

# VTCT Level 2 Certificate in Fitness Instructing - Gym-Based Exercise (QCF)

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Accreditation start date: **1 April 2010**  
Credit value: **24**  
Guided learning hours (GLH): **158**  
Qualification number: **500/8722/8**

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## Statement of unit achievement

By signing this statement of unit achievement you are confirming that all learning outcomes, assessment criteria and range statements have been achieved under specified conditions and that the evidence gathered is authentic.

This statement of unit achievement table must be completed prior to claiming certification.

Unit code	Date achieved	Learner signature	Assessor initials	IV signature (if sampled)
Mandatory units				
UV20522				
UV20525				
UV20523				
UV20526				
UV20527				
UV20524				

# The qualification

## Introduction

The VTCT Level 2 Certificate in Fitness Instructing - Gym-Based Exercise (QCF) will prepare you for a career in the sport and active leisure industry as a fitness instructor - teaching gym-based exercise.

Throughout this qualification you will develop an understanding of anatomy and physiology, the principles of exercise, fitness and health, and relevant health, safety and welfare that must be adhered to in the fitness environment.

You will develop the knowledge and skills needed to plan and instruct a gym-based exercise programme for apparently healthy adults of all ages. You will also learn how to effectively support clients who take part in exercise and physical activity.

## Approved by the Register of Exercise Professionals (REPs)

This qualification is approved by the Register of Exercise Professionals (REPs). Upon successful completion of this qualification you will be eligible to register onto the REPs as a Level 2 Fitness Instructor (gym-based exercise).

## National Occupational Standards (NOS)

Units in this qualification have been mapped to the relevant NOS (where applicable). This qualification is accredited on the Qualifications and Credit Framework (QCF).

This qualification is approved and supported by SkillsActive, the sector skills council for active leisure and learning.



## Progression

On successful completion of this qualification you will be able to plan and instruct gym-based exercise to apparently healthy adults of all ages.

You will also be able to progress to the following VTCT qualifications:

- Level 3 Certificate in Personal Training (QCF)
- Level 3 Diploma in Mat Pilates (QCF)
- Level 3 Award in Adapting Physical Activity for Older Adults (QCF)
- Level 3 Award in Adapting Physical Activity for People with Disabilities (QCF)
- Level 3 Award in Adapting Physical Activity for Antenatal and Postnatal Clients (QCF)
- Level 3 Award in Instructing Sports Specific Conditioning (QCF)

# Qualification structure

## Total credits required - 24

All mandatory units must be completed.

### Mandatory units - 24 credits

VTCT unit code	Ofqual unit reference	Unit title	Credit value	GLH
UV20522	H/600/9013	Anatomy and physiology for exercise	6	41
UV20525	A/600/9017	Principles of exercise, fitness and health	4	28
UV20523	M/600/9015	Know how to support clients who take part in exercise and physical activity	2	13
UV20526	F/600/9018	Planning gym-based exercise	4	23
UV20527	A/600/9020	Instructing gym-based exercise	6	37
UV20524	T/600/9016	Health, safety and welfare in a fitness environment	2	16

# Guidance on assessment

This book contains the mandatory units that make up this qualification. Optional units will be provided in additional booklets (if applicable). Where indicated, VTCT will provide assessment materials. Assessments may be internal or external. The method of assessment is indicated in each unit.

## Internal assessment

*(any requirements will be shown in the unit)*

Assessment is set, marked and internally verified by the centre to clearly demonstrate achievement of the learning outcomes. Assessment is sampled by VTCT external verifiers.

## External assessment

*(any requirements will be shown in the unit)*

Externally assessed question papers completed electronically will be set and marked by VTCT.

Externally assessed hard-copy question papers will be set by VTCT, marked by centre staff and sampled by VTCT external verifiers.

## Assessment explained

VTCT courses are assessed and verified by centre staff. Work will be set to improve your practical skills, knowledge and understanding. For practical elements, you will be observed by your assessor. All your work must be collected in a portfolio of evidence and cross-referenced to requirements listed in this record of assessment book.

Your centre will have an internal verifier whose role is to check that your assessment and evidence is valid and reliable and meets VTCT and regulatory requirements.

An external verifier, appointed by VTCT, will visit your centre to sample and quality-check assessments, the internal verification process and the evidence gathered. You may be asked to attend on a different day from usual if requested by the external verifier.

This record of assessment book is your property and must be in your possession when you are being assessed or verified. It must be kept safe. In some cases your centre will be required to keep it in a secure place. You and your course assessor will together complete this book to show achievement of all learning outcomes, assessment criteria and ranges.



## Creating a portfolio of evidence

As part of this qualification you are required to produce a portfolio of evidence. A portfolio will confirm the knowledge, understanding and skills that you have learnt. It may be in electronic or paper format.

Your assessor will provide guidance on how to prepare the portfolio of evidence and how to show practical achievement, and understanding of the knowledge required to successfully complete this qualification. It is this booklet along with the portfolio of evidence that will serve as the prime source of evidence for this qualification.

Evidence in the portfolio may take the following forms:

- Observed work
- Witness statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies

All evidence should be documented in the portfolio and cross referenced to unit outcomes. Constructing the portfolio of evidence should not be left to the end of the course.

Many frequently asked questions and other useful information are detailed in the VTCT Candidate's Handbook, which is available on the VTCT website at [www.vtct.org.uk/students](http://www.vtct.org.uk/students). Other questions should be addressed to the tutor, lecturer or assessor.

# Unit assessment methods

This section provides an overview of the assessment methods that make up each unit in this qualification. Detailed information on assessment is provided in each unit.

Mandatory units				
		External	Internal	
VTCT unit code	Unit title	Question paper(s)	Observation(s)	Assignment(s)
UV20522	Anatomy and physiology for exercise	1	✗	✓
UV20525	Principles of exercise, fitness and health	1	✗	✓
UV20523	Know how to support clients who take part in exercise and physical activity	0	✗	✓
UV20526	Planning gym-based exercise	0	✓	✓
UV20527	Instructing gym-based exercise	0	✓	✓
UV20524	Health, safety and welfare in a fitness environment	0	✗	✓

# Unit glossary

	Description
<b>VTCT product code</b>	All units are allocated a unique VTCT product code for identification purposes. This code should be quoted in all queries and correspondence to VTCT.
<b>Unit title</b>	The title clearly indicates the focus of the unit.
<b>National Occupational Standards (NOS)</b>	NOS describe the skills, knowledge and understanding needed to undertake a particular task or job to a nationally recognised level of competence.
<b>Level</b>	Level is an indication of the demand of the learning experience, the depth and/or complexity of achievement and independence in achieving the learning outcomes. There are 9 levels of achievement within the Qualifications and Credit Framework (QCF).
<b>Credit value</b>	This is the number of credits awarded upon successful achievement of all unit outcomes. Credit is a numerical value that represents a means of recognising, measuring, valuing and comparing achievement.
<b>Guided learning hours (GLH)</b>	GLH is an estimate of the time allocated to teach, instruct, assess and support learners throughout a unit. Learner initiated private study, preparation and marking of formative assessment is not taken into account.
<b>Observations</b>	This indicates the minimum number of observations required to achieve the unit.
<b>Learning outcomes</b>	The learning outcomes are the most important component of the unit, they set out what is expected in terms of knowing, understanding and practical ability as a result of the learning process. Learning outcomes are the results of learning.
<b>Evidence requirements</b>	This section provides guidelines on how evidence must be gathered.
<b>Maximum service times</b>	The maximum time in which a particular service or practical element must be completed.
<b>Observation outcome</b>	An observation outcome details the practical tasks that must be completed to achieve the unit.
<b>Knowledge outcome</b>	A knowledge outcome details the theoretical requirements of a unit that must be evidenced through oral questioning, a mandatory written question paper or portfolio of evidence.
<b>Assessment criteria</b>	Assessment criteria set out what is required, in terms of achievement, to meet a learning outcome. The assessment criteria and learning outcomes are the components that inform the learning and assessment that should take place. Assessment criteria define the standard expected to meet learning outcomes.
<b>Range</b>	The range indicates what must be covered. Ranges must be practically demonstrated in parallel to the unit's observation outcomes.

# UV20522

## Anatomy and physiology for exercise

It is the aim of this unit to develop your knowledge and understanding of the anatomy and physiology relating to exercise programming for apparently healthy adults of all ages.

Level

**2**

Credit value

**6**

GLH

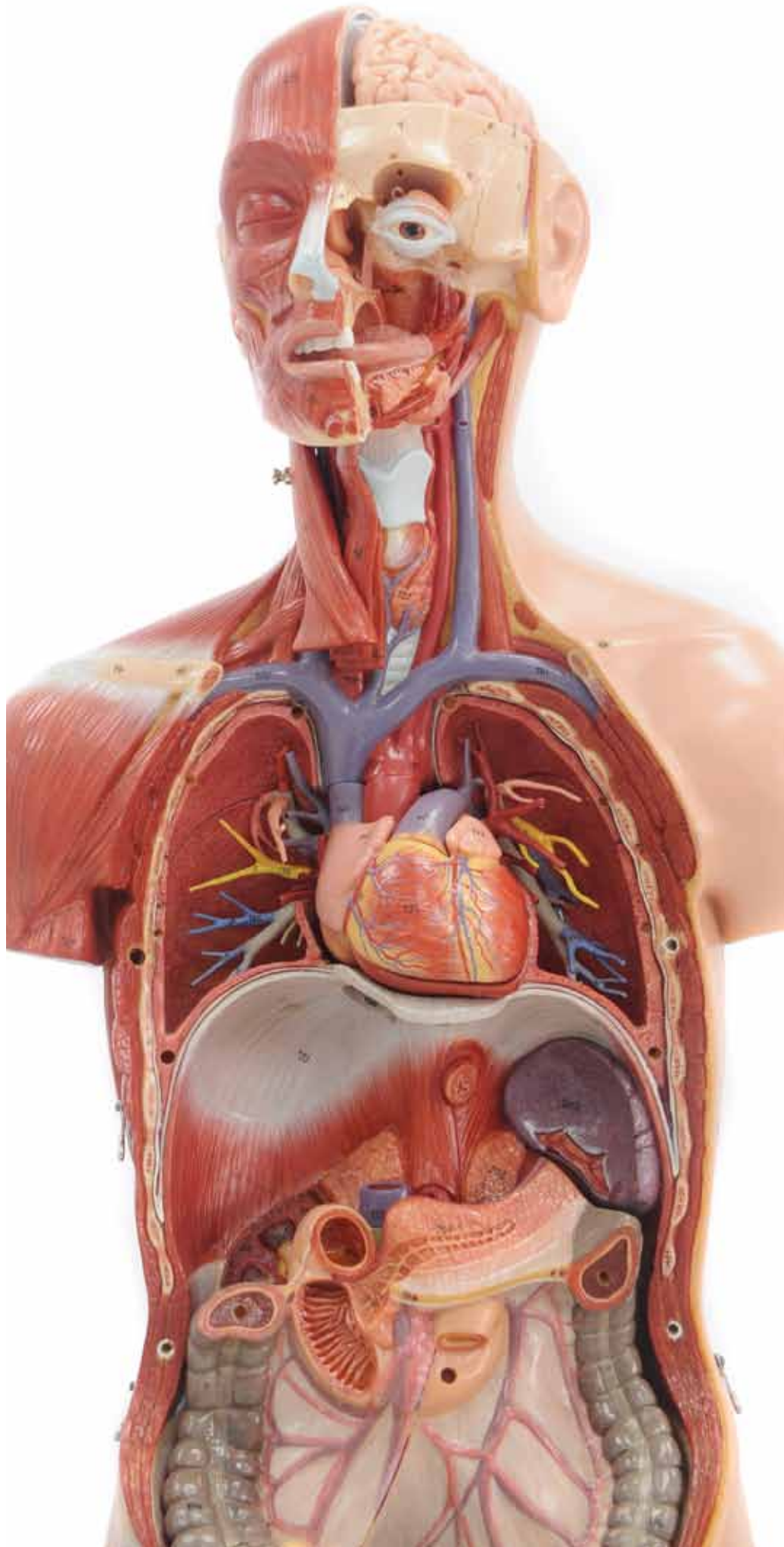
**41**

Observation(s)

**0**

External paper(s)

**1**



# Anatomy and physiology for exercise

## Learning outcomes

On completion of this unit you will:

1. Understand the structure and function of the circulatory system
2. Understand the structure and function of the respiratory system
3. Understand the structure and function of the skeleton
4. Understand joints in the skeleton
5. Understand the muscular system
6. Understand the life course of the musculoskeletal system and its implications for special populations exercise
7. Understand energy systems and their relation to exercise
8. Understand the nervous system and its relation to exercise

## Evidence requirements

1. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
2. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes in this unit. All outcomes must be achieved.
3. *External paper*  
Knowledge and understanding in this unit will be assessed by an external paper.  
**There is one external paper that must be achieved.**

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

## Achieving the external paper

The external paper will test your knowledge of all criteria in this section. **A pass mark of 70% must be achieved.**

Your assessor will complete this table when the 70% pass mark has been achieved.

