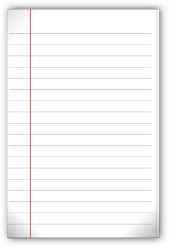
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Description automatically generated**OCR GCSE PE Knowledge organiser**

This booklet contains all the **factual** information for every topic area that you will need to learn to be successful in your GCSE PE studies.

**How to use the knowledge organiser:**



1. The easiest way of using the knowledge organiser is to get some plain paper



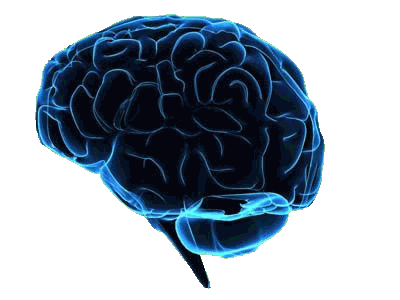
2. Read a section or sub section that you want to learn.



3. Then, cover the section up and try to recall the information from your memory.



4. Write it down on your paper. Gradually build up to the point where you can recall full topics.

5. The more times you do this over the next two years, the more the information will stick in your brain and be easier to recall during an exam.

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**1.1.a – The structure and function of the skeletal system**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Major bones** | 1. Cranium | | 2. Vertebrae | | | | 3. Ribs | | | | 4. Sternum | | | | 5.Clavicle | | 6. Scapula | | | 7. Pelvis | | | 8. Humerus | | | | | 9. Ulna | | 10. Radius |
| 11. Carpals | | 12. Metacarpals | | | | 13. Phalanges | | | | 14. Femur | | | | 15. Patella | | 16. Tibia | | | 17. Fibula | | | 18. Tarsals | | | | | 19. Metatarsals | |  |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Functions of the skeleton** | 1. Support | | | 2. Posture | | | | | 3. Protection | | | | 4. Movement | | | | | 5. Blood cell production | | | | | | 6. Storage of minerals | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Synovial joints** | **Articulating bones** | | | | Bones that move relative to each other at a joint / two or more bones that meet at a joint | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Definition:***  A freely moveable joint in which the bones surfaces are covered in articular cartilage. | | | | ***Type:***  Hinge | | | 1. Knee | | Articulating bones | | | | 1. Femur  2. Tibia | | | | | ***Type:***  Ball and socket | | | 1. Shoulder | | | | | Articulating bones | | 1. Humerus  2. Scapula | |
| 2. Elbow | | Articulating bones | | | | 1. Humerus  2. Radius  3. Ulna | | | | | 2. Hip | | | | | Articulating bones | | 1. Pelvis  2. Femur | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Types of movement at joints** | *Joint type:*  Hinge | 1. Flexion | | | | ***Desc:*** A decrease in the angle around a joint (bending) | | | | | | | | 2. Extension | | | | ***Desc:*** An increase in the angle around a joint (straightening) | | | | | | | | | | | | |
| *Joint type:*  Ball and socket | 1. Flexion | | | | ***Desc:*** A decrease in the angle around a joint. (bending) | | | | 2. Extension | | | | ***Desc:*** An increase in the angle around a joint. (straightening) | | | | 3. Rotation | | | | | | | | ***Desc:*** The turning of a body part about its long axis as if on a pivot. | | | | |
| 4. Abduction | | | | ***Desc:*** Movement away from the midline of the body | | | | 5. Adduction | | | | ***Desc:*** Movement towards the midline of the body | | | | 6. Circumduction | | | | | | | ***Desc:*** The circular movement of a joint. A movement pattern that combines the different types of movement. | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Other components of joints** | 1. Ligament | | ***Desc****:* A short band of tough and flexible tissue connecting bone to bone to stabilise the joint. | | | | | | | | | 2. Cartilage | | | | ***Desc****:* A tough, elastic, fibrous connective tissue that reduces friction and acts as a shock absorber. | | | | | 3. Tendons | | | | | ***Desc****:* A tendon is a tough yet flexible band of fibrous tissue which joins muscle to bone. | | | | |

**1.1.b – The structure and function of the muscular system**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Major muscle groups** | 1. Deltoid | | ***Used to****: For all movements in the arm* | | | 2. Trapezius | | | | ***Used to:*** *Causes extension at the neck* | | | | 3. Latissimus dorsi | | | | ***Used to:*** *Causes adduction at the shoulder* | |
| 4. Pectorals | | ***Used to:***  *Causes adduction and flexion at the shoulder* | | | 5. Biceps | | | | ***Used to:*** *Causes flexion at the elbow* | | | | 6. Triceps | | | | ***Used to:*** *Causes extension at the elbow* | |
| 7. Abdominals | | ***Used to:***  *Bend the body forward* | | | 8. Quadriceps | | | | ***Used to:*** *Stabilize knee. Extension at the knee* | | | | 9. Hamstrings | | | | ***Used to:*** *straighten the hip and cause flexion at the knee* | |
| 10. Gluteals | | | ***Used to:***  Causes extension at the hip and adduction at the hip. | | | | | | 11. Gastrocnemius | | | | | ***Used to:***  Straighten or plantarflex the ankle | | | | |
|  | | | | | | | | | | | | | | | | | | | |
| **Muscle movement** | 1. Antagonistic muscle action | | | ***Definition:***  A pair of muscles that work together to produce movement with one muscle contracting whilst the other muscle relaxes. | | | | **Types of muscle movement** | | | | 1. Agonist | | | ***Definition:***  The muscle that works to create movement | | | | |
| 2. Antagonist | | | ***Definition:***  The muscle that works in the opposite way of the agonist. | | | | |
| 3. Fixator | | | ***Definition:***A muscle which acts as a stabilizer and helps the agonist work effectively. | | | | |
| **Types of muscle contraction** | | | 1. Concentric | | | | | 1. Eccentric | | | | | | | 1. Isometric | | | |
| The muscle shortening as it contracts | | | | | The muscle lengthening during a contraction | | | | | | | The muscle working but remaining the same length during a contraction. | | | |
|  | | | | | | | | | | | | | | | | | | | |
| **Key terms** | 1. Mitochondria | These are parts of each muscle cell and are places where energy is produced. Sometimes referred to as ‘powerhouses’ of muscle cells | | | 2. Myoglobin | | A type of haemoglobin found in muscle cells that transport oxygen to the mitochondria | | | | 3. Fast twitch muscle fibres | | Sometimes called Type II fibres. These are used to generate short bursts of speed or strength. They tire quickly. | | | | 4. Slow twitch muscle fibres | | Sometimes called type I muscle fibres. These can produce energy over a long period of time. |

