

Accredited Exercise Physiologist (AEP)

The role of an accredited exercise physiologist:

Accredited exercise physiologists specialise in clinical exercise interventions for a broad range of pathological populations. These persons may be at risk of developing, or have existing, medical conditions and injuries. The aims of AEP interventions are to prevent acute, manage subacute, manage chronic disease/injury, and assist in restoring one's optimal physical function, health and wellness. These interventions are exercise-based and include functional capacity testing and individually modified rehabilitation to return participants to activities of daily living.

Scope of Practice

1. Screening, assessing and applying clinical reasoning to ensure the safety and appropriateness of exercise and physical activity interventions, which includes conducting tests of physiological measures.
2. Assessing movement capacity in people of all ages and levels of health, well-being or fitness.
3. Development of safe, effective individualised exercise interventions.
4. Provision of health education, advice and support to enhance health and well-being.
5. Provision of exercise intervention and education for those at risk of developing a chronic condition or injury.
6. Provision of clinical exercise prescription, for those with existing chronic and complex medical conditions and injuries.
7. Provision of exercise-based rehabilitation and advice for patients following the acute stage of injury, surgical intervention, or during recovery to restore functional capacity and well-being.
8. The above tasks may occur at any level of primary, secondary or tertiary health care, and may include employment or volunteer work at an individual, community or population health level through various employers or industries.

Eligibility

1. Have a Level 8 (Postgraduate) tertiary qualification with a focus on clinical exercise physiology or exercise prescription for special populations. AND
2. Have undertaken at least **360 hours** of professional practice in the categories defined by SESNZ and identified in practical log books (addition to the **140 hours** of healthy individual populations completing in the Sport Science registration).
 - **200 hours** to be completed across cardiac, metabolic and musculoskeletal domains (they do not need to be evenly distributed, but students do need to demonstrate competency in each domain).
 - **100 hours** to be completed in any other AEP pathology domain e.g. cancer, mental health, respiratory or neurological
 - **60 hours** to be completed in any AEP pathology or activity relevant to the professional standards

**** Note: hours must be supervised by an AEP or relevant professional to sign off student competency**

Continued professional development

To ensure currency of knowledge and experience, AEP's are required to participate in ongoing professional development, and stay abreast of recent research. Yearly professional development requirements to maintain accreditation as an Accredited Exercise physiologist include:

1. A minimum of 20 approved CPD points per membership year (1 January – 31 December)
2. Hold a current cardiopulmonary resuscitation certificate
3. Hold a current first aid certificate

Continued practice is governed by SESNZ national re-accreditation, professional development and professional accountability requirements.

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Accredited exercise physiologist should demonstrate knowledge and understanding in the following core competencies:

1. Cardiac and circulatory conditions

1.1 Target conditions

Ischaemic heart disease (IHD) / acute myocardial infarction (AMI), chronic heart failure (CHF), arrhythmias and pacemakers, hypertension, peripheral artery disease (PAOD), valve disease

1.2 Assessment

Assessment includes a focus on demonstration of pre-screening and pre-program exercise testing; blood pressure measurement/monitoring techniques before, during and after exercise; arrhythmia detection techniques (electrocardiogram (ECG)) and non-ECG); detecting signs/symptoms of myocardial ischaemia and strategies for the management of arrhythmias and myocardial ischaemic signs/symptoms in cardiovascular clientele.

1.3 Recognise and respond to symptoms and red flags

Recognise adverse signs/symptoms including cardiac arrhythmias, myocardial ischaemia, inappropriate high or low blood pressures, and other adverse cardiac signs and symptoms, and formulate appropriate clinical responses that include session modification or termination, first-aid and onward referral.

1.4 Practical

- Practise blood pressure measurement at rest and during exercise on cardiovascular cohort clients.
- Practise 12-lead ECG and non-ECG methods to identify arrhythmias
- Identify and respond to changes in clinical status, co-morbidities, exercise and functional capacity inter and intra sessions
- Consider medications, surgical and medical treatments/complications, allied health interventions/treatments, and clinical and safety risks and their implications on clinical status, exercise and functional capacity in the design and delivery of safe and effective exercise for individual cardiovascular clients.