Paper	Date achieved	Assessor initials
1 of 1		

# Knowledge



## Outcome 1

### Understand the structure and function of the circulatory system

You can:	Portfolio reference / Assessor initials*
a. Identify the location of the heart	
b. Describe the function of the heart	
c. Describe the structure of the heart	
d. Describe how blood moves through the four chambers of the heart	
e. Describe systemic and pulmonary circulation	
f. Describe the structure and functions of blood vessels	
g. Define blood pressure	
h. Identify blood pressure classifications	

\*Assessor initials to be inserted if orally questioned.



## Outcome 2

### Understand the structure and function of the respiratory system

You can:	Portfolio reference / Assessor initials*
a. Identify the location of the lungs	
b. Describe the function of the lungs	
c. Describe the structure of the lungs	
d. Identify the main muscles involved in breathing	
e. Describe the passage of air through the respiratory tract	
f. Describe the process of gaseous exchange of oxygen and carbon dioxide in the lungs	

\*Assessor initials to be inserted if orally questioned.



## Outcome 3

### Understand the structure and function of the skeleton

You can:	Portfolio reference / Assessor initials*
a. Describe the basic functions of the skeleton	
b. Identify the structures of the axial skeleton	
c. Identify the structures of the appendicular skeleton	
d. Explain the classification of bones	
e. Explain the structure of long bones	
f. Explain the stages of bone growth	
g. Describe posture in terms of: <ul style="list-style-type: none"> <li>• Curves of the spine</li> <li>• Neutral spine alignment</li> <li>• Potential ranges of motion of the spine</li> <li>• Postural deviations to include kyphosis, lordosis, scoliosis and the effect of pregnancy</li> </ul>	

\*Assessor initials to be inserted if orally questioned.



## Outcome 4

### Understand joints in the skeleton

You can:	Portfolio reference / Assessor initials*
a. Describe the classification of joints	
b. Describe the structure of synovial joints	
c. Describe the types of synovial joints and their range of motion	
d. Describe joint movement potential and joint actions	

\*Assessor initials to be inserted if orally questioned.



## Outcome 5

### Understand the muscular system

You can:	Portfolio reference / Assessor initials*
a. Identify the three types of muscle tissue	
b. Define the characteristics and functions of the three types of muscle tissue	
c. Describe the basic structure of skeletal muscle	
d. Name and locate the anterior skeletal muscles	
e. Name and locate the posterior skeletal muscles	
f. Describe the structure and function of the pelvic floor muscles	
g. Describe the different types of muscle action	
h. Identify the joint actions brought about by specific muscle group contractions	
i. Identify skeletal muscle fibre types and their characteristics	

\*Assessor initials to be inserted if orally questioned.



## Outcome 6

### Understand the life course of the musculoskeletal system and its implications for special populations exercise

You can:

Portfolio reference /  
Assessor initials\*

a. Describe the life course of the musculoskeletal system, including relevant tendon, ligament, muscle, joint and bone mineral density changes, and their implications for exercise, plus specific implications for working with:

- Young people in the 14-16 age range
- Antenatal and postnatal women
- Older people (50+)

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 7

### Understand energy systems and their relation to exercise

You can:	Portfolio reference / Assessor initials*
a. Describe how carbohydrates, fats and proteins are used in the production of energy/adenosine triphosphate	
b. Explain the use of the three energy systems during aerobic and anaerobic exercise	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 8

### Understand the nervous system and its relation to exercise

You can:	Portfolio reference / Assessor initials*
a. Describe the role and functions of the nervous system	
b. Describe the principles of muscle contraction	
c. Describe the 'all or none law'/motor unit recruitment	
d. Describe how exercise can enhance neuromuscular connections and improve motor fitness	

\*Assessor initials to be inserted if orally questioned.

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Understand the structure and function of the circulatory system

**Location of the heart:** Located centrally in the chest, mediastinum, thorax, between lungs, apex towards left hip.

**Function and structure of the heart:** Function of heart (circulation of blood, receiving and pumping blood to body and lungs), structure of heart (myocardium, septum, atria, ventricles, atrio-ventricular valves, semi-lunar valves, aorta, superior vena cava, inferior vena cava, pulmonary veins, pulmonary arteries).

**Blood flow through heart chambers:** Pulmonary circulation, deoxygenated blood, vena cava, right atrium, tricuspid valve, right ventricle, semi-lunar valve, pulmonary artery, lungs, gaseous exchange, oxygenated blood, pulmonary vein, left atrium, bicuspid valve, left ventricle, semi-lunar valve, aorta, systemic circulation, functional considerations (e.g. stroke volume, cardiac output).

**Systemic and pulmonary circulation:** Systemic (oxygenated blood from lungs, pulmonary vein, left atrium, left ventricle, aorta, arteries, arterioles, capillaries, muscles and organs), pulmonary (deoxygenated blood from muscles and organs, capillaries, venules, veins, vena cava, right atrium, right ventricle, deoxygenated blood to the lungs for oxygenation).

**Structure and function of blood vessels:** Arteries (tunica interna, tunica media, tunica externa), arterioles, capillaries, veins (tunica interna, tunica media, tunica externa, one way valves), venules,

comparison between blood vessels (wall thickness, internal diameter, direction of blood flow, pressure, presence of valves), functions of blood vessels (transport blood, blood flow distribution by vasoconstriction and vasodilation), function of arteries and arterioles (transport oxygenated blood to muscles and organs), functions of veins and venules (transport deoxygenated blood back to the heart, venous return), functions of capillaries (exchange of gases and nutrients between blood and tissues).

**Blood pressure:** Definition of blood pressure (pressure exerted by blood on vessel wall), systolic pressure (contraction), diastolic pressure (relaxation), blood pressure classifications (hypotension, normal, high normal, mild hypertension, moderate hypertension, severe hypertension), short and long term effects of exercise on blood pressure.



## Outcome 2: Understand the structure and function of the respiratory system

**Location of the lungs:** Located laterally in the chest on the left and right sides, mediastinum, thorax, pleural membrane layer, visceral membrane layer, serous membrane layer.

**Function and structure of the lungs:** Function of lungs (paired organs for ventilation, external and internal respiration, elimination of carbon dioxide, supply of oxygen), structure of lungs (left lung – two lobes, right lung – three lobes, bronchus, bronchioles, sub-divisions, capillaries, alveoli, alveolar sacs).

**Muscles involved in breathing:** Inhalation (inspiration), exhalation (expiration), muscles involved (diaphragm, external intercostals), forced inspiration accessory muscles (sternocleidomastoids, scalenes, pectoralis minor), forced expiration muscles (internal intercostals, transversus abdominus, rectus abdominus), functional considerations (e.g. total lung capacity, vital capacity).

**Passage of air during breathing:** Upper respiratory tract (mouth, nose and pharynx), lower respiratory tract (larynx, trachea, bronchi, bronchioles), alveoli, alveolar sacs.

**Process of gaseous exchange:** Surface area for gas exchange (300 million alveoli, 2400km of airways), partial pressure difference (higher and lower partial pressures), diffusion of gases, effect of breathing rate and depth, relative composition of inhaled air (21% oxygen, 0.04% carbon dioxide), relative composition of alveolar air (14% oxygen, 5.5% carbon dioxide), relative composition of exhaled air (16% oxygen, 4.5% carbon dioxide).



## Outcome 3: Understand the structure and function of the skeleton

**Functions of the skeleton:** Support and shape, protection, muscle attachment and movement, production of blood cells, mineral homeostasis, storage of energy.

**Structures of axial skeleton:** Names and locations of bones including cranium, cervical vertebrae (7), thoracic vertebrae (12), lumbar vertebrae (5), sacral vertebrae (5), coccyx (3-5), intervertebral discs, sternum, ribs.

**Structures of appendicular skeleton:** Names and locations of bones including scapula, clavicle, humerus, radius, ulna, carpals, metacarpals, phalanges, ilium, ischium, pubis, femur, patella, tibia, fibula, tarsals, metatarsals, phalanges.

**Classification of bones:** Long (e.g. femur, tibia), short (e.g. tarsals, carpals), flat (e.g. scapula, pelvis), irregular (e.g. vertebrae), sesamoid (e.g. patella), classification based on structure and function.

**Structure of long bone:** Characteristics (greater length than width, slightly curved), structure (diaphysis, epiphyses, metaphysis, articular cartilage, periosteum, medullary, endosteum, compact bone, spongy bone, bone marrow).

**Stages of bone growth:** Development of cartilage, growth of cartilage, development of ossification centre, development of diaphysis and epiphysis, ossification (osteoblasts, osteoclasts), changes in bone growth with age, importance of calcium, factors affecting bone density (exercise, age and osteoporosis).

**Posture and curves of the spine:** Natural mild S-shaped curve of the spine (cervical and lumbar lordoses, thoracic and spinal kyphoses), primary curves of the spine, secondary (developmental) curves of the

spine.

**Posture and neutral spine alignment:** Optimum position of spine and pelvis, maintenance of the natural spinal curvature (cervical, thoracic, lumbar), maintenance of posture in standing, sitting, lying positions.

**Posture and potential ranges of motion of the spine:** Cervical (rotation, flexion and extension), thoracic (rotation, limited flexion and extension), lumbar (flexion, extension, hyperextension), sacral (no range of motion), coccyx (no range of motion), normal thoracic kyphosis (20-45°), normal lumbar lordosis (20-45°), scoliosis (a right-left curve of more than 10°).

**Postural deviations:** Excessive deviations (hyperlordotic and hyperkyphotic), less than normal deviations (hypolorditic and hypokyphotic), definitions and causes (kyphosis, lordosis, scoliosis), effect of pregnancy on posture (e.g. how carrying a baby affects the natural curve).



## Outcome 4: Understand joints in the skeleton

**Classification of joints:** Structural classifications, fibrous (e.g. cranium), cartilaginous (e.g. vertebrae), synovial (e.g. knee), functional classifications (synarthrosis/immovable, amphiarthrosis/slightly moveable, diarthrosis/freely moveable).

**Structure of synovial joints:** Articular capsule, fibrous capsule, synovial cavity, synovial membrane, synovial fluid (lubrication), articular cartilage (shock absorption, decrease friction between bones), bursae (shock absorption), ligaments (attach bone to bone, joint stability).

**Types of synovial joints and range of motion:** Gliding (side to side, back and forth e.g. between carpals and tarsals), pivot (rotation e.g. atlas and axis), saddle (flexion, extension, abduction, adduction, circumduction e.g. thumb), ellipsoid (flexion, extension, abduction, adduction, circumduction e.g. wrist), ball and socket (flexion, extension, abduction, adduction, rotation, circumduction e.g. hip and shoulder), hinge (flexion and extension e.g. knee and elbow).

**Joint movement potential and actions:** Shoulder (flexion, extension, abduction, adduction, horizontal flexion/adduction, horizontal extension/abduction, internal rotation, external rotation), elbow (flexion, extension, supination, pronation), shoulder girdle (elevation, depression, protraction, retraction), spine (flexion, extension, lateral flexion, rotation), hip (flexion, extension, abduction, adduction, internal rotation, external rotation), knee (flexion, extension), ankle (plantarflexion, dorsiflexion, inversion, eversion), actions during different exercises.



## Outcome 5: Understand the muscular system

### Muscle tissue types, characteristics and functions:

Skeletal muscle (striated, voluntary, very large fibre diameter, short to moderate fibre length, fast speed of contraction, attach to bones, e.g. quadriceps), cardiac muscle (striated, involuntary, large fibre diameter, moderate fibre length, moderate speed of contraction, e.g. heart muscle/myocardium), smooth muscle (no striations, involuntary, small fibre diameter, short to long fibre length, slow speed of contraction, e.g. artery walls).

**Structure of skeletal muscle:** Tendon (attach muscle to bone), epimysium, perimysium, endomysium, fascicle, muscle fibres, myofibrils, myofilaments (actin, myosin), sarcolemma, sarcomere (Z discs, H zone, M line, A band, I bands), arrangement of fasciculi (parallel, fusiform, pennate).

**Muscle names and locations:** Anterior muscles (pectoralis major, anterior deltoids, medial deltoids, biceps, rectus abdominis, obliques, transverse abdominis, hip flexors, quadriceps, adductors, anterior tibialis), posterior muscles (trapezius, rhomboids, medial deltoids, posterior deltoids, triceps, latissimus dorsi, erector spinae, gluteals, abductors, hamstrings, gastrocnemius, soleus), diaphragm, intercostals.

### Structure and function of pelvic floor muscles:

Levator ani (pubococcygeus, puborectalis, and iliococcygeus), coccygeus, associated connective tissues which span the area underneath the pelvis (perineum, perineal membrane, perineal pouch), pelvic cavity, function (stability of the pelvis, support bladder and bowel, support uterus in women).

**Types of muscle action:** Definitions of muscle contractions (isotonic concentric, isotonic eccentric, static/isometric, isokinetic), definitions of muscle roles (agonist/prime mover, antagonist, synergist/assistant, fixator), contractions and muscle roles during different exercises.

**Joint actions:** Pectoralis major (adduction of arm, horizontal flexion of arm), deltoids (abduction of the shoulder, flexion and extension of the shoulder), biceps (flexion of the elbow), rectus abdominis (flexion of the spine), obliques (lateral flexion and rotation of the spine), transverse abdominis (isometric stabilisation of the spine), hip flexors (flexion of the hip), quadriceps (extension of the knee, flexion of the hip), adductors (adduction of the hip), anterior tibialis (dorsi flexion of the ankle), trapezius (extension of the neck, elevation of the shoulder, depression of the scapula, retraction of the scapula), triceps (extension of the elbow), latissimus dorsi (adduction of the shoulder, shoulder extension), erector spinae (extension of the spine), gluteals (extension of the hip), abductors (abduction of the hip), hamstrings (flexion of the knee, extension of the hip), gastrocnemius (plantar flexion of the ankle, assist flexion of knee), soleus (plantar flexion of ankle with bent knee), joint actions during different exercises.