**1.1.c – Movement analysis**

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| **Levers** | **About:** Levers are important in movement because they allow efficiency and force to be applied to the body’s movement. A lever is a rigid structure, a length of bone that turns about a pivot – the joint. Levers can be used to increase the force of movement. | | | | | | |
| **Lever systems** | 1. 1st class | A lever in which the fulcrum is positioned between the load and the effort | | **Example:**  Heading a ball in football | | Image result for levers biomechanics | |
| 2. 2nd Class | This lever has the load and the effort on the same side of the fulcrum, with the load nearer the fulcrum | | **Example:**  Standing on tip toes when reaching for a smash in badminton | | Image result for levers biomechanics | |
| 3. 3rd class | The effort is placed between the load and the fulcrum, and the effort must travel a shorter distance and be greater than the load. | | **Example:**  Performing a bicep curl | | Image result for levers biomechanics | |
| **Mechanical advantage** | 1st and 2nd class levers provide mechanical advantage, this means that a larger load can be moved with a smaller amount of effort | | | | | | |
|  |  | | | | | | |
| **Planes of movement and axes of rotation** | 1. Planes of movement | 1. Frontal | An imaginary line which divide the body from front to back vertically | | Performing star jumps | |  |
| 2. Transverse | An imaginary line which divides the body horizontally from front to back | | Bowling in cricket | |
| 3. Sagittal | An imaginary line which divides the body vertically into left and right sides | | Leg action in running | |
| 2. Axes of rotation | 1. Frontal | Runs horizontally from the front to back of your body | | A gymnast performing a cartwheel moves through this axis | |  |
| 2. Transverse | Passes horizontally from left to right | | A somersault passes through this plane | |
| 3. Longitudinal | Passes vertically from the top to the bottom of your body. | | A 360 degree turn rotates through this axis | |

**1.1.d – Structure and function of the Cardiovascular system**

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| **Double circulatory system** | The human body has two circulatory loops in which blood circulates.  One is oxygentated, and the other is deoxygentated | | 1. Systemic | | The circulatory loop that controls blood flow from the heart to the rest of the working muscles and organs. | | **Blood vessel** | | **Definition:**  Tubular structures that carry blood around our body | | 1. Arteries | | | Carry blood at high pressure from the heart to the body tissues. The largest artery is the aorta. |
| 2. Pulmonary | | The circulatory loop that controls blood flow from the heart to the lungs. | | 2. Capillaries | | | Only have a single layer of cells in their walls. Allowing nutrients and waste product to pass through them. |
| 3. Veins | | | Carry blood at low pressure and return the blood to the heart. The vena cava is the largest vein. Veins contain pocket valves that prevent the back flow of blood. |
|  | | | | | | | | | | | | | | |
| **Pathway of blood through the heart** | | The heat contains four chambers, left and right atrium and left and right ventricles. The right side sends deoygentated blood to the lungs. The left sends oxygentated blood to the muscles. A muscular wall called a septum seperates both sides. The heart also consists of valves to prevent the backflow of blood. These are called; tricuspid, bicuspid and semilunar valves. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **major blood vessels** | | 1. Aorta | | Takes oxygenated blood from the left ventricle to the rest of the body. | | | | | | 2. Pulmonary artery | | | Takes deoygentated blood from the right ventricle to the lungs | |
| 3. Vena Cava | | Brings deoxygentated blood from the body to the right atrium. | | | | | | 4. Pulmonary vein | | | Brings oxygenated blood from the lungs to the left atrium | |
|  | | | | | | | | | | | | | | |
| **Key terms** | | 1. Heart rate | | **Definition:**  Number of beats per minute | | 2. Stroke volume | | **Definition:** The amount of blood pumped out of the heart (left ventricle – to the body) during each contraction | | | | 3. Cardiac output | | **Definition:** The volume of blood pumped per minute by each ventricle.  Cardiac output = SV x HR |
|  | | | | | | | | | | | | | | |
| **Role of red blood cells** | | Also known as erythrocytes – they are the most abundant blood cells. They transport oxygen around the body and deliver carbon dioxide to the lungs. | | | | | | | | | | | | |