2. Pulmonary and respiratory conditions

2.1 Target conditions

Asthma, Bronchitis, Emphysema, Cystic Fibrosis and COPD

2.2 Assessment

Measurement, contra-indications, and interpretation of % predicted FVC, FEV, FEV1 FEV Peak, VE at rest and exercise, oxygen saturation

2.3 Recognise and respond to symptoms

Symptom recognition and procedures for stages of respiratory disability: Asthma Attack, EIA, Bronchial Wheeze, SOB, Thick and/or Coloured Sputum, Cyanosis, Fever Fatigue, Weight Loss, Night Cough, Hyperinflation

2.4 Practical

- Practise methodologies and using technologies to measure respiratory and pulmonary function and capacity and interpret clinical status results and their implications for safe and effective exercise participation for respiratory/pulmonary clientele.
- Sub-Maximal tests not using HR for monitoring. E.G., Walking Test, 2 min Walk Test, 6 Min Walk Test.
- Use of RPE Scale

3. Metabolic and endocrine conditions

3.1 Target conditions

Overweight and obesity, metabolic syndrome, dyslipidaemias, Type 1 diabetes, Type 2 diabetes, gestational diabetes, sleep apnoea, polycystic ovarian, Hyper/Hypo-Thyroidism, ESRD (end stage renal disease)

3.2 Assessment

- Glucose Tolerance Test, Fasted Lipid Profile (Hdl, Ldl, Vldl, Cholesterol, Ratios, Tg), Fasted Blood Glucose, Glycosylated Haemoglobin (Hba1c), Pre and post exercise glucose screening
- Kidney Disease: Abdominal Ultrasound; Blood Albumin; Haematuria; Calcium; Urinalysis (Urine Protein, Creatinine, Albumin); Blood Urea Nitrogen (Bun)

3.3 Recognise and respond to symptoms

Recognise adverse clinical signs and symptoms including hypoglycaemic signs and symptoms; and identify and respond to changes in clinical status, co-morbidities, exercise and functional capacity, inter and intra session.

3.4 Practical

- Consider medications, surgical, medical and allied health interventions/treatments, clinical and safety risks including hypo/hyperglycaemia and their implications on clinical status, exercise and functional capacity, and the design and delivery of safe and effective exercise for individual clients.
- Identify changes in clinical status that need to be reported/referred onwards to deliver safe and effective client centred care in a multi-disciplinary care environment.

4. Musculoskeletal conditions

4.1 Target conditions

Osteoarthritis, rheumatoid arthritis, osteoporosis, chronic fatigue syndrome, fibromyalgia, acute, sub-acute and chronic specific and non-specific musculoskeletal pain / injuries /disabilities

4.2 Assessment

ROM, Upper and Lower Limb Strength, interpret assessment results of postural and functional ability assessment, balance scores and assessment procedures. Practise employing pre-screening tools; exercise and functional capacity techniques; and active, passive and resistive assessment tests within AEP scope

4.3 Recognise and respond to symptoms

- Recognise clinical signs and symptoms of adverse musculoskeletal response and identify and respond to changes in clinical status, co-morbidities, exercise and functional capacity, inter and intra session.
- Recognise difference between fatigue and occasional tiredness. Recognise joint inflammation symptoms (colour, heat, swelling, deformity, pain), weakness, crepitus, joint stiffness

4.4 Practical

- Compose, deliver and revise safe and effective functional exercise and workplace rehabilitation programs that consider client clinical status and needs, treatment objectives/progress, influencing parameters and protocol/guidelines including age appropriate exercise guidelines and final phase rehabilitation/functional conditions/return to play guidelines
- Employ behavioural change strategies and revise communication to facilitate mitigation of cognitive, behavioural and other influencing factors on treatment progression for individual musculoskeletal and rehabilitation clients.

5. Mental health

5.1 Target conditions

Anxiety Disorders, Affective Disorders, Psychotic Disorders and Trauma and Stressors Related Disorders

5.2 Assessment

Assessment includes a focus on pre-screening and pre-program exercise testing; modification of communication style to accommodate client needs/clinical status; identifying, interpreting and responding to changes in client clinical status intra and inter session including acute and chronic responses to exercise and behaviours non-conducive to exercise participation and/or progression and emergency response triggers

5.3 Recognise and respond to symptoms

- Formulate and demonstrate employing, interpreting and responding to prognostic screening tools and identifying, evaluating and reporting exercise capacity and clinical status changes including verbal and written communication with clients, referrer and other relevant stakeholders.

5.4 Practical

- Identify and respond to changes in clinical status inter and intra session including behaviours non-conducive to exercise participation and/or progression, emergency response triggers including actual or perceived risk of harm to self, to / from others; medication and/or substance misuse; co-morbidities; exercise and functional capacity changes
- Examine barriers and their implication for exercise participation and/or progression in rehabilitation environment including individual and sociocultural/economic factors; and formulate mitigation strategies.
- Explain the different roles of health professionals in delivering multi-disciplinary care to clients with mental health conditions.

