

GCSE PE - Theory

Healthy, active lifestyles

- Explain what is a healthy, active lifestyle
- Classify the benefits of a healthy, active lifestyle as social, physical or mental
- Describe how physical activity can:
 - increase individual wellbeing
 - help the individual to feel good (serotonin levels)
 - help relieve stress, and prevent stress-related illness
 - increase self-esteem and confidence
 - contribute to good health
 - contribute to enjoyment of life
- Explain how participation in physical activity can stimulate:
 - cooperation
 - competition
 - physical challenge
 - aesthetic appreciation
 - the development of friendships and social mixing.¹

Influences on your healthy, active lifestyle

- Identify key influences on physical activity (C.H.I.R.P.S.)
 - people: family, peers, role models
 - image: fashion, media coverage
 - cultural: age, disability, gender, race
 - resources: access, availability, location, time
 - health and wellbeing: illness, health problems
 - socio-economic: cost, perceived status of the activity
- Explain the range of roles in sport (including leadership, officiating and volunteering) and the qualities they need
- Explain the sports participation pyramid (foundation, participation, performance and elite stages)
- Describe the common purposes of initiatives:
 - increase participation in sport to improve health, with a focus on priority groups
 - retain people in sport through an effective network of clubs, sports facilities, coaches, volunteers and competition
 - create opportunities for talented performers to achieve success and their contributions to the development of healthy lifestyles.
- Identify agencies involved sport including:
 - Sport England
 - Youth Sport Trust
 - National governing bodies.

Exercise and fitness as part of your healthy, active lifestyle

- Explain the terms health, fitness and exercise
- Know about the components of health-related exercise and give a sporting example: cardiovascular fitness, muscular strength, muscular endurance, flexibility and body composition
- Know about the components of skill-related fitness and give a sporting example: Agility, balance, co-ordination, power, reaction time and speed

Physical activity as part of your healthy, active lifestyle

- Know why a PAR-Q is used
- Know the following fitness tests (tests for health-related exercise: Cooper's 12-minute run test, hand grip strength test, sit and reach flexibility test, treadmill test; tests for skill-related fitness: Illinois Agility Run test, standing stork test, Sergeant Jump test, standing broad jump, ruler drop test, 30-metre sprint, three ball juggle)
- Describe, explain and apply the principles of training:
 - progressive overload
 - specificity
 - individual differences/needs
 - rest and recovery
- Explain the components of the FITT principle (Frequency, Intensity, Time and Type),
- Explain the term 'reversibility', why it might occur and its impact on performance
- Describe, explain and apply the principles of setting SMART (Specific, Measurable, Achievable, Realistic and Time-bound) targets
- Describe the following methods of training:
 - interval
 - continuous
 - Fartlek
 - circuit
 - weight
 - cross
- Be able to link the components of fitness required by a sport to suitable training methods
- Give examples from 'typical' exercise sessions to match the fitness requirements of selected physical activities or individuals
- Understand the exercise session and the purpose of each component (warm-up, main activity, cool-down)
- Link methods of training to aerobic and anaerobic activity
- Understand what is meant by resting heart rate, working heart rate and recovery rates, plot examples on a graph and evaluate results
- Use graphs to demonstrate and explain the use of target zones and training thresholds.

Your personal health and wellbeing

- Understand the link between exercise, diet, work and rest, and their influence on personal health and wellbeing
- Explain the requirements of a balanced diet
- Explain the importance, and use, of macro nutrients (carbohydrates, fats and protein), micro nutrients (minerals and vitamins), water and fibre
- Explain the need to consider the timing of eating when performing due to the redistribution of blood flow (blood shunting) during exercise.

Physical activity and your healthy mind and body

- Describe the different body types (somatotypes): endomorph, mesomorph and ectomorph and explain the effect each can have on participation, including identifying activities where different body types are an advantage
- Outline why, and how, expected and optimum weight varies according to height, gender, bone structure and muscle girth, and explain how this may affect participation
- Explain the terms: anorexic, obese, overfat, overweight and underweight and explain how they may impact on achieving a sustained involvement in physical activity
- Explain the effects of smoking and alcohol on general health and on physical activity
- Know about different categories of drugs and why performers might risk using them:
 - performance enhancing (anabolic steroids, beta blockers, diuretics, narcotic analgesics, stimulants, peptide hormones - including erythropoietin/EPO)
 - recreational (alcohol, nicotine/smoking)
- Identify risks associated with participation in physical activities and explain how to reduce these risks to better maintain wellbeing (warming-up/cooling-down, checking equipment and facilities, personal readiness/PAR-Q, balanced competition, adherence to rules, correct clothing).

A healthy, active lifestyle and your cardiovascular system

- Effects of exercise on the cardiovascular system:
 - Short-term effects of exercise (increased heart rate, systolic/diastolic blood pressure, increased blood pressure)
 - Long-term effects of exercise (cardiac output, decreased resting heart rate, faster recovery, increased stroke volume, increased size of heart, effects on blood pressure, healthy veins and arteries)
- Importance of rest (rest required for adaptation to take place, time for recovery before next exercise session)
- Diet (effects on blood pressure and cholesterol - HDL and LDL)
- Recreational drugs (effects of alcohol and smoking/nicotine on blood pressure).

A healthy, active lifestyle and your respiratory system

- Effects of exercise on the respiratory system:
 - Immediate and short-term effects of participation in exercise and physical activity (increased breathing rate, increased depth of breathing, oxygen debt)
 - Effects of regular participation in - and long-term effects of participation in - exercise and physical activity (increased lung capacity/volume and vital capacity)
- Recreational drugs (effect of smoking/nicotine on the alveoli-gaseous exchange).

A healthy, active lifestyle and your muscular system

- Know the major muscle groups that benefit from particular types of physical activity (deltoid, trapezius, latissimus dorsi, pectorals, biceps, triceps, abdominals, quadriceps, hamstrings, gluteals, gastrocnemius)
- Role of muscles in movement (antagonist and antagonist pairs)
- Effects of exercise on muscles
 - Short-term effects of exercise (isometric and isotonic contractions, increased fuel/energy demands, lactic acid, muscle fatigue)
 - Long-term effects of participation in exercise (adaptations increased strength and size/hypertrophy)
- Potential for injuries such as muscle strain and muscle atrophy (due to injury and inactivity), and their treatment using common techniques
- Rest (rest required for adaptation to take place, time for recovery before next exercise session)
- Diet (effects of protein in building and repairing muscles)
Performance enhancing drugs (use of steroids to aid muscle building and recovery).

A healthy, active lifestyle and your skeletal system

- Function of skeletal system for movement, support and protection during physical activity
- Ranges of movement at hinge joint at elbow and knee, ball and socket joint at shoulder during physical activity (flexion, extension, rotation, abduction, adduction)
- Effects of exercise on skeletal system
 - long-term effects (increased bone density and strength of ligaments and tendons)
 - importance of weight-bearing exercise (exercises such as walking, running, tennis and aerobics) to prevent osteoporosis
- Potential for injuries such as fractures (compound, greenstick, simple, stress) and joint injuries (tennis elbow, golfer's elbow, dislocation, sprain, torn cartilage), and their treatment using common techniques such as RICE (rest, ice, compression, elevation)
- Diet and skeletal system (effect of calcium and vitamin D on bones).