**1.1.d – Structure and function of the Respiratory system**

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| **Pathway of air through the respiratory system** | 1. Mouth 2. Nose 3. Trachea 4. Bronchi 5. Bronchiole 6. Alveoli | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Role of respiratory muscles in breathing** | 1. Inspiration (breathing in) | | Role: Intercostal muscles and diaphragm contract. Ribs move upwards and out. Diaphragm moves downwards meaning the area of the thoracic cavity increases. Pressure in the lungs decreases drawing air in. | | | | | | 2. Expiration (breathing out) | | | | Role: Intercostal muscles and diaphragm relax. The ribs lower and the diaphragm moves upwards meaning the pressure in the longs increases forcing air out. | | |
|  | | | | | | | | | | | | | | | |
| **Key terms** | 1. Breathing rate | | | **Definition:**  The frequency of breathing measured in breaths per minute. | | 2. Tidal volume | | **Definition:**  The amount of air which enters the lungs during normal inhalation at rest. | | | | 3. Minute ventilation | | | **Definition:**  The volume of gas inhaled or exhaled from the lungs per minute |
|  | | | | | | | | | | | | | | | |
| **Gaseous exchange** | The movement of gases taking place at the alveoli and capillaries. Gases diffuse through the walls of the capillaries surrounding the alveoli. | | | | | | **Key term** | | | 1. Oxyhaemoglobin | | | | Haemoglobin combines with oxygen to form this bright red chemical | |
|  | | | | | | | | | | | | | | | |
| **Aerobic and anaerobic exercise** | 1. Aerobic exercise | ***Definition:***  Use of oxygen for the duration of exercise | | | ***Intensity:***  When exercise is not too fast and is steady, the heart can supply all the oxygen that the working muscles need. | | | | | | ***Summarised as:***  glucose + oxygen → energy + carbon dioxide + water. | | | | |
| 2. Anaerobic exercise | ***Definition:***  Exercise which does not allow for the use of oxygen | | | ***Intensity:***  When exercise duration is short and at high intensity, the heart and lungs cannot supply blood and oxygen to muscles as fast as the respiring cells need them. | | | | | | ***Summarised as:***  glucose → energy + lactic acid. | | | | |
| **Key term** | 1. Lactic acid | With the absence of oxygen, lactic acid is formed in the working muscles. Lactic acid causes muscle pain and fatigue | | | | | | | | | | | | | |

**1.1.e – Effects of exercise on the body systems (short term)**

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| **Key terms** | 1. Exercise | | Activity that requires physical effort. Usually carried out to sustain or bring about improvements to health or fitness. | | | 2. Metabolism | | | This involves the many continuous chemical processes inside the body that are essential for living, moving and growing. | | | |
|  | | | | | | | | | | | | |
| **Short term effects** | **Muscular system** | | 1. Increase in muscle temperature | | 2. Increase in metabolic activity | | | | | 3. Increase in the production of lactic acid (depending on the type of exercise) | | |
|  | | | | | | | | | | | |
| **Cardiovascular system** | | 1. Heart rate increases | | | 2. The heart muscle becomes warmer | | | 3. Increase in stroke volume and cardiac output | | | |
| **Key terms** | 1. anticipatory rise | | This is the raising of the heart rate before exercise begins. Adrenaline causes this. | | 2. Adrenaline | | This is a hormone released from the adrenal glands and its major action is to prepare the body for ‘fight or flight’ | | | 3. Vascular shunts | Occur when more blood is distributed to the working muscles and less to the non-essential organs |
|  | | | | | | | | | | | |
| **Respiratory system** | | 1. Rise in the respiratory rate (breathing rate) | | | | 2. Tidal volume increases | | 2. Minute ventilation increases | | | |

**1.1.e – Effects of exercise on the body systems (long term)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Long term effects** | **Muscular system** | | 1. Muscular strength and size increases (hypertrophy) | | | 2. Tendons become stronger | | | | 3. Increase in the range of movement around a joint | | | | 4. Muscular endurance increases | | | 5. Fatigue and tiredness will be delayed |
| **Key term** | 1. hypertrophy | | | The increase in size of skeletal or cardiac muscle. Often as a result of training or exercise | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| **Cardiovascular system** | | 1. Heart becomes stronger and increases in size (cardiac hypertrophy) | | | | 2. More blood is delivered to the working muscles | | | | 3. Stroke volume increases | | | 4. Cardiac output increases | | | 5. resting heart rate lowers |
| 6. More capillaries develop increasing blood flow | | | | 7. Blood vessels become more efficient | | | | 8. Blood pressure decreases at rest | | | 9. Increase in red blood cells | | | 10. Decrease in blood viscosity |
| **Key terms** | 1. Capillarisation | | **Definition:**  The development of blood capillaries in the body which increases through long term effects of exercise | | | | | 2. Rate of recovery | | | **Definition**:  The speed at which the body returns back to normal after exercise. | | | 3. Blood viscosity | | **Definition:**  The thickness of the blood and how resistant the blood is to flow freely. |
|  | | | | | | | | | | | | | | | | |
| **Respiratory system** | | 1. Increase in capillary density – greater uptake of oxygen | | | | | 2. slight increase in tidal volume and vital capacity | | | | | 3. Greater intercostal muscle strength | | | 4. Surface area of the alveoli increases – which increases gaseous exchange | |

