Title	**Demonstrate basic knowledge of anatomical structures and physiological responses to exercise**		
Level	**3**	**Credits**	**5**

Purpose	People credited with this unit standard are able to: describe the movement of gross anatomical structures during exercise; and describe common physiological responses and adaptations of the body that result from exercise.

Classification	Exercise > Human Anatomy, Physiology and Nutrition

Available grade	Achieved

Guidance Information

1 All learning and assessment within this unit standard must be carried out in accordance with the following:
- legislation including Health and Safety at Work Act 2015, Privacy Act 2020, Consumer Guarantees Act 1993;
- guidelines and codes of practice include the NZ Register of Exercise Professionals (REPs) Code of Ethical Practice and the REPs Pre-Screening form and guide. These are available from the REPs website www.reps.org.nz/;
- organisational policies and procedures including Emergency Action Plans (EAPs) and Standard Operating Procedures (SOPs).

2 Definitions
Acute physiological responses refer to an immediate change in one or more of the body's responses to a stimulus such as exercise.
Chronic physiological adaptations refer to changes to one or more of the body's systems as a result of long-term consistent stimulus such as exercise.
Gross anatomical structures - bones, muscles and joints refers to major muscles, muscle groups, joints, and the underlying bones to which these muscles attach.

3 This unit standard covers basic anatomical knowledge. This level of knowledge is not sufficient to operate in an exercise prescription role.

Outcomes and performance criteria

Outcome 1

Describe the movement of gross anatomical structures during exercise.

Range movements may include but are not limited to – flexion, extension, abduction, adduction, external rotation, internal rotation, inversion, eversion, dorsiflexion, plantar flexion, horizontal flexion, circumduction, pronation, supination.

Performance criteria

1.1 Identify the location of bones in the body.

Range bones include – skull, spine, clavicle, scapula, ribcage, radius, ulna, tibia, fibula, humerus, pelvis, femur.

1.2 Describe the movements available of joints during exercise.

Range joints include – shoulder, shoulder girdle, spine, elbow, wrist, hip, knee, ankle.

1.3 Describe the planes of motion.

Range sagittal plane, transverse plane and frontal (coronal) plane.

1.4 Identify the location of muscles on the body and describe the movement they create during concentric contraction.

Range hamstrings, quadriceps, gluteals, calves, pectorals, trapezius, lattisimus dorsi, erector spinae, deltoids, rhomboids, biceps, triceps, rectus abdominus, obliques, adductors and abductors of thigh.

Outcome 2

Describe common physiological responses and adaptations of the body that result from exercise.

Performance criteria

2.1 Describe common physiological responses of the body during exercise.

2.2 Describe physiological adaptations of the body in response to exercise.

Planned review date	31 December 2029

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 August 2017	31 December 2026
Review	2	24 January 2019	31 December 2026
Review	3	29 August 2024	N/A

Consent and Moderation Requirements (CMR) reference	0099

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Toi Mai Workforce Development Council qualifications@toimai.nz if you wish to suggest changes to the content of this unit standard.