiny sacs at the end of the bronchioles, where gas exchange takes place.
- Expiratory Reserve Volume** - The additional amount of air that can be expired from the lungs by determined effort after normal expiration.
- Inspiratory Reserve Volume** - The maximal amount of additional air that can be drawn into the lungs by determined effort after normal inspiration.
- Intercostal Muscles** - Internal muscles that run between the ribs and help the chest to expand and shrink during breathing.



Muscular System

- Voluntary Muscle** - A muscle which is controlled by an individual.
- Involuntary Muscle** - A muscle which is not under an individual's control.
- Cardiac Muscle** - An involuntary muscle found in the wall of the heart.
- Antagonistic Pair** - Two muscles working together. One contracts while the other relaxes.
- Agonist** - The muscle which is contracting. Also known as the 'prime mover'.
- Antagonist** - The muscle which is relaxing.
- Isometric Contraction** - Where a muscle contracts but the length of the muscle does not change.
- Eccentric Contraction** - Occurs when the muscle lengthens due to a greater opposing force.
- Concentric Contraction** - Occurs when the muscle shortens, therefore generating force.



Anaerobic & Aerobic

- Aerobic Respiration** - The process of releasing energy from glucose, using oxygen.
- Anaerobic Respiration** - The process of releasing energy from glucose, without oxygen.
- Aerobic Exercise** - Exercising at a moderate intensity, allowing the body to utilise oxygen for energy production.
- Anaerobic Exercise** - Exercising at a high intensity, not allowing the use of oxygen for energy production.
- Lactic Acid** - A toxic acid produced in muscles during anaerobic exercise. Causes muscle cramps.
- Oxygen Debt** - The amount of oxygen needed at the end of physical activity to break down any lactic acid.
- EPOC** - Excess Post-Exercise oxygen consumption. This is when there is an increased rate of oxygen intake following activity - in order to pay back the oxygen debt.