**1.2.a – Components of fitness**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Components of fitness** | 1. Cardiovascular endurance / stamina | ***Definition:***  The ability to continue exertion while getting energy from the aerobic system used to supply the body with energy. | ***Example in sport:***  Running, cycling, swimming and aerobics. | Test(s): | 1. Cooper 12 minute run  2. Multi stage fitness test |
| 2. Muscular endurance | ***Definition:***  The ability to move your body and muscles repeatedly without fatiguing. | ***Example in sport:***  cross country running, cycling, swimming, rugby and football | Test(s): | 1. Press up test  2. Sit-up test |
| 3. Speed | ***Definition:***  The ability of the body to move quickly | ***Example in sport:***  athletics, swimming, squash, football and basketball. | Test(s): | 1. 30m sprint test |
| 4. Strength | ***Definition:***  The ability of a muscle to exert a force over a short period of time. | ***Example in sport:***  *Rugby scrum* | Test(s): | 1. Grip strength dynamometer test  2. 1 repetition max (RM) |
| 5. Power | ***Definition:***  *The ability to exert a maximal force in as short a time as possible. Power = strength x speed* | ***Example in sport:***  triple jump, games such as rugby, sprinting and throwing | Test(s): | 1. Standing jump test  2. Vertical jump test |
| 6. Flexibility | ***Definition:***  The range of movement about a joint. | ***Example in sport:***  gymnastics, dance, games such as hockey and football, tennis and table tennis. | Test(s): | 1. Sit and reach test |
| 7. Agility | ***Definition:***  The ability to change direction at speed; nimbleness | ***Example in sport:***  trampolining, gymnastics, netball, rugby, volleyball and basketball | Test(s): | 1. Illinois agility test |
| 8. Co-ordination | ***Definition:***  The ability to move two or more body parts under control, smoothly and efficiently. | ***Example in sport:***  Activities include Dance, racket sports, team games and martial arts. | Test(s): | 1. Wall throw test |
| 9. Reaction time | ***Definition:***  The time it takes to initiate an action or movement, or the time it takes to make a decision to move. | ***Example in sport:***  start of a race, the return of serve in a racket sport and team games | Test(s): | 1. Ruler drop test |
| 10. Balance | ***Definition:***  The ability to stay upright or stay in control of body movement. | ***Example in sport:***  Gymnastics, dance and Games such as rugby, netball and hockey | Test(s): | 1. ‘Stork stand’ test |

**1.2.b – Applying the principles of training**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Principles of training**  **S**  **P**  **O**  **R** | 1. Specificity | | | ***Definition:***  Making training specific to the sport being played / movements used / muscles used / energy system(s) used. | | | | | | | | 2. Overload | | | | ***Definition:***  The gradual increase of stress placed upon the body during exercise training (more than normal). Work the body harder. | | | | | |
| 3. Progression | | | ***Definition:***  Gradual increase of the amount of overload so that fitness improves, but without potential for injury. Once adaptions have occurred make more demands of the body. | | | | | | | | 4. Reversibility | | | | ***Definition:***  Losing fitness levels when you stop exercising or training due to injury or illness. | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | |
| **Optimising Training** | **FITT** | 1. Frequency | | | | ***Definition:***  how often you train | | | | | 2. Intensity | | | | ***Definition:***  how hard you train | | | | | | |
| 3 Time | | | | ***Definition:***  length of the training session | | | | | 4. Type | | | | ***Definition:***  specific method, used eg continuous training | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | |
| **Types of training** | | 1. Continuous | | | | ***Desc:***  Training that involves activity without rest intervals. It can be performed at any intensity. | | | | | | 5. Weight training | | | | ***Desc***  The use of weights/resistance to cause adaptation of the muscles. Chose appropriate eight/exercise depending on fitness aim, eg strength/power training or muscular endurance | | | | |
| 2. Interval | | | | ***Desc:***  Periods of training/work that are followed by periods of rest or low intensity exercise. | | | | | | 6. Plyometrics | | | | ***Desc:***  Use of plyometric exercises eg bounding, depth jumping, to increase power. It includes an eccentric contraction (lengthening of the muscle) followed by larger concentric contraction (shortening of the muscle). | | | | |
| 3. Fartlek | | | | ***Desc:***  Swedish for ‘speed play’. Periods of fast work with intermittent periods of slower work. Varying speed, terrain and work:rest ratios. | | | | | | 7. Circuit | | | | ***Desc:***  A series of alternate exercises performed at stations that focus on different muscle groups. | | | | |
| 4. HIIT | | | | ***Desc:***  Alternating periods of short intense anaerobic exercise with less intense recovery periods | | | | | |
|  | | | | | | | | | | | | | | | | | | | | |
| **Components of a warm up** | | | | 1. Pulse raising | | | 2. Mobility | | | | 3. Stretching | | | | | | 4. Dynamic movements | | | 5. Skill rehearsal |
|  | | | | | | | | | | | | | | | | | | | | |
| **Components of a cool down** | | | | 1. Low intensity stretching | | | | | | | | | 2. Stretching | | | | | | | |
|  |  | | | | | | | | | | | | | | | | | | | | |
| **Optimising Training continued** | **Benefits of warm up** | | | | 1. Warming up the muscles/ preparing the body for exercise | | | | | 2. Body temperature | | | | 3. Heart rate | | | | | | 4. Flexibility of muscles and joints | |
| 5. Pliability of ligaments and tendons | | | | 6. Blood flow and oxygen to muscles increases | | | | | | | | 7. The speed of muscle contraction | | | | |
|  | | | | | | | | | | | | | | | | | | | | |
| **Benefits of a cool down** | | | | 1. Helps body transition back to a resting state | | | | 2. Gradually lowers heart rate | | | 3. Gradually lowers temperature | | | | | | | 4. Circulates blood and oxygen | | |
| 5. Gradually reduces breathing rate | | | | 6. Increases removal of waste products such as lactic acid | | | 7. reduces the risk of muscle soreness and stiffness | | | | | | | 8. Aids recovery by stretching muscles | | |

