

Title	Demonstrate knowledge of exercise prescription for people with bone and joint conditions		
Level	5	Credits	5

Purpose	<p>This unit standard is designed for exercise professionals who wish to specialise in working with people with bone and joint conditions.</p> <p>People credited with this unit standard are able to: explain bone and joint conditions in terms relevant to an exercise professional; explain how exercise affects acute physiological responses of people with bone and joint conditions to exercise types; relate chronic adaptations of people with bone and joint conditions to New Zealand risk factors; describe the process followed when working with people with bone and joint conditions; and identify environmental and social factors and changes in behaviour that enhance adherence to exercise.</p>
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Classification	Fitness > Exercise Prescription
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Available grade	Achieved
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Guidance Information

- 1 This unit standard applies to people with a medical prescription for exercise to improve bone and joint conditions. These conditions include osteoporosis, osteoarthritis, arthritis, and rheumatoid arthritis.
- 2 Exercise prescription for people with bone and joint conditions may only be undertaken with prior written medical clearance.
- 3 *Exercise prescription guidelines* for people with bone and joint conditions include: Nelson M E; Rejeski W J; Clair S N; Duncan P W; Judge J O; King A C; Macera C A; Castaneda-Sceppa C. *Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association*. Source: *Medicine & Science in Sports and Exercise*, 2007 Aug; 39(8): pp 1435-1445. Available at <http://www.acsm.org>.
- 4 *Exercise types* must include – interval, continuous, resistance; and may also include – plyometric, circuit, aqua, land, weight bearing, non-weight bearing, aerobic, anaerobic.

Outcomes and performance criteria

Outcome 1

Explain bone and joint conditions in terms relevant to an exercise professional.

Performance criteria

- 1.1 The risk factors associated with bone and joint conditions are explained in terms of managing risk by an exercise professional.
- 1.2 The physiology of people with bone and joint conditions is related to limitations, precautions and considerations for exercise.
- 1.3 The diagnostic information collected by, and the role of, medical professionals typically used to diagnose and monitor bone and joint conditions are explained.

Range medical professional – general practitioner, geriatrician or specialist physician, physiotherapist;
diagnostic information may include – range of movement tests, body mass index, bone mineral density, blood lipid profile, blood pressure, electrocardiogram, age-predicted maximal heart rate, random blood glucose levels, fasting blood glucose levels.

Outcome 2

Explain acute physiological responses of people with bone and joint conditions to exercise types.

Range exercise types must include but are not limited to – duration, intensity, risk.

Performance criteria

- 2.1 The acute physiological responses of people with bone and joint conditions to exercise are explained in terms of effects of commencing, sustaining and ceasing types of exercise.

Outcome 3

Relate chronic physiological adaptations of people with bone and joint conditions to regular exercise and New Zealand risk factors.

Range exercise must include but is not limited to – duration, intensity, risk.

Performance criteria

- 3.1 Chronic physiological adaptations of people with bone and joint conditions to regular exercise are explained in terms of risk factors associated with metabolic functions.

3.2 Exercise prescription for people with bone and joint conditions is described in terms of benefits of exercise.

Range benefits must include – psychological and physical factors.

Outcome 4

Describe the process followed when working with people with bone and joint conditions.

Performance criteria

4.1 The information required in order to make judgements and prescribe exercise for people with bone and joint conditions is described.

Range personal details, general medical details, status of current activity levels, health status (including injuries and medications), lifestyle details, exercise history, exercise intentions, exercise preferences.

4.2 Exercise prescription for people with bone and joint conditions is described in terms of the risks and benefits of exercise and the safety considerations.

Range safety considerations must include – absolute and relative contraindications, modes of exercise that are unsuitable, intensities and durations that are unsuitable, frequencies that are unsuitable, signs that exercise should be ceased, conditions where medical supervision is required; risks must include – immediate risks, and risks of ongoing complications or damage.

4.3 An exercise programme for people with bone and joint conditions is described in terms of the frequency, intensity, time and type recommended in accordance with exercise prescription guidelines.

Range guidelines – American College of Science Medicine, American Heart Foundation.

Outcome 5

Identify environmental and social factors and changes in behaviour that enhance adherence to exercise.

Performance criteria

5.1 Environmental and social factors that may increase or decrease the ease with which people with bone and joint conditions can engage in and adhere to exercise are identified.

Range environmental and social factors – positive, negative.

- 5.2 Behaviour changes that may occur and ways of reinforcing or overcoming those changes in people with bone and joint conditions are identified.

Range behaviour changes – positive, negative.

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	12 February 2010	31 December 2024
Review	2	26 January 2023	31 December 2024

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>.