### Muscle fibre types and characteristics:

Fast twitch type 2 (white in colour, high intensity, short duration, low in mitochondria, low in myoglobin, fast contraction speed, fast to fatigue), slow twitch oxidative type 1 (red in colour, low intensity, long duration/endurance, high in mitochondria, high in myoglobin, slow contraction speed, resistant to fatigue).



## Outcome 6: Understand the life course of the musculoskeletal system and its implications for special populations exercise

### Life course of the musculoskeletal system for young people between 14-16 years:

Life course (muscular hypertrophy, strength and power development, increase in bone density, strengthened attachment of tendons and ligaments), implications for exercise (differentiation between improvements through natural development or exercise, consideration of developing joint structures, gradual warm up and cool down, avoid heavy resistance exercises, use RPE to monitor exercise intensity, resistance training should use light weights and high reps, emphasise correct exercise technique, rest and recovery to avoid overuse and over training).

### Life course of the musculoskeletal system for antenatal and postnatal women:

Life course (weight gain, decreased bone density, increased force at joints and tendons, excessive lumbar lordosis, joint and ligament laxity in the lumbar spine, change in centre of gravity, weakness in abdominal muscles, widening of sacroiliac joints and pubic symphysis, increase in anterior pelvic tilt), implications for exercise (avoid supine exercise after 16 weeks of pregnancy, avoid prone exercise, avoid prolonged motionless standing, avoid heavy isometric or overhead resistance exercise, avoid leg adduction and abduction against resistance, avoid loaded forward flexion, avoid rapid changes of direction, avoid uncontrolled twisting or ballistic movements, avoid risk of falling or trauma, avoid high intensity or impact exercise, avoid crunching and twisting abdominal exercises).

**Life course of the musculoskeletal system for older people (50+):** Life course (1-2% loss in physical fitness each

year, loss of neuromuscular function, signs and symptoms of potentially serious musculoskeletal disease, muscular atrophy and decreased muscular strength, decrease in bone density and bone strength, demineralisation in bones, development of osteoporosis, degradation of ligaments and tendons, implications for exercise (undertake longer and more gradual mobility and warm up, undertake a gradually tapered cool down, exercise intensity must be at a challenging but health related level, use RPE scale to monitor intensity, emphasise correct exercise technique, increase duration of transitions, simplify exercise when required, learn new exercises at the most basic level, avoid extreme spinal flexion).



## Outcome 7: Understand energy systems and their relation to exercise

### **Nutrients and the production of energy:**

Carbohydrates (e.g. bread, pasta), proteins (e.g. meat, fish), fats (e.g. cheese, butter, energy yield per gram of macronutrient), carbohydrates (break down into glucose, glycogen storage in muscles and liver), fats (break down into fatty acids in presence of oxygen, stored as adipose tissue, protection, energy store), protein (break down into amino acids, growth and repair of muscle, used for energy when other nutrients are depleted), water (hydration), adenosine triphosphate (ATP – break down and resynthesis, energy equation).

**Energy systems:** Energy molecules (ADP, ATP), systems (creatine phosphate system, glycolytic system, aerobic system).

### **Use of energy systems during exercise:**

Creatine phosphate system (high intensity activity of 6-10 seconds), glycolytic system (moderate to high intensity activity of up to 90 seconds), aerobic system (low to moderate intensity of above 90 seconds), the energy continuum for intensity and duration, relative percentage contributions of energy systems during different activities.



## Outcome 8: Understand the nervous system and its relation to exercise

### Roles and functions of the nervous system:

Main functions (sense changes to stimuli, information processing, response to stimuli), central nervous system components (brain, spinal cord), CNS roles (receive messages from peripheral nervous system about environment, interprets information, sends messages back to the peripheral nervous system), peripheral nervous system components (sensory neurons, motor neurons), PNS roles (transmits information from receptors to CNS, transmits information from CNS to muscles and glands), peripheral nervous system divisions (autonomic nervous system, somatic nervous system, sympathetic system, parasympathetic system).

### Specific nervous system functions and roles:

Somatic system roles (sensory input, control of voluntary muscle), autonomic system roles (sense hormonal balance, internal organ function, control of involuntary muscle, control of endocrine glands), sympathetic division roles (increase heart rate, increase breathing rate, mobilise energy stores, regulation of blood pressure, blood flow redistribution, most active during exercise), parasympathetic division (slows down functions, more active during rest and recovery).

### Principles of muscle contraction:

Sliding filament theory (myosin and actin, cross bridges, shortening of sarcomere), process (attachment of myosin to actin, power stroke, detachment, ATP and energy transfer).

**Motor unit recruitment:** Motor units (motor neuron, muscle fibre), small motor units (type I), large motor units (type II),

all or none law (if a stimulus is above threshold individual muscle fibres fully contract, if a stimulus is below threshold muscles fibres do not contract), strength of muscle contraction.

### Exercise and neuromuscular enhancement:

Aerobic training adaptations (improved aerobic capacity of trained muscles, glycogen sparing, increased fat utilisation), resistance training adaptations (improved motor recruitment, increased ability to achieve stronger muscle contractions, muscle fibre hypertrophy, muscle fibre hyperplasia, improved recruitment of fast twitch fibres), motor skills training adaptations (growth of new nervous system connections, increased frequency of nerve impulses to motor units, improved synchronous motor unit recruitment, improved inter-muscular co-ordination, automatic performance of movement patterns).

# UV20525

## Principles of exercise, fitness and health

It is the aim of this unit to develop your knowledge and understanding of safe and effective exercise for a range of clients, the health benefits of physical activity and the importance of healthy eating.

Level

**2**

Credit value

**4**

GLH

**28**

Observation(s)

**0**

External paper(s)

**1**



# Principles of exercise, fitness and health

## Learning outcomes

On completion of this unit you will:

1. Understand the effects of exercise on the body
2. Understand the components of fitness
3. Understand how to apply the principles and variables of fitness to an exercise programme
4. Understand exercise contra-indications and the key safety guidelines for special populations
5. Understand how to safely monitor exercise intensity
6. Understand the health benefits of physical activity
7. Understand the importance of healthy eating

## Evidence requirements

1. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
2. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes and ranges in this unit. All outcomes must be achieved.
3. *External paper*  
Knowledge and understanding in this unit will be assessed by an external paper. **There is one external paper that must be achieved.**

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

## Achieving the external paper

The external paper will test your knowledge of all criteria in this section. **A pass mark of 70% must be achieved.**

Your assessor will complete this table when the 70% pass mark has been achieved.

Paper	Date achieved	Assessor initials
1 of 1		

# Knowledge



## Outcome 1

### Understand the effects of exercise on the body

You can:	Portfolio reference / Assessor initials*
a. Describe cardiovascular and respiratory adaptations to endurance/ aerobic training	
b. Identify the short and long term effects of exercise on blood pressure	
c. Describe the 'blood pooling' effect following exercise	
d. Describe the effects of exercise on bones and joints including the significance of weight bearing exercise	
e. Describe Delayed Onset of Muscle Soreness (DOMS)	
f. Identify exercises or techniques likely to cause DOMS	
g. Describe the short and long term effects of different types of exercise on muscle	
h. Describe different exercises that can improve posture	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 2

### Understand the components of fitness

You can:	Portfolio reference / Assessor initials*
a. Define the components of health related fitness	
b. Define the components of skill related fitness	
c. Identify the factors that affect health and skill related fitness	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 3

### Understand how to apply the principles and variables of fitness to an exercise programme

You can:	Portfolio reference / Assessor initials*
<p>a. Describe the physiological implications of:</p> <ul style="list-style-type: none"> <li>• specificity</li> <li>• progressive overload</li> <li>• reversibility</li> <li>• adaptability</li> <li>• individuality</li> <li>• recovery time</li> </ul>	
<p>b. Explain the principles of FITT (Frequency, Intensity, Time and Type)</p>	
<p>c. Explain the principles of a progressive training programme in developing components of fitness</p>	
<p>d. Explain how to recognise when and how to regress a training programme</p>	
<p>e. Explain the principles of adaptation, modification and progression for each component of FITT</p>	
<p>f. Describe the effect of speed on posture, alignment and intensity</p>	
<p>g. Describe the effect of levers, gravity and resistance on exercise</p>	
<p>h. Describe the differences between programming exercise for physical fitness and for health benefits</p>	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 4

### Understand exercise contra-indications and the key safety guidelines for special populations

You can:	Portfolio reference / Assessor initials*
a. Describe the exercise contra-indications and key safety guidelines for working with older people (aged 50+)	
b. Describe the exercise contra-indications and key safety guidelines for working with antenatal and postnatal clients	
c. Describe the exercise contra-indications and key safety guidelines for working with young people (aged 14-16)	
d. Describe the key safety considerations for working with disabled people	

\*Assessor initials to be inserted if orally questioned.



## Outcome 5

### Understand how to safely monitor exercise intensity

You can:	Portfolio reference / Assessor initials*
<p>a. Describe the benefits and limitations of different methods of monitoring exercise intensity including:</p> <ul style="list-style-type: none"><li>• the talk test</li><li>• Rating of Perceived Exertion (RPE)</li><li>• heart rate monitoring and the use of different heart rate zones</li></ul>	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 6

### Understand the health benefits of physical activity

You can:	Portfolio reference / Assessor initials*
a. Describe the health benefits of physical activity	
b. Describe the effect of physical activity on the causes of certain diseases including: <ul style="list-style-type: none"> <li>• coronary heart disease</li> <li>• some cancers</li> <li>• type 2 diabetes</li> <li>• hypertension</li> <li>• obesity</li> <li>• osteoporosis</li> </ul>	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 7

### Understand the importance of healthy eating

You can:	Portfolio reference / Assessor initials*
a. Describe the national food model/guide	
b. Describe key healthy eating advice that underpins a healthy diet	
c. Explain the importance of adequate hydration	
d. Explain professional role boundaries in relation to offering nutritional advice	
e. Explain the dietary role of the key nutrients	
f. Identify the common dietary sources of the key nutrients	
g. Describe the energy balance equation	
h. Explain the health risks of poor nutrition	

*\*Assessor initials to be inserted if orally questioned.*

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Understand the effects of exercise on the body

### **Adaptations to endurance training:**

Cardiovascular (improved oxygen transport, increased heart size, increased stroke volume, decreased resting heart rate, increased cardiac output, improved blood flow distribution, increased blood volume, capillarisation, decreased blood pressure, respiratory (improved pulmonary ventilation, improved pulmonary diffusion, arterial-venous oxygen difference, decreased resting breathing rate, increased lung capacity).

### **Effects of exercise on blood pressure:**

Short term effects of exercise (no change in diastolic pressure, progressive increase in systolic pressure), long term effects of exercise (reduction in overall resting blood pressure, improved regulation of overall blood pressure).

**Blood pooling:** In the extremities, venous return (skeletal muscle pump, non-return valves), associated risks (dizziness, fainting), prevention of blood pooling through progressive cool down.

### **Effects of exercise on bones and joints:**

Improved bone density, increased joint stability, improved mobilisation and range of motion at joints, significance of weight bearing exercise (bone structure, ageing and osteoporosis), types of weight bearing exercise (walking, running, resistance training), potential risk of injury.

**Effects of exercise on muscles:** Short term (increased contractility, increased excitability, increased elasticity, increased energy metabolism, heat generation),

long term effects of aerobic exercise (increased concentration of aerobic enzymes, increased size and number of mitochondria, increased ability to use fat as an energy source, increased storage of muscle glycogen, increased supply of intramuscular fat), hypertrophy (increase in muscle mass and cross-sectional area, possible increase in number of muscle fibres, increased motor unit recruitment).

### **Delayed onset of muscle soreness (DOMS):**

Structural muscle damage (microscopic fibre tears, muscle cell leakage), effects of eccentric muscle contra-actions, causal exercises and techniques (e.g. plyometrics, eccentric resistance training, isometric training, downhill running, higher than normal exercise intensity).

**Exercises to improve posture:** Floor based core stability exercises, equipment based core stability exercises, exercise starting positions (standing, seated, lying prone, lying supine, lying sideways, hand and knees), equipment (swiss ball, stability discs, cable machines), other functional multi-joint exercises, progression of exercises (resistance through levers and external, combined movements, rate and speed of movement, repetitions, range of motion), technique consideration (correct pelvic tilt, neutral spine, engaging core muscles).



## Outcome 2: Understand the components of fitness

**Components of fitness:** Definitions of health related fitness components (cardiovascular endurance, muscular endurance, muscular strength, flexibility, body composition), definitions of skill related fitness components (speed, power, agility, balance, co-ordination, reaction time), importance of fitness components for different activities.

**Factors affecting fitness:** Genetics, gender, age, body type, training status, lifestyle factors (nutrition, smoking, alcohol, drugs, rest, stress).