**1.3.c – Preventing injury in physical activity and training**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Prevention of injury** | **Ways to minimise risk of injury** | 1. Personal protective clothing (PPE) | ***Examples:***  shin pads, a gum shield or a scrum cap in rugby | | | | 2. Correct clothing and footwear | | | ***Examples:***  boots with correct studs, waterproof clothing | | | |
| 3. Appropriate levels of competition | ***Examples:***  have the correct level of fitness for the event, have an understanding of the skills and techniques required for the sport, take into account individual’s age and time available as well as the appropriate equipment used. | | | | 4. Lifting and carrying equipment | | | ***Examples:***  Bend the knees not the back, use mechanical assistance if necessary. Things like a trampoline should only be put out or put away by people who are trained to do so. | | | |
| 5. Warm up and cool down | ***Examples:***  for an activity carry out an effective warm-up, a cool-down is equally important. Listen to your body and stop if in pain. | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Common injuries to be aware of** | 1. Head injuries | 2. Spinal injuries | 3. Fractures | | 4. Dislocations | | | 5. Sprains | | 6. Strains | | 7. Blisters |
|  | | | | | | | | | | | | |
| **Risk assessments** | ***Definition:***  The technique by which you measure the chances of an accident happening, anticipate what the consequences would be and plan actions to prevent it. | | | | | | | | | | | |
| **Potential hazards** | 1. Sports Hall | 2. Fitness centre | | 3. Playing field | | | 4. Artificial outdoor areas | | | | 5. Swimming pool | |
| ***Such as:***  1. Exercise / gym equipment,  2. walls  3. doors  4. windows  5. lighting  6. hard floor  7. other participants. | ***Such as:***  1. Equipment (broken or position)  2. flooring  3. windows  4. free weights  5. other participants. | | ***Such as:***  1.litter (including broken bottles and dog mess),  2. goal posts and other semi-permanent equipment  3. movable equipment  4. fencing  5. pitch surface  6. other participants. | | | ***Such as:***  1.litter (including broken bottles and dog mess),  2. goal posts and other semi-permanent equipment  3. movable equipment  4. fencing  5. pitch surface  6. other participants. | | | | ***Such as:***  1. water  2. chemicals in the water, surface or surrounding area, 3. equipment, 4. weather (if outdoors)  5. other participants. | |

**2.1.a – Engagement patterns of different social groups in physical activity and sports**

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| **Physical activity and sport in the UK** | **Current trends** | 1. 16-24 year olds | | | Currently participation rates are in decline. This is the age at which lifetime habits are set. 54.7% of this age group participate in sport once a week. | | | | | | | | | | |
| 2. Over 24 | | | 31.4% participate in sport at least once a week for 30 minutes or more. Those that do are significantly fitter and healthier. | | | | | | | | | | |
| 3. Women | | | Gender equality tries to ensure men and women are treated equally in sport. However particularly in higher levels of sport funding for women is significantly lower. A focus on image rather than achievement. | | | | | | | | | | |
| 4. Disability | | | Fewer people with a disability take part in sport than those without a disability. However the percentage of those with a disability taking part in sport is increasing. | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Most popular activities in terms of participation** | | | 1. Walking | | 2. Swimming | | | 3. Keep fit / yoga | | | 4. Cycling | | | 5. Cue sports |
| **Most popular sports in terms of participation** | | | 1. Swimming | | 2. Athletics | | | 3. Cycling | | | 4. Football | | | 5. Golf |
|  | | | | | | | | | | | | | | |
| **Agencies involved in PA and sport** | 1. Department for culture media and sport | | | ***2.*** UK sport | | 3. UK sports Institute | | | ***4.*** Youth Sport Trust | | | 5. Governing bodies | | |
| **How** | Responsible for government policy to sport | | | To provide support for elite sportspeople who have a high level of performance or potential | | Provide the very best sports people with appropriate facilities and support. | | | Sports agency responsible for the development of sport for young people | | | Administer sports nationally and organise competitions. | | |
| **Key agency** | 1. Sport England | | | Tries to **help communities** develop sporting habits for life. **Funds organisations and projects** to get **more people involved** in sport and tries to help **push elite athletes to the highest level**. Aims to increase participation for people aged 14 and older to at least 30 minutes once a week. Currently for adults this figure is at around 33%. | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Strategies to improve participation** | | | | | | | 1. Promotion | | | 2. Provision | | | 3. Access | |
| Key term | **1. Participation rates** | | This refers to the number of people within a group who are involved in sport compared with those who are not. | | | | | | | | | | | | |

