

# Standards Met by Registered Clinical Exercise Physiologists in New Zealand



**Clinical Exercise Physiology New Zealand**  
Ratonga Haumanu Whaiaroaro Aotearoa

***STANDARDS APPROVED BY BOARD OF  
CLINICAL EXERCISE PHYSIOLOGY NEW ZEALAND  
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# ***STANDARDS MET BY REGISTERED CLINICAL EXERCISE PHYSIOLOGISTS IN NEW ZEALAND***

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## **PRINCIPLES**

Clinical Exercise Physiologists are allied health professionals specialising in the prescription of therapeutic exercise, based on a physiological assessment, for the management of a wide range of diseases and disorders. Clinical Exercise Physiologists hold a bachelor's degree in science plus either a one-year postgraduate diploma or a 2-year Master's degree in clinical exercise physiology. Both postgraduate programmes include extensive clinical training. These qualifications must be awarded by a government approved tertiary education institution. An applicant applying to CEPNZ for registration as a Clinical Exercise Physiologist (CEP) will therefore have either 4 years of tertiary education specialising in clinical exercise physiology including one year of postgraduate clinical training, or 5 years of tertiary education, the first 3 years being mainly in the basic exercise-related sciences, plus 2 years of specialised training in clinical exercise physiology. Applicants for registration may also hold a PhD degree (or equivalent), however the applicant must have a level of knowledge and clinical training in clinical exercise physiology that meets the competencies detailed later in this document. Regardless of academic pathway, applicants will have accumulated at least 500 hours of supervised clinic training (work experience cannot be included in this minimum requirement).

A registered CEPNZ member is entitled to call themselves a Registered Clinical Exercise Physiologist, New Zealand (RCEPNZ). For example: a member with registration and, say, an MSc in CEP, would be entitled to display their credentials as: John Smith MSc CEP, RCEPNZ.

To encourage reciprocity with CEP professional bodies in other countries, and to reduce the workload related to assessing individuals from other countries, the following certifications, accreditations, or registrations may be provided as evidence that the individual possesses competencies equivalent to those required for CEPNZ registration:

- Exercise & Sports Science Australia – Accredited Exercise Physiologist (AEP)
- Canadian Society for Exercise Physiology – Certified Exercise Physiologist (CSEP-CEP)
- American College of Sports Medicine – Registered Clinical Exercise Physiologist (RCEP)
- American College of Sports Medicine – Certified Clinical Exercise Specialist (CCES)
- British Association for Sport and Exercise Science – Certified Exercise Practitioner (CEP), Accredited Sport and Exercise Scientist
- Biokinetic Association, South Africa – Certified Biokineticist (BK), Health Professions Council of South Africa.

Applicants with the above-mentioned backgrounds seeking registration in NZ must provide supporting documentation to enable the CEPNZ Board to assess their background and qualifications. If in doubt a Board member may interview the applicant. All applications for registration must be approved by a majority of Board members.

To reduce the Board's workload related to the competency assessment of domestically trained applicants for the purposes of registration, an educational institution offering clinical exercise physiology postgraduate qualifications may apply to the CEPNZ Board to have their graduands' competency assessment expedited. The education institution will provide the Board with relevant course outlines. Two CEPNZ members who are not employees of the educational institution will be appointed by the Board as assessors to observe and/or participate in the final practical examination. After the academic institution has confirmed that the graduands are eligible to graduate, applicants will send a copy of their academic transcript to the Secretary of the CEPNZ Board. Graduates from programmes who are considered to be competent by the CEPNZ assessors are deemed to have met the competencies for CEPNZ registration. The CEPNZ Board will decline to register an applicant if a) they failed the final examination, and/or b) the assessors considered they did not meet CEPNZ standards at the time of the examination. Applicants who have graduated from an institution that did not have CEPNZ assessors present during their final examination will be required to pass a written examination that assesses the applicant's theoretical and practical competency.

Applicants who have the required educational and clinical training requirements but who are not certified by one of the non-NZ CEP registration bodies listed above will need to apply to take the written CEPNZ competency examination. All applicants regardless of their educational qualifications and prior certification with a non-NZ CEP registration body will also need to satisfy the other requirements for registration, such as membership of CEPNZ, and the provision of suitable references (see page 9).

This document includes a guide to the applicants that includes brief notes on how evidence of competency can be demonstrated. As with any set of advanced clinical standards, sufficient detail cannot (and should not) be included that would prescribe in detail what applicants must know and how they must act in any given clinical context. Frequently, especially in regard to people with comorbidities, assessment and prescription guidelines require considerable modification from published guidelines that are typically related to single diagnoses. A general principle is that a standard is met when the applicant provides evidence of a level of knowledge and competencies commensurate with their experienced peers.