## Outcome 3: Understand how to apply the principles and variables of fitness to an exercise programme

**Principles and variables of training:** Definitions (specificity, progressive overload, reversibility, adaptability, individuality, recovery time), associated physiological implications, application for each component of fitness.

**FITT principles:** Definitions for health and fitness (Frequency, Intensity, Time, Type), American College of Sports Medicine (ACSM) standard guidelines (application for each component – cardiovascular health, cardiovascular fitness, muscular strength and endurance, flexibility, physical activity).

**Progression of a training programme:** Training needs analysis, specificity, adaptation, overload, recovery (adaptation), reversibility, ACSM progression guidelines using FITT principles, SMART goal setting (Specific, Measurable, Achievable, realistic, Time bound).

**Regression of a training programme:** Causes of overtraining (inadequate recovery, overparticipation in competition, repetitive and boring training, consistent high intensity, high levels of non-training

stress), recognising signs and symptoms of overtraining (condition and performance, psychological, movement co-ordination), periodisation through manipulation of training principles and variables (intensity, volume), guidelines for prevention and recovery of overtraining, importance of rest and recovery.

**Effect of speed:** Slow exercise speed (allows strict posture, allows accurate alignment), faster exercise speed (increases intensity, increases potential for injury risk, increases potential for improper posture and alignment).

**Effect of levers, gravity and resistance:** Levers during exercise, effects of levers on exercise (speed of movement, force generation, range of motion, torque loads), gravity (speed and control of eccentric movements, power generation), resistance (intensity, speed of movement).

**Exercise programming differences:** Differences between programming for health and physical fitness, reasons for differences.



## Outcome 4: Understand exercise contra-indications and the key safety guidelines for special populations

### Exercise contra-indications and key safety guidelines for older adults (50+):

Clients (screened and asymptomatic, little or no experience of the type of exercise, only 1% of the 50+ population is highly trained, activity levels are low and decline with age, 1-2% loss in physical components of fitness each year), contra-indications (loss of physiological and psychological function, poor functional status, signs and symptoms of a potentially serious disease, sensory and cognitive declines), safety guidelines (undertake a pre-exercise health screening, refer to other professionals if required, undertake longer and more gradual mobility and warm-up, undertake a gradually tapered cool down, exercise intensity must be at a challenging but health related level, use RPE scale to monitor intensity, emphasise correct exercise technique, increase duration of transitions, simplify exercise when required, learn new exercises at the most basic level, avoid extreme spinal flexion).

### Exercise contra-indications and key safety guidelines for antenatal and postnatal women:

Clients (normal and healthy adult women, normal and healthy pregnancy, normal and healthy birth, previously normal and healthy pregnancies and births), contra-indications (injury, joint misalignment, muscle imbalance, motor skill decline, embolism, thrombosis, haemorrhage, pelvic floor dysfunction, neck and shoulder pain, experiencing other pregnancy related symptoms), safety guidelines (non-exercisers should begin with 15 minutes continuous aerobic activity gradually increasing to 30 minutes, do not exceed 45 minutes duration, maintain adequate hydration and calorie

intake, avoid exercising in hot and humid conditions, use the RPE scale to monitor intensity not heart rate, avoid supine exercise after 16 weeks of pregnancy, avoid prone exercise, avoid prolonged motionless standing, avoid heavy isometric or overhead resistance exercise, avoid leg adduction and abduction against resistance, avoid loaded forward flexion, avoid rapid changes of direction, avoid uncontrolled twisting or ballistic movements, avoid risk of falling or trauma, avoid high intensity or impact exercise, re-educate post-birth women on posture and joint alignment before progressing, avoid crunching and twisting abdominal exercises, babies should be excluded from the exercise area, ensure instructor's first aid skills are up-to-date, follow exercise guidelines for trimesters of pregnancy,

### Exercise contra-indications and key safety guidelines for young people (aged 14-16):

Clients (screened and asymptomatic, apparently healthy young people), contra-indications (stage of growth and development, musculoskeletal injuries), safety guidelines (wear appropriate clothing and footwear, undertake a gradual warm up and cool down, avoid heavy resistance exercises, use RPE to monitor exercise intensity, resistance training should use light weights and high reps, emphasise correct exercise technique, avoid ballistic stretching, ensure adequate hydration and calorie intake).

### Exercise contra-indications and key safety guidelines for disabled people:

Contra-indications (impaired physical condition and function, impaired motor skills, impaired neurological or cognitive function, impaired sensory



## Outcome 4: Understand exercise contra-indications and the key safety guidelines for special populations (continued)

function, musculoskeletal imbalances and postural deviations), safety guidelines (undertake exercise in a safe and supportive environment, make reasonable adjustments to enable access, refer to other professionals if required, adapt exercise for the disability, provide specialist assistance if required, incorporate functional and life related movement, use specialist equipment if required).

## Outcome 5: Understand how to safely monitor exercise intensity

### Methods of monitoring exercise

**Intensity:** Talk test, visual signs, rating of perceived exertion (RPE), heart rate monitoring, using different heart rate training zones (for health benefits, for

specific fitness improvements), benefits and limitations of methods (specific clients needs, safety, practicality, reliability, validity).

## Outcome 6: Understand the health benefits of physical activity

### Health benefits of physical activity:

Reduced early mortality, reduced morbidity (coronary heart disease, diabetes), improved mental health and psychological wellbeing (anxiety, depression, stress, mood), cardio-protective mechanisms, improved weight management and body composition, improved posture, prevention of lower back pain, reduced risk of injury, improved joint stability, increased bone density, improved ability to perform active daily living tasks.

### Effect of physical activity on disease

**causes:** Coronary heart disease (reduced

blood pressure, improved blood cholesterol profile, improved elasticity of blood vessels, capillarisation, improved blood flow distribution), some cancers (reduced stress and lifestyle changes), type 2 diabetes (improved regulation of insulin, improved blood glucose regulation), hypertension (reduced blood pressure, improved blood flow distribution, improved elasticity of blood vessels, reduced muscular tension, reduced stress level), obesity (improved fat metabolism, increased calorie expenditure), osteoporosis (increased bone formation, improved density, improved posture, reduced risk of injury).



## Outcome 7: Understand the importance of healthy eating

**Healthy eating:** Principles of a healthy balanced diet, National Food Guide, Food Standards Agency (FSA), eat well plate (balance of good health), Government Department of Health 'five a day' recommendation.

**Importance of hydration:** Type of drink, intake quantity, timing of intake, importance (maintain body balance/homeostasis, maintain body processes and functions, maintain physical and mental performance).

**Professional role boundaries:** Code of Ethics, REPs Code of Conduct, when to refer to GP or dietary professionals (obesity, malnutrition, excessively underweight, eating disorders).

**Key nutrients:** Macronutrients (carbohydrates, fats, proteins), micronutrients (water soluble vitamins C and B, fat soluble vitamins A, D, E and K), minerals (calcium, copper, iron, magnesium, phosphorus, potassium, sodium, selenium, zinc), water.

**Dietary role of key nutrients:** Carbohydrate (energy, digestion, nervous system function), fats (provide essential fatty acids, insulation, protection of vital organs, energy, transport fat-soluble vitamins), protein (muscle growth, muscle repair, oxygen transport, fight disease, energy), vitamins (energy metabolism, protein synthesis, glycogen synthesis, blood clotting, red blood cell formation, aid growth, maintenance of teeth and bones, aids vision), minerals (bone growth, teeth growth, energy production, enzyme function, nerve and muscle function, water balance, blood clotting, oxygen transport in red blood cells), water (maintain hydration, maintain homeostasis, heat regulation,

maintain blood plasma volume, removal of waste products).

**Dietary sources of the key nutrients:**

Simple carbohydrates (sugar, sweets, chocolate, fruit), complex carbohydrates (beans, bread, pasta, potatoes, rice, corn), fats (meat, dairy products, processed foods cakes, biscuits, pies, oils), protein (meat, fish, eggs, dairy products, grains, beans, leafy vegetables), vitamins (vegetables, fruit, milk, fish, eggs), minerals (milk, nuts, vegetables, meats).

**Energy balance equation:** Energy needs for different activities, energy intake, energy expenditure, positive energy balance, negative energy balance, basic metabolic rate (BMR), physical activity levels, calculating energy intake and expenditure.

**Health risks of poor nutrition:** Obesity, diabetes, malnutrition, heart disease, stroke, osteoporosis, cancer, poor circulation, hypertension, arthritis, mental health problems (depression, anxiety, low self image).

# UV20523

## Know how to support clients who take part in exercise and physical activity

The aim of this unit is to develop your knowledge and understanding of how to support clients and provide ongoing customer service. You will also develop the skills to support clients taking part in exercise and physical activity.

Level

**2**

Credit value

**2**

GLH

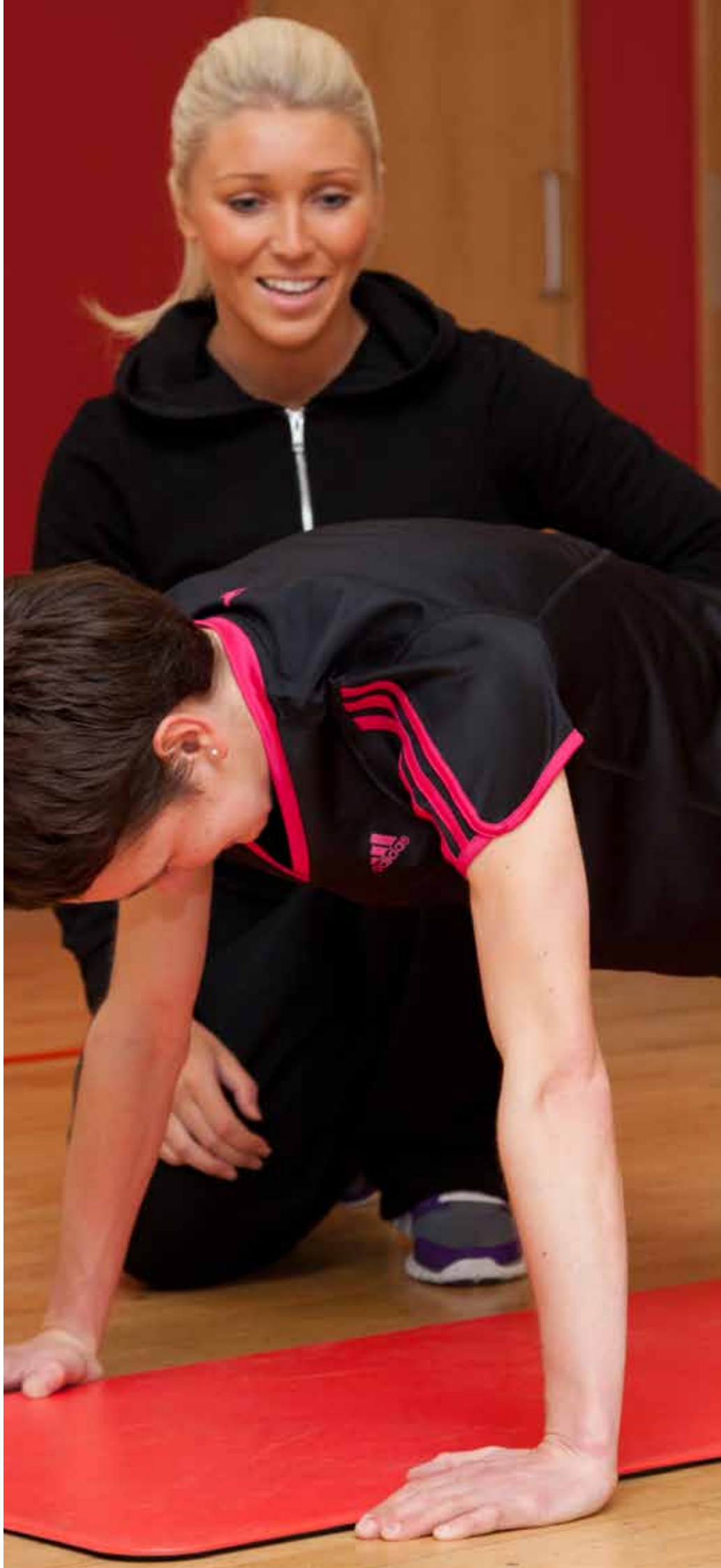
**13**

Observation(s)

**0**

External paper(s)

**0**



# Know how to support clients who take part in exercise and physical activity

## Learning outcomes

On completion of this unit you will:

1. Understand how to form effective working relationships with clients
2. Understand how to address barriers to exercise/physical activity that clients experience
3. Understand how to support clients to adhere to exercise/physical activity
4. Understand how to provide ongoing customer service to clients

## Evidence requirements

1. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
2. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes in this unit. All outcomes must be achieved.
3. *External paper*  
There is no external paper requirement for this unit.

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

# Knowledge



## Outcome 1

### Understand how to form effective working relationships with clients

You can:	Portfolio reference / Assessor initials*
a. Explain why it's important to form effective working relationships with clients	
b. Explain why it's important to present oneself and the organisation positively to clients	
c. Describe how different communication skills can be used to assist clients with motivation	
d. Explain the importance of valuing equality and diversity when working with clients	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 2

### Understand how to address barriers to exercise/physical activity that clients experience

You can:	Portfolio reference / Assessor initials*
a. Identify the typical barriers to exercise/physical activity that clients experience	
b. Explain how incorporating a client's exercise/physical activity preference into their programme can strengthen motivation and adherence	
c. Describe different incentives and rewards that can strengthen client motivation and adherence	
d. Describe different strategies that can help clients overcome typical barriers to exercise/physical activity	

\*Assessor initials to be inserted if orally questioned.