**2.1.a – Engagement patterns of different social groups in physical activity and sports**

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| **Participation in physical activity and sport:**  **Factors that affect participation** | 1. Age | ***How:*** Participation decreases with age. 72% of 16-19 year olds whereas 14% of people aged over 70 regularly take part in physical activity. |
| 2. Gender | ***How:*** 51% of men and 36% of women regularly take part in physical activity. |
| 3. Ethnicity | ***How: F***or men from different ethnic backgrounds participation rates tend to stay fairly similar. However, for women those from a white background have higher participation rates than those from other ethnicities. Across different sports ethnicity participation rates can vary, with sports such as golf and cycling being predominantly white. Whereas basketball and cricket more than a third are from a non-white background. Some cultures / religions can make it difficult particularly for women to participate in sport. |
| 4. Religion / culture | ***How:*** Schools and teachers have a significant impact on the type of and engagement of participation rates in and across different sports. |
| 5. Family | ***How:*** You are more likely to take part in sport if your parents or guardians participate in sport themselves. |
| 6. Education | ***How:*** Schools and teachers have a significant impact on the type of and engagement of participation rates in and across different sports |
| 7. Time / work commitments | ***How:*** Busy lives and other social or work commitments can impact on a person’s participation in physical activity. |
| 8. Cost /disposable income | ***How: T***hose from a higher socio-economic group (more money) participate in more sport. |
| 9. Disability | ***How:*** 17.2% of people aged 16 or over and with a long term illness or disability played sport at least once a week |
| 10. Opportunity / access | ***How:*** The availability of sports and facilities can play a significant impact on a person’s likely hood to participate in a physical activity. |
| 11. Discrimination | ***How:*** Has no place in sport, however due to actual or perceived prejudice many people from minority ethnic backgrounds do not take part in regular physical activity. |
| 12. Environment / climate | ***How:*** Can often dictate participation in particular for certain sports. E.g. There are not many skiers from Jamaica. |
| 13. Media coverage | ***How:*** Mainly dominated by male sports in particular football. Events such as Wimbledon can increase the numbers participating in a sport greatly. Particularly when a UK team or sports person is successful. |
| 14.Role models | ***How:*** Parents and significant others, peers, sports star and celebrities can all influence participation. |

**2.1.b – Commercialisation of physical activity and sport**

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| **Different types of media** | 1. Social | | 2. Internet | 3. TV /visual | | 4. Newspapers / magazines | | 5. Radio |
| **Examples** | 1. Facebook  2. Twitter  3. Instagram | | 1. Youtube  2. Chat forums  3. Gaming | 1. terrestrial (BBC, ITV etc.)  2. Freeview, Sky etc.  3. Cinema.  4. Documentaries. | | 1. Tabloids  2. broadsheets  3. glossy mags  4. Local  5. periodicals. | | 1. national  2.local  3. commercial. |
|  | | | | | | | | |
| **Key terms** | 1. Sport | Organised competition between individuals or teams that includes physical activity | | | | | | |
| 2. Commercialisation | The influence of commerce, trade or business on an industry to make a profit | | | | | | |
| 3. Sponsorship | The giving of money or goods to performers in order to get good publicity and/or increase profit. | | | | | | |
| 4. Media | Different forms of communication that can inform, educate, and entertain people. | | | | | | |
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| **The golden triangle** | This is a term used to show the links and relationship between sponsorship, sporting events and the media. All three factors influence one another. | | | | | | | |
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| **Positive effects of the media** | 1. Provides a shop window to help promote or sell a sport, a person or a product.  2. Provides funding via advertising and sponsorship.  3. Makes sport more exciting, entertaining and interesting and therefor more attractive to people.  4. Provides role models.  5. Can influence rules and times of play to make the sport more accessible to people. | | | | **Negative effects of the media** | | 1. Can over-sensationalise the negative aspects of sport such as cheats, drugs or poor behaviour.  2. Can assert too much control over sport.  3. Can under-represent minority groups including those with a disability. | |
| **Positive effects of sponsorship** | 1.Provides money for athletes to train and compete full time.  2. Pays for competitions (eg. The ‘Barclays’ premiership)  3. Gives sponsors free advertising  4. Tax concessions are given to businesses.  5. Can boost an image of a company, a sport or a sports star. | | | | **Negative effects of sponsorship** | | 1. Companies only want to sponsor successful athletes’ or teams.  2. A narrow range of sports attract the most sponsorship.  3. Sponsorship deals can be very fragile an injury, loss of form or poor behaviour can cause them to stop.  4. Some products such as tobacco advertising my not be morally advisable | |

**2.1.c – Ethical and socio-cultural issues in physical activity and sport**

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| **Ethics in sport** | 1. Sportsmanship | | Ethical, appropriate, polite and fair behaviour whilst participating in a game or athletic event; fair play | | 2. Gamesmanship | | | Where the laws of the game are interpreted in ways, which whilst not illegal, are not in the spirit of the game. Pushing the limits to gain unfair advantage | | | | 3. Etiquette | | | The customs we observe surrounding the rules and regulations of physical activity | |
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| **Drugs in sport** | **Reasons that drugs are prohibited** | 1. Performance enhancing effects that contravene the ethics of sport | | | | | 2. Health and safety of the athlete | | | | 3. Illegality – it is forbidden by law to possess or supply some substances | | | | | |
| **Examples of performance enhancing drugs** | 1. Anabolic steroids | | ***What is it?***  Synthetic hormones that enhance physical performance | | | | | | | | **Used for:**  Allow athletes to train harder and longer. Increasing strength and aggression | | | | |
| 2. Beta blockers | | ***What is it?***  A drug used to control heart rhythm and lower blood pressure | | | | | | | | **Used for:**  Keeps the athlete calm and steady | | | | |
| 3. Stimulants | | ***What is it?***  Drugs used to raise physiological arousal in the body | | | | | | | | **Used for:**  Work as a brain stimulant, which increases alertness | | | | |
| **Use of drugs or banned substances can lead to:** | 1. Addiction | | | | | 2. Anxiety | | | | 3. Depression | | | | | 4. Lowering of self esteem |
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| **Violence in sport** | 1. Violence | Physical acts committed in sport that go beyond the accepted rules of play or accepted levels of contact within a contact sport | | | | | | | 2. Deviance | | | | Behaviour that is either immoral or seriously breaks the norms of the sport | | | |
| **Reasons for violence** | 1. We can’t help it – an instinctive response | | | | 2. We get frustrated | | | | 3. We copy others | | | | 4. We simply get angry | | |

