

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).

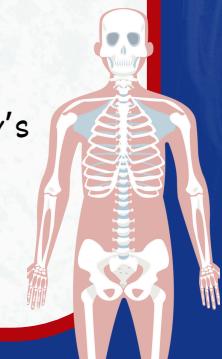
Dorsi-Flexion - Flexing the toes so that they move closer to the shin.

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



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.

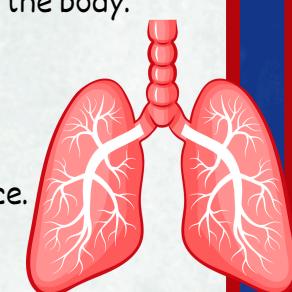
Bronchioles - Smaller branches coming off the bronchi.

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.

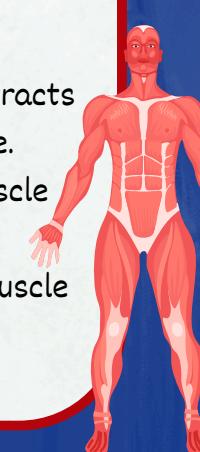
Agonist - The muscle which is contracting. Also known as the 'prime mover'.

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.