## Outcome 3

### Understand how to support clients to adhere to exercise/ physical activity

You can:	Portfolio reference / Assessor initials*
a. Explain why it is important for a client to take personal responsibility for their own fitness and motivation	
b. Describe how to assist clients to develop their own strategy for motivation and adherence	
c. Identify different behaviour change approaches/strategies to encourage adherence to exercise/physical activity	
d. Describe how to set short, medium and long term SMART goals	
e. Describe how to review and revise short, medium and long term SMART goals	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 4

### Understand how to provide ongoing customer service to clients

You can:	Portfolio reference / Assessor initials*
a. Explain the importance of client care both for the client and the organisation	
b. Explain why it is important to deal with client needs to their satisfaction	
c. Identify where to source relevant and appropriate information to meet client needs	
d. Explain the importance of dealing with any delay in meeting client needs timely and effectively	
e. Give examples of how to exceed customer expectations, when appropriate	
f. Explain the importance of handling client complaints positively following an organisation's procedure	

\*Assessor initials to be inserted if orally questioned.

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Understand how to form effective working relationships with clients

### **Effective working relationships with clients:**

Different clients (specific needs, apparently healthy adults, apparently healthy young people, antenatal and postnatal clients, disabled clients), importance of gaining mutual respect, gaining mutual confidence, gaining mutual trust, determine client needs, establish rapport.

### **Positive presentation of self and organisation:**

Presentation (professional conduct, dress/appearance, attitude, show respect, equal opportunities, inclusion and exclusion, punctuality), importance of gaining clients' confidence, gaining clients' respect, enhance professional image and reputation, gain repeat clients, word of mouth, gain new clients.

### **Communication skills and client motivation:**

Personalised, client feels valued, friendly and welcoming with new and returning clients, verbal (telephone, face to face, language, voice intonation, accent, dialect), non-verbal (questionnaires, handouts, posters, e-mails, websites, social networking), body language to provide positive feedback to clients, active listening to encourage client views about their performance, open questions, demonstration to show and reinforce exercise techniques, informal consultation to discuss client needs and set goals, written communication to summarise agreed goals and plans.

### **Importance of valuing equality and diversity:**

To maintain respect and dignity, to ensure fair treatment, to meet

individual needs, to provide individual encouragement to reach potential, to provide a safe, supportive and welcoming environment, equality and diversity can be met by maintaining professional boundaries, staying non-judgmental and ensuring equal rights (gender, race, nationality, ethnic or national origin, religious or political beliefs, disability, marital status, social background, family circumstance, sexual orientation, gender reassignment, spent criminal convictions, age or for any other reason).



## Outcome 2: Understand how to address barriers to exercise/physical activity that clients experience

**Typical barriers to exercise:** Threatened by 'super-fit instructors/beautiful people', access, transport, cost, time, energy, lack of motivation, lack of knowledge, self-conscious, low self-efficacy, low self-esteem, lack of childcare, gender, age, ethnicity, socio-economic status, social pressure, health and injury concerns, no exercise partner to motivate, unreadiness to change behaviour.

**Strengthen motivation and adherence:** Incorporate client's exercise and physical preferences, plan programmes accordingly, preferences (health related, fitness related, enjoyment related, social), consideration of these factors strengthen motivation and adherence (increase intrinsic motivation, increase client control and autonomy, increase self-efficacy, increase potential competence and ability, increase enjoyment).

**Incentives and rewards:** Physical and psychological health benefits, physical fitness improvements, achievement of personal goals, social interaction, fun and enjoyment, improved ability to complete daily living tasks, positive praise and feedback from others, free memberships, free training sessions, free personal instruction, gym challenges, social events, rewards based on attendance, rewards based on achievement of goals.

**Strategies to overcome barriers to exercise:** Select appropriate exercise activities (ability, fitness level, enjoyment, client needs, peer group), provide financial concessions, appropriate time scheduling of exercise activities, provide accurate exercise information and advice, provide access to childcare, referral to relevant health professionals,

social support and inclusion, encourage exercise partners, goal setting (SMART), positive reinforcement, enthusiasm, encouragement, social support, rapport with instructor, teaching approaches (learning style, verbal/non-verbal communication, equal opportunities).



### Outcome 3: Understand how to support clients to adhere to exercise/physical activity

#### **Importance of taking personal responsibility:**

Increase intrinsic motivation, increase control and autonomy, increase potential for exercise adherence, encourage personal reflection of progress and needs.

#### **Assisting clients to develop their own strategy:**

Regular consultations with client, clarify goals, establish realistic expectations, review exercise behaviour, address barriers to exercise, make strategy plan for relapse.

#### **Behaviour change approaches/strategies:**

Behaviour change (stages of behaviour change, relapse prevention model), approaches/strategies (prompting, contract between trainer and client, rewarding attendance, positive feedback on progress, goal setting and review, social support, reduce barriers, provide exercise information and guidance).

#### **Goal setting:**

Needs and wants analysis, SMART principles (specific, measurable, achievable, realistic, time bound), short, medium and long term SMART goals (improve health, develop specific fitness components, sport specific, improve psychological wellbeing, improve social interaction, fun and enjoyment, lifestyle, functional ability for daily life, weight management).

#### **Review and revise goals:**

Review short, medium and long term SMART goals, goal review methods (consultation, written client questionnaire, analysis of exercise records), review progress (achievement of agreed goals, previous and current client needs), and set new SMART goals.



## Outcome 4: Understand how to provide ongoing customer service to clients

**Importance of client care:** For the client (personalised customer service, enhanced customer experience, achievement of goals), for the organisation (avoidance of litigation (law of tort), improved retention, growth of business, maintain image and reputation).

**Importance of dealing with client needs:** Maintain satisfaction of client, meet client needs, achieve client goals, maintain confidence and trust of client, promote client adherence and attendance, maintain professional and organisation image, positive word of mouth, potential increase in client base.

**Sources of appropriate information to meet client needs:** Timetables, noticeboard, e-mails to keep clients informed, REPs code of conduct, organisation's procedures, referral professionals (GP, physiotherapist, nutritionist), evidence based journals, evidence based websites, evidence based text books, customer feedback.

**Importance of meeting client needs timely and effectively:** Maintain client satisfaction, to stop a problem escalating, optimise effectiveness of service, maintain customer loyalty, minimise risk of relapse or drop-out, maintain reputation and professional image.

**Exceed customer expectations:** Customer needs analysis, provide service over and above what is expected, follow organisation's procedures, examples of exceeding expectations (level of personal attention and service, standard of exercise service provided, levels of personal communication experienced).

**Handle client complaints positively:** Acknowledge complaint immediately (HEAT – Hear, Empathise, Apologise, Take action), handle complaints (privately, positively, confidently, professionally, promptly, confidentially, empathetically, with trust and respect, to client's satisfaction), follow agreed procedures (organisation's operational procedures and good practice, REPs Code of Conduct).

# UV20526

## Planning gym-based exercise

The aim of this unit is to develop the knowledge, understanding and skills that you require to plan and prepare a gym-based exercise programme for apparently healthy adults (individuals and groups). This may include young people aged 14-16 (provided they are in a larger adult group), older adults, antenatal and postnatal clients and disabled clients (provided the relevant contra-indications and safety guidelines are observed).

Level

**2**

Credit value

**4**

GLH

**23**

Observation(s)

**1**

External paper(s)

**0**



# Planning gym-based exercise

## Learning outcomes

On completion of this unit you will:

1. Be able to collect and use client information to plan a gym-based exercise programme
2. Be able to plan a safe and effective gym-based exercise programme with clients
3. Understand how to collect client information to plan gym-based exercise
4. Understand how to use client information to plan gym-based exercise
5. Understand how to plan gym-based exercise with clients

## Evidence requirements

1. *Environment*  
Evidence for this unit must be gathered in a real or realistic working environment.
2. *Simulation*  
Simulation is not allowed in this unit.
3. *Observation outcomes*  
Competent performance of 'Observation' outcomes must be demonstrated to your assessor on **at least one occasion**.
4. *Range*  
All ranges must be competently demonstrated.
5. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
6. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes and ranges in this unit. All outcomes and ranges must be achieved.
7. *External paper*  
There is no external paper requirement for this unit.

# Achieving observations and range

## Achieving observation outcomes

Your assessor will observe your performance of practical tasks. The minimum number of observations required is indicated in the evidence requirements section of this unit.

Criteria may not always naturally occur during a practical observation. In such instances you will be required to produce other forms of evidence or asked questions to demonstrate your competence in this area. Your assessor will document the criteria that have been achieved through oral questioning.

Your assessor will sign off an outcome when all criteria have been competently achieved.

## Achieving range

The range section indicates what must be covered. Ranges should be practically demonstrated as part of an observation. Where this is not possible other forms of evidence may be produced. All ranges must be covered.

Your assessor will document the portfolio reference once a range has been competently achieved.



# Observations

## Outcome 1

### Be able to collect and use client information to plan a gym-based exercise programme

You can:

- a. Use appropriate methods to collect information to plan a gym-based programme
- b. Check the information is accurate and up-to-date
- c. Identify client needs and potential and any possible risks from participation in a gym-based programme
- d. Maintain client confidentiality

\* May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 2

### Be able to plan a safe and effective gym-based exercise programme with clients

You can:

- a. Agree objectives with clients appropriate to:
  - their needs and potential
  - accepted good practice in the industry
  - own level of competence

\*May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



# Range

**\*You must practically demonstrate that you have:**

<b>Planned to minimise risk relating to <b>all</b> factors</b>	<b>Portfolio reference</b>
Client	
Activities planned with the client	
Other activities happening at the same time	
<b>Carried out screening using <b>all</b> methods</b>	<b>Portfolio reference</b>
PAR-Q	
Informed consent	
<b>Collected <b>all</b> client information</b>	<b>Portfolio reference</b>
Personal goals	
Lifestyle	
Medical history	
Physical activity history	
Physical activity preferences	
Physical measurements (height, weight and BMI)	
<b>Provided <b>all</b> information to clients</b>	<b>Portfolio reference</b>
Sensitive feedback based on test results/norms and collected information	
Healthy lifestyle advice (within limits of knowledge and competence)	
<b>Planned <b>all</b> components of a gym-based session</b>	<b>Portfolio reference</b>
Safe and effective warm-up	
Safe and effective cool-down	

\*It is strongly recommended that all range items are practically demonstrated. Where this is not possible, other forms of evidence may be produced to demonstrate competence.



\*You must practically demonstrate that you have:

Planned to meet a <b>minimum of 3</b> client objectives		Portfolio reference
Improve fitness		
Improve motivation		
Address barriers to participation		
Improve skills and techniques		
Improve health		
Fun and enjoyment		
Planned to improve <b>all</b> components of fitness		Portfolio reference
Cardiovascular fitness		
Muscular fitness		
Flexibility		
Motor skills		
Planned to use a minimum of <b>3</b> types of cardiovascular equipment		Portfolio reference
Upright cycle		
Recumbent cycle		
Treadmill		
Stepper		
Rowing machine		
Elliptical trainer		
Cross trainer		

\*It is strongly recommended that all range items are practically demonstrated. Where this is not possible, other forms of evidence may be produced to demonstrate competence.



\*You must practically demonstrate that you have:

Planned to use a <b>minimum of 4</b> fixed resistance machines	Portfolio reference
Seated chest press (neutral grip)	
Seated chest press (BB grip)	
Bench press	
Pec dec	
Seated row (low pulley)	
Seated row (neutral grip)	
Seated row (BB grip)	
Shoulder press	
Lat pull down (in front of chest)	
Assisted pull up	
Tricep pushdown (high pulley)	
Tricep press	
Bicep curl (low pulley)	
Seated bicep curl	
Leg press	
Total hip	
Seated knee extension	
Lying leg curl	
Seated leg curl	
Abdominal machine	
Seated abductor	
Seated adductor	
Lower back machine	

\*It is strongly recommended that all range items are practically demonstrated. Where this is not possible, other forms of evidence may be produced to demonstrate competence.



**\*You must practically demonstrate that you have:**

Planned to use a <b>minimum of 3</b> body weight exercises	Portfolio reference
Chins	
Press up	
Lunge	
Squat	
Abdominal curl/plank	
Back raise	

Planned to use a <b>minimum of 4</b> free weight exercises	Portfolio reference
Front raise (DB)	
Single arm row	
Bent arm pullover (DB)	
Shoulder press (DB)	
Lateral raise (DB)	
Upright row (BB)	
Bench press	
Flyes (DB)	
Prone flye (DB)	
Supine tricep press (BB)	
Single arm tricep press (DB)	
Bicep curl (BB) (DB)	
Lunge (BB) or (DB) optional	
Deadlift (BB) (DB)	
Squat (BB) (DB)	

Considered adaptations to plans for <b>all</b> client groups	Portfolio reference
Young people in the 14-16 age range	
Antenatal and postnatal women	
Older people (50+)	

\*It is strongly recommended that all range items are practically demonstrated. Where this is not possible, other forms of evidence may be produced to demonstrate competence.

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

Where possible your assessor will integrate knowledge outcomes into practical observations through oral questioning.