**2.2 – Sports Psychology: Skill classification**

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| **Characteristics of skilful movement** | ***Motor skill definition:***  An action or task that has a target or goal and that requires voluntary body and/or limb movement to achieve this goal. | | ***Skill is:*** | A learned action/learned behaviour with the intention of bringing about pre- determined results, with maximum certainty and minimum outlay of time and energy. | | | | | | | |
| ***Skilful movements are:*** | 1. Efficient | 2. Pre-determined | | 3. Co-ordinated | | | 4. Fluent | 5. Aesthetic |
| ***Definition:*** | Performed effectively with minimum effort. | It is what the person means to do. | | In control and performed with precision | | | It flows well and is a fluid movement. | It looks nice and is pleasing to the eye. |
|  | | | | | | | | | | | |
| **Classification of skills** | 1. Simple to complex skills (difficulty continuum) | | ***This means:***  **Simple skills:** Require less concentration and coordination such as throwing and striking e.g. sprint start in running | | | | | ***This means:***  **Complex skills:** Take longer to learn and requires greater concentration and coordination to perform e.g. pole vault | | | |
| 2. Open to closed continuum (environmental continuum) | | ***This means:***  **Open skills:** A skill which is performed in a certain way to deal with a changing or unstable environment, e.g. to outwit an opponent in rugby, windsurfing. | | | | | ***This means:***  **Closed skills:** A skill which is not affected by the environment or performers within it. The skill tends to be done the same way each time. e.g. diving or throwing a dart. | | | |
| **Key terms** | 1. Perceptual skills | | The interpretation of information or stimuli. Not all stimuli is perceived and what is perceived depends on experience and ability. | | 2. Cognitive skills | | | intellectually based and link working out and problem solving skills. These skills affect the perceptual process and help make sense of what is required in any given situation. | | |

**2.2 – Sports Psychology: Goal setting and mental preparation**

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| **Goal setting** | **Reasons to goal set** | 1. For exercise / training adherence | | **Principles of goal setting**  **(SMART**) | 1. Specific | | | A clear goal specific to the demands of the sport/muscles used/movements used | | | 2. Measurable | it must be possible to measure whether they have been met |
| 2. To motivate performers | | 3. Achievable | | | they must be reachable by the performer and within their capabilities | | | 4. Recorded | crucial for monitoring and once achieved can be checked of or deleted improving motivation. |
| 3. to improve and / or optimise performance | | 5. Time bound | | | Goals should be set over a set period of time, short term and progressive being the most effective. | | | | |
| **Key terms** | 1. Performance goals | | ***This means:***  Goals are directly related to the performance or a technique. Performers compare themselves against what they have already done or suggest what they are going to do. | | | 2. Outcome goals | | | ***This means:***  Goals focus on end result/winning. These should be avoided as they can rely on factors that cannot be controlled such as other performers. Beginners prefer to avoid outcome goals because failure can demotivate/winning may be an unrealistic goal. They tend to be mid or long term goals. | | | |
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| **Mental preparation** | 1. Imagery | Can improve concentration, it is creating pictures in our mind. Creating a feeling of movement or capturing an emotional feeling for example happiness or pleasure. Mainly used to help cope with stress and anxiety. Such as imagining lifting a trophy or scoring a goal. | | | | | 2. Mental rehearsal | | | Can involve both internal and external imagery. External is picturing yourself from outside of the body. Internal is imagining yourself doing the activity. It follows a movement pattern or action such as a gymnastics routine, or racing around a track. | | |
| 3. Selective attention | The ability to discriminate between information that is relevant and information that is unimportant in the execution of the skill. Factors that affect selective attention include - relevance, expectation and vividness. | | | | | 4. Positive thinking | | | Sometimes called 'self-talk' involves the participant being positive about past experiences and performances and future efforts by talking to themselves or thinking how successful they might be. | | |
| **Key terms** | 1. Arousal | ***Definition:*** A physical and mental (physiological and psychological) state of alertness/readiness, varying from deep sleep to intense excitement/alertness. | | | | | 2. Anxiety | | | ***Definition:*** The feeling of fear that we experience that something might go wrong either in the present or in the future. | | |

**2.2 – Sports Psychology: Guidance**

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| **Types of guidance** | What is it? | ***Desc:*** A method to convey information to a performer. | | | Key term | 1. Kinaesthetic sense | | The feeling or sense we get through movement | |
| 1. Visual | ***This is:***  (seeing) – live demo, poster, film, chart or court markings | **Advantages** | 1. useful for all levels of ability  2. good for novices  3. Performer sees what is required, 4. Vision is dominant sense  5. can copy others | | | **Disadvantages** | | 1. Must be of good quality  2. Some skills too complex |
| 2. Verbal | ***This is:***  (hearing) – from coach | **Advantages** | 1. Useful for high level  2. highlights key points  3. Quick to share information  4. Questioning can make performers think | | | **Disadvantages** | | 1. Can lead to information overload  2. Difficult to hear in noisy environments  3. Complex things are difficult to explain |
| 3. Manual | ***This is:***  (physically assist movement) – from coach | **Advantages** | 1. useful for complete beginners  2. Allows performer to develop correct feel | | | **Disadvantages** | | 1. May not think they are really performing skill |
| 4. Mechanical | ***This is:***  (use of objects/aids) e.g. floats in swimming, harnesses in trampolining. | **Advantages** | 1. Good for potentially dangerous skills  2. Performer gains a feel for skill without fear, builds confidence. | | | **Disadvantages** | | 1. Equipment may be expensive  2. Performer may become reliant on the aid. |