6. Neurological conditions

6.1 Target conditions

Stroke (CVA), Spinal Cord Injury (SCI), Parkinson's Disease, Cerebral Palsy, Multiple Sclerosis (MS), Dementia, Traumatic Brain Injury (TBI)

6.2 Assessment

- Examine the diagnostic criteria and procedures; comorbid secondary complications and their implications on clinical and safety risks for exercise participation and potential to change clinical status for neurological clientele.
- Testing of senses (vision, hearing) and speech, coordination/balance and joint flexes

6.3 Recognise and respond to symptoms

- Symptom recognition and treatment for the sudden onset of a Stroke or TIA (Muscular Weakness, Slurred Speech, Confusion) FAST screen for Strokes/TIA (Face, Arm, Smile)
- Recognise that urgent medical attention is required when stroke is suspected
- Recognise that pre-existing neurological deficit may worsen at times of tiredness or inter/current illness.

6.4 Practical

- Capacity monitoring, treatment risks, comorbidities, accessibility and mobilisation needs
- Practise setting up an appropriate exercise environment that accommodates the accessibility and mobilisation needs of the neurological client and manual handling techniques to assist with client transfers within the parameters of professional practice.

7. Cancer conditions

7.1 Target conditions

Breast cancer, Prostate cancer, Colorectal cancer

7.2 Assessment

Pre-exercise evaluation: physical activity, type and stage of cancer, treatments undertaken, fatigue levels, quality of life

7.3 Recognise and respond to symptoms

- Identification of symptoms: pain, fatigue, rapid weight loss, surgical scarring
- Identify changes and respond to clinical status, comorbidities, exercise and functional capacities between, during and after exercise sessions
- How symptoms affect training ability and tolerance
 - Hormone Therapy (to reduce sex hormones, testosterone or oestrogen – side effects of Osteoporosis)
 - Chemotherapy: Side Effects, Duration, effect of exercise on recovery whilst on chemotherapy
 - Effect of exercise on the immune response

7.4 Practical

- Consider medications, surgical, medical and allied health interventions/treatments, clinical and safety risks and their implications on clinical status, exercise and functional capacity in the design and delivery of safe and effective exercise for individual clients.
- 3 Identify and respond to changes in clinical status, co-morbidities, exercise and functional capacity, between and during exercise sessions.

8. Ageing

8.1 Target conditions

Compromised senses (eyesight, hearing, heat/cold, touch), sarcopenia, orthostatic hypotension, post-fall syndrome, arterial stiffening, insulin insensitivity, reduced thermoregulation, associated musculoskeletal conditions

8.2 Assessment

- Risk Assessment: MMSE, Bartels Index, Hospital and Anxiety Questionnaire
- Balance (static, dynamic), activities of daily living (ADL), validated falls risk assessments (e.g. Tinetti, DGI and POMA), musculoskeletal limitations from Osteoarthritis/Inflammatory disease (joints/muscles),
- Seated to Standing BP, TUG, parallel walk test, tandem walk test, 10m timed walk, 2 and 6 min walk, progressive walking test, ROM testing, upper and lower limb strength

8.3 Practical

- Development of a progressive exercise programmes for persons with reduced walking function and/or balance problems, sensory perception e.g. eyesight, hearing, touch and/or presence of co-morbidities.
- Use of exercise aids/ADL aids

9. Bicultural Considerations

Treat all people with respect and consideration of their identity and belief without discrimination towards:

- Age or generation, gender, sexual orientation, occupation and socioeconomic status, ethnic origin or migrant experience, religious or spiritual belief & disability
- Understands the Treaty of Waitangi/Te Tiriti o Waitangi and its relevance to the health of Maori in Aotearoa/New Zealand
- Apply the Treaty of Waitangi/Te Tiriti o Waitangi to professional practice
- Demonstrates knowledge of differing health and socio-economic status of Maori and non-Maori
- Practises in a way that respects each person's right to hold personal beliefs, values and goals
- Consults with members of cultural and other groups as requested and approved by the participant/s

10. Professional Practice

Accredited Exercise Physiologists (AEP) are able to consider clinical scientific, ethical and legislative parameters, and the broader healthcare system framework, for their practice

- Illustrate and understand the scope of practice for AEP's
- Employ core principles of case management and appropriate clinical reporting in the delivery of clinical, health and wellness, work conditioning and rehabilitation services within the boundaries of the SESNZ scope of practice and the healthcare system framework
- Practice professional conduct that incorporates the principles, legislation, regulations, rights and responsibilities that underpin the SESNZ code of professional conduct and ethics.
- Employ evidence-based practice and professional clinical practice principles of an AEP