

Title	Relate human anatomy and movement to gym equipment and static stretching		
Level	2	Credits	4

Purpose	People credited with this unit standard are able to identify: gross anatomical structures; typical movements created by the human body; muscle actions and full joint movement ranges in relation to gym equipment; and the correct body positioning and movement progression for each major muscle group targeted when using the ACC SportSmart stretch posters.
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Classification	Fitness > Exercise Prescription
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Available grade	Achieved
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Guidance Information

- 1 *Gym exercise equipment* refers to any machinery or object used to provide overload to the working muscles.
- 2 Where gym equipment is not available people may choose to identify the gym equipment that could be used by suitable description and/or picture or diagram.
- 3 ACC SportSmart stretch posters are available from the Accident Compensation Corporation under 'publications' on their website <http://www.acc.co.nz>.
- 4 The *positive phase* of a movement refers to the time from when the load is engaged and concentric contraction of the prime mover occurs through until the negative phase begins. The *negative phase* of a movement refers to the time from when the load is engaged and eccentric contraction of the prime mover occurs through until the positive phase begins.

Outcomes and performance criteria

Outcome 1

Identify gross anatomical structures.

Performance criteria

1.1 Major muscle groups are identified.

Range lower body – hamstrings, quadriceps, gluteals, calves;
upper body – pectorals, trapezius, latissimus dorsi, deltoids,
erector spinae, rhomboids, biceps, triceps, rectus abdominus,
internal and external obliques.

1.2 Major bones and joints are identified.

Range bones – calcaneus, talus, fibula, tibia, femur, pelvis, vertebra,
scapula, humerus, radius, ulna, carpals, axis, skull;
joints – ankle, knee, hip, sacroiliac, intervertebral, shoulder, elbow,
wrist, neck.

Outcome 2

Identify typical movements created by the human body.

Performance criteria

2.1 With reference to anatomical position and the planes of motion the typical movements that occur at major joints are identified.

Range movements may include – flexion, extension, abduction,
adduction, rotation, inversion, eversion, dorsi flexion, plantar
flexion, circumduction, pronation, supination;
planes of motion may include – sagittal plane, transverse plane,
frontal (coronal) plane.

2.2 The movements created by the contraction of major muscle groups across related joints are identified.

Range lower body – hamstrings, quadriceps, gluteals, calves;
upper body – pectorals, trapezius, latissimus dorsi, deltoids,
rhomboids, biceps, triceps, rectus abdominus, internal and
external obliques.

2.3 The types of contractions muscles make to create and control human movement are defined and identified.

Range concentric, eccentric, isometric.

2.4 The roles a muscle play during a movement are identified.

Range agonist, antagonist, synergist, fixator.

Outcome 3

Identify muscle actions and full joint movement ranges in relation to gym equipment.

Range major muscle group – hamstrings, quadriceps, gluteals, calves, pectorals, trapezius, latissimus dorsi, deltoids, rhomboids, biceps, triceps, rectus abdominus, internal and external obliques.

Performance criteria

3.1 An item of gym equipment that targets each major muscle group is identified.

3.2 The full range of movement and safe tempo for the movement completed using the gym equipment is identified.

Range start position, end position, count or tempo.

3.3 The muscles' role and action through the positive and negative phases of the full range of movement completed using the gym equipment are identified.

Range action – concentric, eccentric, isometric;
role – agonist, antagonist, synergist, fixator.

Outcome 4

Identify the correct body positioning and movement progression for each major muscle group targeted when using the ACC SportSmart stretch posters.

Performance criteria

4.1 The major muscle group targeted by the stretch is identified.

Range major muscle group – hamstrings, quadriceps, gluteals, calves, pectorals, trapezius, latissimus dorsi, deltoids, rhomboids, biceps, triceps, rectus abdominus, internal and external obliques.

4.2 The key points to attain the correct starting position for the stretch are identified.

Range joint angles, points of contact, position of body parts, alignment of body parts.

4.3 The movement direction required to increase the stretch is identified.

4.4 The breathing pattern required to increase the stretch is identified.

4.5 The intensity required for safe stretching is identified.

4.6 The typical duration for an effective static stretch is identified.

Replacement information	This unit standard was replaced by unit standard 30636.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 August 2005	31 December 2020
Review	2	23 November 2017	31 December 2020

Consent and Moderation Requirements (CMR) reference	0099
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

This unit standard is expiring