**2.2 – Sports Psychology: Feedback**

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| **Feedback** | **Definition:** Information that is given to a performer either during or after their performance with the aim of improving future performances. | | | |
| **Types of feedback** | 1. Intrinsic | ***This means:***  sometimes referred to as kinaesthetic feedback, received via receptors in the muscles. Sensations that are felt by the performer, providing information from movement. | ***Advantage:***  Experienced performers can make immediate adjustments. | ***Disadvantage:***  Requires high level of kknowledge to know what to do next. |
| 2. Extrinsic | ***This means:***  Received from outside of the performer, eg from a coach or team mate | ***Advantage:***  Beginners need feedback from coaches to be made aware of technique | ***Disadvantage:***  This type of feedback is not always available |
| 3. Positive | ***This means:***  What’s good or correct about performance | ***Advantage:***  Motivating, highlights success | ***Disadvantage:***  Could suggest performance was better than it was |
| 4. Negative | ***This means:***  What’s bad or incorrect about performance | ***Advantage:***  Enables coach to provide guidance on how a skill can be performed better, helps performer to prioritise improvement | ***Disadvantage:***  Demotivating, beginners may struggle to know how to respond |
| 5. Knowledge of results | ***This means:***  Information for performer about time, placing, result | ***Advantage:***  Quick measure of performance | ***Disadvantage:***  Can be demotivating |
| 6. Knowledge of performance | ***This means:***  Feedback on performance generally and technique. | ***Advantage:***  Many aspects to one performance so feedback can be detailed for or focused. | ***Disadvantage:***  Hard to break a performance down to provide detailed feedback |

**2.3 – Health, fitness and well-being**

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| **Key terms** | 1. Health | ***Definition:***  The state of emotional, physical and social well-being | | 2. fitness | | | | ***Definition:***  The ability to meet the demands of your environment. | | | | | | | 3. well-being | | | | | | | | ***Definition:***  This refers to a feeling or mental state of being contented, happy, prosperous and healthy |
|  | | | | | | | | | | | | | | | | | | | | | | | |
| **Consequences of a sedentary lifestyle** | 1. Physical | This includes: | | 1. Increased risk of Injury | | | | 2. Increased risk of Coronary heart disease (CHD) | | | | | | | 3. Higher Blood pressure | | | | | | | | 4. increased risk of obesity |
| 5. Increased risk of Type 2 diabetes | | | | 6. Poor fitness | | | | | | | 7. Poor posture | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | |
| 2. Emotional | This includes: | | 1. Lack of Self esteem / confidence | | | | | | | | | 2. Stress management | | | | | | | | 3. Poor self image | | |
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| 3. Social | This includes: | | 1. Friendship and lower levels of confidence | | | | 2. Belonging to a group – can lead to isolation | | | | | | | 3. Loneliness – social isolation | | | | | | | |  |
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| **Definition of a balanced diet** | A diet that contains the correct proportions of carbohydrates, fats, proteins, vitamins, minerals and water necessary to maintain good health. | | | | | | | | | | | | | | | | | | | | | | |
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| **Components of a balanced diet** | **Composition of a balanced diet** | | | | 1. 50% carbohydrate | | | | | | | 2. 30-35% fat | | | | | | | 3. 15-20% protein | | | | |
| 1. Carbohydrates | Primarily involved in energy production.  Simple and complex | | | | | | | 2. Proteins | | | | | Building blocks for body tissue and are essential for repair. | | | | 3. Fats | | | Important role in insulating the body.  Saturated fats  Unsaturated fats | | |
| 4. minerals | Essential for health and chemical reactions in the body.  Macro minerals  Trace elements | | | | 5. Vitamins | | | | Vital for the functioning of our metabolism and the prevention of disease. | | | | | | 6. Fibre | | | | This helps the digestive system work effectively. It also reduces cholesterol. | | | |
| 7. Water and hydration | Essential for good health. Carries nutrients in the body and helps with the removal of waste products. Helps to regulate body temperature. | | | | | | | | | | | | | | | | | | | | | |
| **Key term** | 1. Energy balance | Energy input = energy expenditure. This equation must balance for your weight to remain constant. | | | | | | | | | | | | | | | | | | | | | |
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| **Diet and exercise** | 1. Carb-loading | | depleting stores of glycogen by cutting down on carbohydrates and keeping to a diet of protein for a few days. Light training and then a high carbohydrate diet for 3 days before the event.  Shown to increase the stores of glycogen and helps to offset fatigue. | | | | 2. Fluids | | | | Those that exercise can lose up to 1 litre of water per hour during exercise.  Must drink plenty of water to ensure full hydration and prevent dehydration.  Small amounts are often best. | | | | | | 3. Vitamins and mineral supplements | | | | | Body requires more if you exercise regularly. More vitamins above what you require can be bad for your health. | |