# Knowledge



## Outcome 2

### Be able to plan a safe and effective gym-based exercise programme with clients

You can:	Portfolio reference / Assessor initials*
b. Select gym-based exercises that will help clients to develop: <ul style="list-style-type: none"><li>• cardiovascular fitness</li><li>• muscular fitness</li><li>• flexibility</li><li>• motor skills</li></ul>	
c. Plan how to minimise any risks relevant to the programme	
d. Plan realistic timings and sequences for exercise	
e. Record programme plans in an appropriate format	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 3

### Understand how to collect client information to plan gym-based exercise

You can:	Portfolio reference / Assessor initials*
a. Explain the process of informed consent	
b. Describe different methods to collect client information, including: <ul style="list-style-type: none"> <li>• questionnaire</li> <li>• interview</li> <li>• observation</li> <li>• physical measurements</li> </ul>	
c. Describe how to determine which method(s) of collecting information are appropriate according to the individual	
d. Explain the principles of screening clients prior to gym-based exercise to include the use of the physical activity readiness questionnaire (PARQ)	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 4

### Understand how to use client information to plan gym-based exercise

You can:	Portfolio reference / Assessor initials*
a. Describe the factors, based on client screening, which may affect safe exercise participation	
b. Give examples of how client information affects the planning of gym-based exercise	
c. Identify the reasons for temporary deferral of exercise	
d. Explain the reasons for referring clients to other professionals	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 5

### Understand how to plan gym-based exercise with clients

You can:	Portfolio reference / Assessor initials*
a. Describe how to plan gym-based exercise to meet the needs of clients with different objectives	
b. Explain why it is important to agree goals and objectives for gym-based exercise with clients	
c. Identify a range of exercises for individual clients to develop: <ul style="list-style-type: none"> <li>• cardiovascular fitness</li> <li>• muscular fitness</li> <li>• flexibility</li> <li>• motor skills</li> </ul>	
d. Identify a range of cardiovascular and resistance machines, and their uses	
e. Describe how to plan gym-based exercise using circuit formats	

*\*Assessor initials to be inserted if orally questioned.*

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Be able to collect and use client information to plan a gym-based exercise programme

### **Use methods to collect information:**

Client information (personal details, personal goals, lifestyle, medical history, physical activity history, current health status, physical activity preferences, barriers to participation), interview methods (formal, informal), questionnaire methods (e.g. PARQ, lifestyle, medical history), observation methods (e.g. exercise technique, signs of exertion, posture), physical measurements (height, weight, Body Mass Index, blood pressure, waist to hip ratio, bioelectrical impedance, other fitness tests to meet client needs).

### **Check information is accurate and up-to-date:**

Verbally check recorded information with client, amend information if required, gain client authentication or signature if required.

### **Identify client needs, potential and possible risks:**

For participating in different types of exercise (cardiovascular, muscular, flexibility, motor skills), needs and potential (fitness level, skill level, goals), possible risks (coronary heart disease risk factors, medical conditions, medication, medical history, aggravation of injury, previous exercise history).

### **Maintain client confidentiality:**

According to data protection legislation (e.g. confidential paperwork securely stored in locked filing apparatus, e-information password protected, coding system used on confidential forms instead of names), according to code of ethics.



## Outcome 2: Be able to plan a safe and effective gym-based exercise programme with clients

**Agree objectives with clients:** Objectives (improve fitness, improve motivation, address barriers to participation, weight management, improve skills and techniques, improve health, fun and enjoyment), appropriate to their needs and potential, appropriate to accepted good practice, appropriate to own level of competence), agreeing (use communication skills, consider client preferences and needs, use negotiation skills, reach a mutual agreement, signature of client).

**Select gym-based exercises:** Appropriate to clients needs/objectives, to develop cardiovascular fitness, to develop muscular fitness, to develop flexibility, to develop motor skills, apply exercise variables (reps, sets, resistance, intensity, duration, exercise order, speed of movement, range of movement).

**Minimise risks:** Client risks (e.g. medical condition), risks of activities planned with the client (e.g. exercise causing injury), risks from other activities happening at the same time (e.g. injury from other individuals using equipment in close proximity), undertake a risk assessment of exercise environment, plan risk control measures (e.g. pre-exercise health screening, appropriate exercise selection or alternatives, safe exercise supervision).

**Plan realistic timings and sequences:** Meet client objectives and needs, for each component of the session, for different exercises, appropriate to environment, appropriate to type and duration of session, to consider other gym users.

**Record programme plans:** Use a written programme card or session plan, record warm up (mobility, pulse raiser and stretch),

record details of resistance exercises, record details of cardiovascular exercises, record details of cool down and stretching activities, list (exercise name, reps, sets, intensity, duration, level or resistance, muscle group, realistic timings and sequences, alternatives and progressions, teaching points).



### Outcome 3: Understand how to collect client information to plan gym-based exercise

**Process of informed consent:** Aims and objectives of the exercise session, physical and technical demands of the exercise session, activities included, benefits and risks of the exercise session, explaining the meaning of informed consent to the client, providing the client with opportunity to reflect on verbal and written information provided, checking the clients understanding, providing the client with opportunity to make an informed decision about participation, recording signed consent, secure and confidential storage of written informed consent.

**Methods of collecting information:**

Questionnaire, interview, observation, physical measurements.

**Determining appropriate methods:**

Based on client's specific needs and objectives, based on client's personality type and confidence, based on availability of time, based on availability of equipment and environment.

**Principles of screening clients:**

Identify and refer individuals with medical contra-indications to exercise, to identify individuals at increased risk of disease due to age, symptoms, injury, or risk factors, to identify individuals with clinically significant disease who should participate in a medically supervised exercise programme, to identify individuals with specific needs, to identify likes, dislikes, preferences, to identify barriers to participation, to enable prescription of safe and effective exercise, to inform setting of objectives and goals.



## Outcome 4: Understand how to use client information to plan gym-based exercise

### Factors affecting safe exercise

**participation:** Primary and secondary risk factors of coronary heart disease, medical conditions, medication, medical history, previous exercise history, fitness and skill level, current injury status, specific needs (e.g. age, disability, ante and postnatal).

### Effect of client information on planning:

Modification of warm up and cool down (e.g. plan longer duration and a more gradual approach for older adults or lower fitness levels), modification of main exercises (e.g. plan increased exercise complexity and range of movement for higher fitness or skill levels), modification of exercise intensity (e.g. plan for higher repetitions and lower resistance for younger people, plan slower exercise speeds for lower skill levels, plan lower target heart rates for cardiovascular health), modification of programme variables to meet individual needs (e.g. frequency, intensity, duration, progression, overload), offer alternative exercises to meet client preference and ability.

### Reasons for temporary deferral of

**exercise:** Minor illness (e.g. colds), minor injuries (e.g. muscle strain), excessive fatigue, inappropriate personal clothing and equipment, positive response to PARQ.

### Reasons for referring clients:

Identification of contra-indications and medical conditions (e.g. refer to GP), identification of injuries (e.g. refer to physiotherapist, sports therapist), when outside the limits of professional responsibility or competence at level 2 (e.g. referral to more experienced/advanced instructor, specific populations instructor), to meet insurance requirements, to meet ethical and legal requirements (public liability, professional liability).



## Outcome 5: Understand how to plan gym-based exercise with clients

**Planning gym-based exercise:** Plan to meet the needs of clients objectives (improve fitness, weight management, improve motivation, address barriers to participation, improve skills and techniques, improve health, fun and enjoyment), apply ACSM (American College of Sports Medicine), FITT guidelines (Frequency, Intensity, Time, Type), apply the principles and variables of training (adherence, overload, progression, adaptation, specificity, reversibility), session to include warm up component (mobility, pulse raising, preparatory stretching, induction and skill rehearsal), aerobic component (increase heart rate, maintain heart rate in training zone, lower heart rate), muscular strength and endurance component (muscle balance, exercise sequencing), cool down component (pulse lowering after cardiovascular training, re-warming after resistance training, maintenance and developmental stretching), consider reps, sets, exercise order, balance of programme.

**Importance of agreeing goals and objectives:** Confirm/clarify objectives with client, ensure goals are realistic and achievable, ensure client has ability and willingness, opportunity to review performance, identify motivational targets, motivate/encourage client, inclusion and adherence, goals (short term, medium term, long term), SMART (specific, measurable, attainable, realistic, time bound).

**Exercises to develop cardiovascular fitness:** Upright cycle, recumbent cycle, treadmill, stepper, rowing machine, elliptical trainer, cross trainer.

### Exercises to develop muscular fitness:

Range of bodyweight exercises (chins, press up, lunge, squat, abdominal curl, plank, back raise), resistance machines (see range), free weights (deadlift (BB and DB), lunge (BB and DB), squat (BB and DB), front raise (DB), single arm row, single arm tricep press (DB), bicep curl (BB and DB), shoulder press (DB), lateral raise (DB), upright row (BB), bench press, bent arm pullover (DB), flyes (DB), prone flye (DB), supine tricep press (BB).

### Exercises to develop flexibility:

Types (static 10-12 seconds, dynamic, maintenance 15 seconds and developmental stretching 15-30 seconds), range of stretching exercises e.g. standing, sitting or lying (pectorals, latissimus dorsi, trapezium, rhomboids, deltoids, triceps, biceps, abdominals, erector spinae, quadriceps, hip flexor, hamstrings, gluteals, adductors, abductors, gastrocnemius, soleus, tibialis anterior).

### Exercises to develop motor skills:

Consideration of all the exercises in relation to speed, agility, reaction time, power, co-ordination, balance.

**Cardiovascular machines:** Range of machines (upright cycle, recumbent cycle, treadmill, stepper, rowing machine, elliptical trainer, cross trainer), uses of different machines.

**Resistance machines:** Range of machines (seated chest press with neutral grip, seated row with low pulley, seated row with neutral grip), shoulder press, lat pulldown in front of chest, assisted pull up, bench press, seated chest press with barbell grip, pec dec, seated row with barbell grip, triceps pushdown with high pulley, tricep press, biceps curl with low



## Outcome 5: Understand how to plan gym-based exercise with clients (continued)

pulley, seated bicep curl, leg press, total hip, seated adductor, seated abductor, seated knee extension, lying thigh curl, seated thigh curl, abdominal machine, lower back machine, uses of different machines.

### **Planning using circuit formats:**

Types of circuit (aerobic, bodyweight, resistance, free weights, muscle strength and endurance), components of a circuit, sequencing of exercise stations, intensity of exercise, complexity of exercises, apply exercise variables (reps, sets, resistance, intensity, duration, exercise order, speed of movement, range of movement).

# Notes

Use this area for notes and diagrams



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# UV20527

## Instructing gym-based exercise

It is the aim of this unit to develop the knowledge, understanding and practical skills that you require to effectively instruct and supervise gym-based exercise to apparently healthy adults (individuals and groups). This may include young people aged 14-16 (provided they are in a larger adult group), older adults, antenatal and postnatal clients and disabled clients (provided the relevant contra-indications and safety guidelines are observed).

Level

**2**

Credit value

**6**

GLH

**37**

Observation(s)

**1**

External paper(s)

**0**



# Instructing gym-based exercise

## Learning outcomes

On completion of this unit you will:

1. Be able to prepare self and equipment for gym-based exercise
2. Be able to prepare clients for gym-based exercise
3. Be able to instruct gym-based exercise
4. Be able to supervise clients undertaking gym-based exercise
5. Be able to bring a gym-based exercise session to an end
6. Be able to reflect on providing gym-based exercise
7. Be able to support clients taking part in gym-based exercise
8. Understand how to provide gym-based exercise

## Evidence requirements

1. *Environment*  
Evidence for this unit must be gathered in a real or realistic working environment.
2. *Simulation*  
Simulation is not allowed in this unit.
3. *Observation outcomes*  
Competent performance of 'Observation' outcomes must be demonstrated to your assessor on **at least one occasion**.
4. *Range*  
All ranges must be competently demonstrated.
5. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
6. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes and ranges in this unit. All outcomes and ranges must be achieved.
7. *External paper*  
There is no external paper requirement for this unit.

# Achieving observations and range

## Achieving observation outcomes

Your assessor will observe your performance of practical tasks. The minimum number of observations required is indicated in the evidence requirements section of this unit.

Criteria may not always naturally occur during a practical observation. In such instances you will be required to produce other forms of evidence or asked questions to demonstrate your competence in this area. Your assessor will document the criteria that have been achieved through oral questioning.

Your assessor will sign off an outcome when all criteria have been competently achieved.

## Achieving range

The range section indicates what must be covered. Ranges should be practically demonstrated as part of an observation.

Your assessor will document the portfolio reference once a range has been competently achieved.



# Observations

## Outcome 1

### Be able to prepare self and equipment for gym-based exercise

You can:

- a. Prepare self to supervise gym-based exercise
- b. Select equipment for gym-based programmes as appropriate to client needs
- c. Prepare the environment and equipment as appropriate to client needs

*\* May be assessed through oral questioning.*

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 2

### Be able to prepare clients for gym-based exercise

You can:

- a. Help clients feel welcome and at ease
- b. Explain the purpose and value of the exercises, including warm up and cool down
- c. Describe the exercises, including their physical and technical demands
- d. Confirm or revise plans with clients as appropriate
- e. Advise clients of the facility's emergency procedures
- f. Use warm up activities that are safe and effective for the clients

\*May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 3

### Be able to instruct gym-based exercise

You can:

- a. Give explanations and demonstrations that are technically correct (with safe and effective alignment of exercise positions)
- b. Communicate as appropriate to client needs and the environment

*\* May be assessed through oral questioning.*

Observation	1	<i>Optional</i>	<i>Optional</i>
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 4

### Be able to supervise clients undertaking gym-based exercise

You can:

- a. Adopt appropriate positions to observe clients and respond to their needs
- b. Monitor the safety and intensity of exercise
- c. Provide feedback and instructing points which are timely, clear and motivational
- d. Adapt exercises with suitable progressions and regressions according to client needs

\*May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 5

### Be able to bring a gym-based exercise session to an end

You can:

- a. Allow sufficient time to end the session according to clients' level of experience
- b. Use cool down activities that are safe and effective for clients
- c. Give the clients an accurate summary of feedback on the session
- d. Give the clients the opportunity to:
  - reflect on the session
  - ask questions
  - provide feedback
  - identify further needs
- e. Make sure the clients understand how to continue their programme of gym-based exercise without direct supervision
- f. Leave the environment in a condition acceptable for future use

\* May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 6

### Be able to reflect on providing gym-based exercise

You can:

- a. Review the outcomes of working with clients and client feedback
- b. Identify:
  - how well the exercises met client needs
  - how effective and motivational the relationship with the clients was
  - how well the instructing style matched client needs
- c. Identify how to improve personal practice
- d. Explain the value of reflective practice

\*May be assessed through oral questioning.

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



## Outcome 7

### Be able to support clients taking part in gym-based exercise

You can:

- a. Present a positive image of self and organisation to clients
- b. Establish an effective working relationship with clients
- c. Communicate with clients in a way that makes them feel valued
- d. Use motivational styles appropriate to the client and the exercise format

\* *May be assessed through oral questioning.*

Observation	1	Optional	Optional
Date achieved			
Criteria questioned orally			
Portfolio reference			
Assessor initials			
Learner signature			



# Range

You must practically demonstrate that you have:

<b>Used <b>all</b> communication styles</b>	<b>Portfolio reference</b>
Motivational techniques appropriate to the individual	
Motivational techniques appropriate to the exercise format	
<b>Instructed <b>all</b> components of a gym-based session</b>	<b>Portfolio reference</b>
Safe and effective warm-up	
Safe and effective cool-down	
<b>Instructed a <b>minimum of 3</b> types of cardiovascular equipment</b>	<b>Portfolio reference</b>
Upright cycle	
Recumbent cycle	
Treadmill	
Stepper	
Rowing machine	
Elliptical trainer	
Cross trainer	
<b>Instructed a <b>minimum of 3</b> body weight exercises</b>	<b>Portfolio reference</b>
Chins	
Press up	
Lunge	
Squat	
Abdominal curl/plank	
Back raise	



You must practically demonstrate that you have:

Instructed a <b>minimum of 4</b> fixed resistance machines	Portfolio reference
Seated chest press (neutral grip)	
Seated chest press (BB grip)	
Bench press	
Pec dec	
Seated row (low pulley)	
Seated row (neutral grip)	
Seated row (BB grip)	
Shoulder press	
Lat pull down (in front of chest)	
Assisted pull up	
Tricep pushdown (high pulley)	
Tricep press	
Bicep curl (low pulley)	
Seated bicep curl	
Leg press	
Total hip	
Seated knee extension	
Lying leg curl	
Seated abductor	
Seated adductor	
Seated leg curl	
Abdominal machine	
Lower back machine	



You must practically demonstrate that you have:

Instructed a <b>minimum of 4</b> free weight exercises	Portfolio reference
Front raise (DB)	
Single arm row	
Bent arm pullover (DB)	
Shoulder press (DB)	
Lateral raise (DB)	
Upright row (BB)	
Bench press	
Supine tricep press (BB)	
Prone flyes (DB)	
Flyes (DB)	
Single arm tricep press (DB)	
Bicep curl (BB) (DB)	
Lunge (BB) or (DB) optional	
Deadlift (BB) (DB)	
Squat (BB) (DB)	
Spotting (must be covered in addition to the four chosen exercises)	
Used <b>all</b> forms of instruction	Portfolio reference
Correct lifting and passing	
Lifting the barbell safely from the floor and spotting	
Accurate demonstrations of exercises with particular attention to the speed of movement	

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

Where possible your assessor will integrate knowledge outcomes into practical observations through oral questioning.

# Knowledge



## Outcome 8

### Understand how to provide gym-based exercise

You can:	Portfolio reference / Assessor initials*
a. Identify safe and effective alignment for a range of gym-based exercise positions to cover use of: <ul style="list-style-type: none"><li>• cardiovascular machines</li><li>• resistance machines</li><li>• free weights</li></ul>	
b. Identify different methods of adapting a gym-based exercise programme to ensure appropriate progression and/or regression	
c. Describe how to develop client co-ordination by building exercises/ movements up gradually	
d. Describe the principles of behaviour management for group inductions	

*\*Assessor initials to be inserted if orally questioned.*

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Be able to prepare self and equipment for gym-based exercise

**Prepare self:** Personal clothing and footwear, professional image, review planning documents, timekeeping and organisation.

**Select equipment:** For clients (individuals, groups), appropriate to client needs, according to planned exercises, equipment to offer alternative exercises if required, (cardiovascular fitness, muscular fitness, flexibility, motor skills), equipment (e.g. cardiovascular machines, resistance machines, benches, racks, free weights, barbells, dumbbells, collars, mats).

**Prepare the environment and equipment:** For different clients (individuals, groups), for different exercises (cardiovascular fitness, muscular fitness, flexibility, motor skills, circuit formats), according to planned session, prepare environment (risk assessment, layout, ventilation, temperature, lighting), prepare equipment (risk assessment, check condition, ensure accessibility, resistance machine settings and pins).



## Outcome 2: Be able to prepare clients for gym-based exercise

### **Help clients feel welcome and at ease:**

Establish rapport, demonstrate equality, maintain professional conduct (dress, behaviour, respect), adopt a friendly and informal approach, demonstrate empathy, non-judgemental attitude, answer questions in full.

**Purpose and value of exercises:** Warm up exercises (safe physiological and psychological preparation, reduce injury risk, specific skill rehearsal), cardiovascular exercises (improve health and efficiency of heart, lungs, and vascular system), resistance exercises (develop muscular strength and endurance, muscular hypertrophy, improve bone density, reduce risk of osteoporosis, improve posture, improve joint stability), flexibility exercises (develop or maintain range of motion, reduce injury risk, improve posture), motor skill exercises (improve co-ordination, improve balance, improve speed and power, improve agility, improve reaction time, improve movement efficiency, improve functional movement), cool down exercises (safely return the body and mind to a resting state, develop flexibility, promote recovery from exercise).

**Describe exercises:** Rationale for exercises, purpose of exercises, physical and technical demands of exercises, offer alternatives for each exercise.

**Confirm or revise plans:** Present plans to the client, give the client opportunity to feedback and discuss plans, amend plans according to client needs and preferences.

**Advise clients of emergency procedures:** Fire procedure (location of fire exits, location of fire extinguishers, conduct for evacuation, location of meeting or assembly points, recording attendance),

accident or medical emergency procedure (location of duty first aider, location of first aid kits), other advisory emergency information (location of nearest office and telephone), other health and safety information (environment and equipment hazards, manual handling of exercise equipment).

**Use safe and effective warm up activities:** Mobility, pulse raising, preparatory stretching, induction and skill rehearsal, gradual and progressive, adapt for client needs (skill and fitness), adapt for environmental needs (temperature, space, type and intensity of session).



### Outcome 3: Be able to instruct gym-based exercise

**Instruct:** Clients (individuals, groups), different exercises and equipment (cardiovascular fitness, muscular fitness, flexibility, motor skills, circuit formats), components of the session (warm up and stretch, cardiovascular, muscular strength and endurance, cool down and stretch).

**Give explanations and demonstrations:**

Appropriate to the gym environment, IDEA (Introduction, Demonstration, Explanation of Activity), NAMSET (Name the Exercise, Name the Area, Name the Muscle, Silent demonstration, Explained demonstration, Teach into position), verbal explanations (technically correct, to correct poor technique, regular teaching points to meet individual needs, positive reinforcement), visual demonstrations of

movements and techniques (technically correct and accurate, effective posture, safe and effective alignment of exercise positions, quality and clarity of movement, appropriate movement speed), demonstrate correct lifting techniques (dead lifting barbell safely from the floor), demonstrate correct passing techniques (self spotting, use of spotter, use of racks).

**Communicate:** Appropriate to client needs, fair and equitable, appropriate to environment (e.g. space, layout), use appropriate methods of voice projection, use effective volume and pitch of voice (instructions, explanations, teaching points, motivation), use of motivational techniques appropriate to the client and exercise format.

### Outcome 4: Be able to supervise clients undertaking gym-based exercise

**Supervise:** Clients (individuals, groups), different exercises and equipment (cardiovascular fitness, muscular fitness, flexibility, motor skills, circuit formats).

**Adopt appropriate positions:** Observe clients (body position and posture, technical performance), to respond to client needs, use a variety of teaching positions (front, side, rear), use mirroring, demonstrate control of the client.

**Monitor safety and intensity of exercise:** Recognise signs of overexertion (breathlessness, pain or discomfort, change in skin colour), recognise signs of medical illness, monitor safety of exercise technique, monitor safe use of equipment and environment, monitor exercise intensity (talk test, Rate of Perceived Exertion

(RPE), target heart rate zones).

**Provide feedback and instructing points:** Feedback (timely, clear, motivational, positive praise, encouragement), clear and concise instructing points, verbal and practical (to improve and correct improved technique, to reinforce technique, feedback tailored to individual needs).

**Adapt exercises:** According to client needs, for apparently healthy special population clients (young people 14-16, ante and postnatal women, older adults 50+), progression or regression (exercise type, exercise order, number of exercises, repetitions, sets, speed, resistance, range of motion, target heart rate, duration).



## Outcome 5: Be able to bring a gym-based exercise session to an end

**Bring sessions to an end:** Clients (individuals, groups), sessions covering different exercises (cardiovascular fitness, muscular fitness, flexibility, motor skills, circuit formats).

**Allow sufficient time to end the session:** Adapt cool down according to client's needs (level of fitness, level of skill, level of experience), adapt cool down according to environmental needs (temperature, space, time of day, intensity of session).

**Use safe and effective cool down activities:** Incorporate different types of equipment, rewarming after resistance exercise, gradual pulse lowering after cardiovascular exercise maintenance stretching, developmental stretching, relaxation, revitalising.

**Give clients feedback:** Accurate summary of strengths and areas for improvement (technical performance and progress, motivation and effort, health and safety).

**Give clients opportunities:** Reflect on the session (own performance, own progress, instruction, enjoyment and satisfaction), ask questions (e.g. technique, training methods), provide feedback (e.g. instruction, activities), identify further needs (future sessions, training without supervision).

**Make sure clients understand their programme:** Overall purpose of the programme, specific goals and objectives, different programme components, details of activities and exercises included in each component, progressions and adaptations.

**Leave environment in acceptable condition:** Environment (clean, hygienic, tidy, temperature, ventilation, and lighting), equipment (clean, hygienic, removed and

safely stored/stacked, secure storage of free weights, remove pins from resistance machines), report and record maintenance/faults.



## Outcome 6: Be able to reflect on providing gym-based exercise

**Review outcomes:** Working with clients (achieved goals, achieved objectives), client feedback (positive, negative).

**Identify effectiveness:** Exercises meeting client needs (objectives, goals, safety, equipment), relationship with client (rapport, respect and trust, motivation, communication), instructing style to match client needs (demonstrations and explanations, teaching, motivation).

**Improve personal practice:** Areas for personal improvement (e.g. planning, communication, demonstration, instruction), how to improve (personal action plans, personal goal setting, identify continuing

professional development, undertake advanced training and qualifications).

**Value of reflective practice:** Identify personal strengths, to identify personal areas for improvement, to improve professional practice and standards, to more effectively plan and deliver gym-based exercise, to more effectively meet client needs.

## Outcome 7: Be able to support clients taking part in gym-based exercise

**Present a positive image:** Self (timekeeping, dress, hygiene, appearance, communication, professional behaviour), organisation (e.g. working relationship with colleagues, quality of customer care, branded uniform, promoting service level agreement).

**Establish an effective working relationship:** With clients (ethical, mutual respect and trust, maintain professional boundaries, fairness and equality), with colleagues (spotters, assistants, managers, other professionals).

**Communicate with clients:** Use positive verbal communication (language, volume, pitch and tone), demonstrate positive body language (hand gestures, eye contact, facial expressions), demonstrate active listening.

**Use motivational styles:** Appropriate to individual clients, appropriate to exercise format, positive reinforcement, voice pitch and tone, reward motivation, goal motivation, intrinsic self motivation, peer motivation.



## Outcome 8: Understand how to provide gym-based exercise

### **Safe and effective alignment for exercise**

**positions:** Exercise positions (sitting, standing, bent over, lying prone, lying supine, inclined, declined), neutral spine (sitting, standing, lying), joint alignment, range of movement (avoid locking/hyperextension and excessive range of movement), postural cues (standing 'tall and thin', weight bearing joints 'soft', looking in a forward direction), machine adjustments for client positioning, alignment of client to positional indicators on machines, specific technique instructions and teaching points for each exercise (cardiovascular machines, resistance machines, free weight exercises, body weight).

### **Methods of adapting gym-based exercise**

**programme:** Progression or regression (exercise mode, exercise order, number of exercises, repetitions, sets, speed, resistance, range of motion, target heart rate, duration).

**Developing client co-ordination:** Start with basic movements, start with light resistance, start with slow speed of movement, break the movements down into parts (starting position, phases of movement, end position), gradually build up parts of movement to whole movement.

### **Principles of behaviour management:**

Establish rapport with the group, use positive and confident communication, present a professional image, present clear aims for the induction, establish ground rules for gym health, safety and conduct, maintain eye contact with the group, gather the group for explanations and demonstrations, minimise possible distractions, manage group practice within a limited and observable area, induct equipment types together.

# UV20524

## Health, safety and welfare in a fitness environment

It is the aim of this unit to develop your knowledge and understanding of how to maintain health, safety and welfare in a fitness environment, including the safeguarding of children and vulnerable adults.

Level

2

Credit value

2

GLH

16

Observation(s)

0

External paper(s)

0



# Health, safety and welfare in a fitness environment

## Learning outcomes

On completion of this unit you will:

1. Understand emergency procedures in a fitness environment
2. Understand health and safety requirements in a fitness environment
3. Understand how to control risks in a fitness environment
4. Understand how to safeguard children and vulnerable adults

## Evidence requirements

1. *Knowledge outcomes*  
There must be evidence that you possess all the knowledge and understanding listed in the 'Knowledge' section of this unit. This evidence may include projects, assignments, case studies, reflective accounts, oral/written questioning and/or other forms of evidence.
2. *Tutor/Assessor guidance*  
You will be guided by your tutor/assessor on how to achieve learning outcomes in this unit. All outcomes must be achieved.
3. *External paper*  
There is no external paper requirement for this unit.

# Developing knowledge

## Achieving knowledge outcomes

You will be guided by your tutor and assessor on the evidence that needs to be produced. Your knowledge and understanding will be assessed using the assessment methods listed below:

- Observed work performance
- Witness testimony/statements
- Audio-visual media
- Evidence of prior learning or attainment
- Written questions
- Oral questions
- Assignments
- Case studies
- Professional discussion
- Employer-provided question papers and tests
- E-assessment.

# Knowledge



## Outcome 1

### Understand emergency procedures in a fitness environment

You can:	Portfolio reference / Assessor initials*
a. Identify the types of emergencies that may occur in a fitness environment	
b. Describe the roles that different staff and external services play during an emergency	
c. Explain the importance of following emergency procedures calmly and correctly	
d. Describe how to maintain the safety of people involved in typical emergencies, including children, older people and disabled people	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 2

### Understand health and safety requirements in a fitness environment

You can:	Portfolio reference / Assessor initials*
a. Outline why health and safety is important in a fitness environment	
b. Identify the legal and regulatory requirements for health and safety relevant to working in a fitness environment	
c. Describe the 'duty of care' and professional role boundaries in relation to special population groups	
d. Identify the typical roles of individuals responsible for health and safety in a fitness organisation	
e. Describe the types of security procedures that may apply in a fitness environment	
f. Describe the key health and safety documents that are relevant in a fitness environment	

*\*Assessor initials to be inserted if orally questioned.*



## Outcome 3

### Understand how to control risks in a fitness environment

You can:	Portfolio reference / Assessor initials*
<p>a. Identify possible hazards in a fitness environment, relating to:</p> <ul style="list-style-type: none"> <li>• facilities</li> <li>• equipment</li> <li>• working practices, including lifting and handling of equipment</li> <li>• client behaviour</li> <li>• security</li> <li>• hygiene</li> </ul>	
<p>b. Describe how to risk assess the types of possible hazards in a fitness environment</p>	
<p>c. Describe how to control risks associated with hazards in a fitness environment</p>	
<p>d. Identify the appropriate person/position to contact within a fitness organisation when hazards and risks cannot be controlled personally</p>	

\*Assessor initials to be inserted if orally questioned.



## Outcome 4

### Understand how to safeguard children and vulnerable adults

You can:	Portfolio reference / Assessor initials*
a. Describe what is meant by safeguarding the welfare of children and vulnerable adults	
b. Describe the responsibilities and limitations of a fitness instructor in regard to safeguarding children and vulnerable adults	
c. Identify the types of abuse which an instructor may encounter (physical, emotional, neglect, bullying and sexual)	
d. Identify possible signs of abuse (physical, emotional, neglect, bullying and sexual)	
e. Describe a fitness organisation's policies and procedures in relation to safeguarding children and vulnerable adults, including typical reporting procedures	
f. Describe the procedures to follow to protect yourself from accusations of abuse	
g. Identify the statutory agencies responsible for safeguarding children and vulnerable adults	
h. Explain when it may be necessary to contact statutory agencies	
i. Describe how to maintain the confidentiality of information relating to possible abuse	

\*Assessor initials to be inserted if orally questioned.

# Unit content



This section provides guidance on the recommended knowledge and skills required to enable you to achieve each of the learning outcomes in this unit. Your tutor/assessor will ensure you have the opportunity to cover all of the unit content.

## Outcome 1: Understand emergency procedures in a fitness environment

**Types of emergencies:** First aid (accidental injury, medical conditions), accident (using equipment, trips, slips, falls), fire (building, equipment, flammable products), missing person (child, disabled person, vulnerable adults), suspected bomb, chemicals.

**Roles of staff and external services:** Instructor (deal with situation when it arises within limits of own responsibility, refer situation if necessary, report emergency), receptionist (contact emergency services, meet and direct emergency services to location), instructor or line/duty manager (complete incident/report form according to organisation requirements), paramedic (treat medical emergency), Police (investigate missing person), Fire Service (investigate, resolve and make safe fire emergency).

**Importance of following emergency procedures:** To ensure the emergency is resolved, the health and safety of all clients and staff, staff responsibilities are clearly allocated and followed, the emergency is reported and recorded.

**Maintaining the safety of people involved:** Stop the fitness activity, provide information to keep people informed, direct to a safe environment (other area, first aid room, fire assembly point), contact appropriate personnel (line manager, emergency services, parent or guardian, significant others), consider needs of specific populations (disabilities, older adult, children), ensure appropriate procedures are in place.



## Outcome 2: Understand health and safety requirements in a fitness environment

**Importance of health and safety:** Protect clients and staff, ensure provision of safe and effective equipment, ensure safe and hygienic premises, to meet health and safety requirements and industry standards.

**Legal and regulatory requirements:** Health and safety legislation, disability discrimination legislation, Law of Tort, occupiers' liability, REPS Code of Conduct, employee and public liability insurance, control of substances hazardous to health, CRB checks.

**Duty of care and professional role boundaries:** Duty of care (ensure no unreasonable harm or loss, three criteria for negligence), greater duty of care with vulnerable adults (over 18 years and in need of community care services, mental or other disability, unable to care for self, potential for exploitation), greater duty of care with clients undergoing special physiological lifespan processes (ageing, childhood, antenatal, postnatal).

**Professional role boundaries for special populations:** Unable to practise or advertise as a special populations instructor, unable to instruct special population clients on one to one or group basis, unable to plan a progressive and long term special population activity programme, health screened and asymptomatic special populations may be accommodated on an occasional basis within mainstream exercise sessions, clients must be informed of instructor role boundaries and given the choice to participate, instructors should obtain relevant qualifications if regularly working with special population clients, insurance policies must cover the instruction

of special populations, other referral sources for maintaining professional role boundaries (Code of Ethics, REPS Code of Conduct, general practitioner, physiotherapist, first aider, line manager).

**Roles of individuals in health and safety:** Role of instructor (equipment and facility checks, service and maintenance, completing and recording specific activity risk assessments, maintaining safe practice during exercise services), role of managers (monitor health and safety practice, review risk assessments, review organisational health and safety policy, update staff on health and safety policy), health and safety executive (inspection and review of organisation's health and safety procedures and practice).

**Types of security procedures:** Controlled and recorded reception access/departure, CCTV coverage of public areas, entrances and exits, lockable storage for personal valuables, locked storage of maintenance and cleaning products, locked doors to areas with restricted public access, locked storage of client data records, opening and closing procedures, fire and evacuation procedures, fire alarm testing.

**Key health and safety documents:** Organisation health and safety policy, risk assessment, accident/incident report form, first aid book, equipment and facility maintenance and service records.



### Outcome 3: Understand how to control risks in a fitness environment

**Possible hazards:** Facilities (e.g. slippery or uneven floor surfaces, obstructed floor areas, fire), equipment (e.g. broken, improper technical use), working practices (e.g. inappropriate exercise type and intensity, improper exercise technique, lifting, handling), client behaviour (e.g. abuse), security (e.g. medical condition, unauthorised persons, theft), hygiene (e.g. cross-infection, contact with hazardous cleaning and maintenance products), anything that may cause harm.

**Risk assessment:** Visual inspection and appraisal of possible hazards, identification of who may be harmed, written completion of risk assessment form (hazards, harm potential, people affected, risk severity, risk frequency, risk rating, additional control measures), review of risks.

**Risk control:** Facilities (e.g. cleaning and maintenance schedule, appropriate activities, sufficient floor area, suitable client footwear, location of fire exits, location of fire extinguishers, serviced fire extinguishers, storage of flammable products, organisational procedure for fire emergency), equipment (e.g. service and maintenance schedule undertaken and recorded, out of order equipment clearly marked, correct technical instruction), working practices (e.g. correct technical instruction, appropriate exercise type and intensity, correct lifting and handling technique), client behaviour (e.g. rules and standards information), security (e.g. qualified first aider, replenished first aid kit, location of nearest first aid kit, organisational procedure for medical emergency, controlled reception access), hygiene (e.g. regular cleaning schedule, clothing guidelines for clients, client hygiene information).

**Appropriate personnel:** Referral of hazards outside the limits of personal responsibility (line manager, organisation health and safety manager, external services, health and safety executive).



## Outcome 4: Understand how to safeguard children and vulnerable adults

**Safeguarding welfare:** Children and vulnerable adults, protecting from maltreatment, preventing impairment of health and development, ensuring provision of safe and effective care, ensuring optimum life chances, acts that affect those working with children and vulnerable adults (the children act, the police act, the protection of children act, every child matters act, safeguarding vulnerable groups act, the disability discrimination act), protect yourself with CRB check.

**Responsibilities and limitations:** Responsibility of fitness instructor (duty of care to safeguard children and adults during provision of service, refer suspected and reported abuse to the designated employee), limitations (refer but not deal with suspected or reported abuse).

**Types of abuse:** Physical (e.g. hitting, shaking, throwing, poisoning, burning, drowning, suffocating, causing physical harm, forcing training and competition exceeding the capacity of the body, giving drugs to enhance performance or delay puberty), emotional (e.g. constant criticism, name calling, sarcasm, bullying, under constant pressure to perform to unrealistically high standards), neglect (e.g. not ensuring safety, exposure to undue cold or heat, exposure to unnecessary risk of injury), bullying (e.g. name calling, insults, verbal abuse, being deliberately embarrassed and humiliated by others, being made to feel different, being lied about, being physically assaulted or threatened with violence, being ignored), sexual (e.g. forcing or enticing a person to take part in sexual activities, involving people in looking at, or in the production of, sexual online images, watching sexual

activities, or encouraging people to behave in sexually inappropriate ways).

**Possible signs of abuse:** Physical (e.g. unexplained recurrent injuries or burns, probable excuses or refusal to explain injuries, wearing clothes to cover injuries, refusal to undress for exercise, bald patches, chronic running away, fear of medical help or examination, self destructive tendencies, aggression towards others, fear of physical contact), emotional (e.g. physical, mental and emotional development lags, sudden speech disorders, continual self depreciation, overreaction to mistakes, extreme fear of any new situation, inappropriate response to pain, neurotic behaviour, extremes of passivity or aggression), neglect (e.g. constant hunger, poor personal hygiene, constant tiredness, poor state of clothing, untreated medical problems, no social relationships, destructive tendencies), bullying (e.g. become withdrawn, start stammering, lack confidence, become distressed and anxious, stop eating, attempt or threaten suicide, have their possessions go missing, refuse to talk about problems, have unexplained bruises and cuts, begin to bully others, become aggressive and unreasonable), sexual (e.g. distracted, sudden mood swings, exhibit or mimic sexual behaviours, poor self body image, resist changing clothes, wetting and soiling accidents, self injury).

**Policies, procedures and reporting procedures:** For a specific fitness organisation (safeguarding children, safeguarding vulnerable adults, protection from accusations of abuse).

**Statutory agencies:** Social Services, Police, National Society for the Prevention



## Outcome 4: Understand how to safeguard children and vulnerable adults (continued)

of Cruelty to Children (NSPCC), Ofsted, Independent Safeguarding Authority (ISA), associated roles and responsibilities, when to contact statutory agencies (when abuse is suspected, when abuse has been reported).

**Maintaining confidentiality:** Follow organisational procedures, refer to designated member of staff, use a safe and private place to discuss the issue, record and store details according to the data protection act.

# Notes

Use this area for notes and diagrams



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