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### **Clinical Training: total hours – 500**

**Clinical Knowledge & Clinical Competencies achieved while enrolled in a tertiary institution's CEP programme**

CEPNZ registration requires 500 hours of clinical training. The diagnoses covered are: cardiac, metabolic, pulmonary, musculoskeletal/orthopaedic, neurological, neuromuscular, chronic pain and fatigue, cancer, immune, haematological, psychological, chronic kidney disease, renal dialysis and renal transplant patients, and pre-and post-surgical rehabilitation.

#### Notes:

1. *An hour spent with a client who has comorbidities may be logged as one-half hour for the primary diagnosis and one-half hour for one other comorbidity.*

#### Hours can be logged from the following activities:

*Pre-exercise assessment and testing*

*Exercise prescription*

*Supervising clients' exercise sessions*

*Post-exercise programme assessment*

*Providing reports to referrers*

*Delivery of formal education classes to condition-specific groups of clinic clients.*

2. *Hours observing others perform these activities cannot be counted.*
3. *Hours can only be claimed from activities where the applicant has worked with clinical populations, not healthy individuals.*

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## **SCOPE OF PRACTICE**

The Clinical Exercise Physiologist in NZ has expertise in the assessment and prescription of exercise for individuals across their lifespan to reduce the risk of disease related to physical inactivity and to improve the exercise capacity of people with chronic medical conditions.

Clinical Exercise Physiologists in NZ:

1. Screen and stratify people of all ages and states of health for the purpose of exercise planning and to optimise the safety of physical interventions.
2. Design and conduct appropriate exercise testing including, but not limited to, cardiopulmonary exercise testing, body composition etc.
3. Use instrumentation such as electrocardiography, expired gas analysis, and spirometry, to assess cardiac and respiratory function.
4. Design and prescribe an individualised exercise programme to increase exercise capacity and assist in the treatment and management of chronic medical conditions.
5. Design, prescribe, and monitor individualised exercise programmes both on a one-to-one basis or in group sessions for disease prevention and rehabilitation.
6. Demonstrate an understanding of and ability to design exercise programmes and provide lifestyle education for people from different cultural backgrounds, and to people with psychological barriers to exercise.
7. Provide an education programme regarding the effect of exercise on: a) an individual's health condition; b) their comorbidities, or the risk of developing comorbidities; c) the importance of life-long physical activity.
8. Accept referrals from health care professionals at the primary and secondary levels of health care.
9. Maintain communication with relevant health professionals, refer to and work with other health care professionals, and deliver their services without direct medical supervision except in the case of high-risk clients. It is the responsibility of the clinical exercise physiologist to determine the level of risk in consultation with the client's medical practitioner.
10. Are certified in cardiopulmonary resuscitation and hold a current Level 3 First Aid Certificate where working in a medical setting with Level 4 First Aid qualified staff onsite. All other settings require Level 4 First Aid Certification.
11. Comply with relevant Acts and statutes such as the Privacy Act (1993) and Health & Safety Act (1992) and its codes of practice; and if a self-employed member of CEPNZ, comply with all statutes governing employment and business practice.
12. Meet the principles of competency as set out in the Health and Practitioners Competence Assurance Act (2003).
13. Meet the requirements for continuing professional development.

The scope of practice of the Clinical Exercise Physiologists in NZ does not include the diagnosis of a medical condition. If tests conducted by a Clinical Exercise Physiologist reveal findings that are not consistent with the known and expected health status of the client, the client will be referred to other appropriate health professionals and if this professional is not the client's GP, a letter will be sent informing the GP of the referral and the physiologist's concerns.

The Clinical Exercise Physiologist in NZ works in a) a multidisciplinary and inter-professional collaborative setting in a public or privately funded organisation, b) in a private practice as a self-employed individual or in partnership, or c) as a clinic tutor in a tertiary education institution. The Clinical Exercise Physiologist may be an employer. Employees may include reception and administrative staff, other Clinical Exercise Physiologists, or personal trainers and recent graduates who are not eligible for CEPNZ registration.

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## **CODE OF ETHICS**

CEPNZ have adopted a modified version of the NZ Medical Association's Code of Ethics. The NZMA Code can be obtained from: [http://www.nzma.org.nz/sites/all/files/Code\\_of\\_Ethics.pdf](http://www.nzma.org.nz/sites/all/files/Code_of_Ethics.pdf)

The following is a summary, edited to make the Code relevant to exercise physiologists registered with CEPNZ.

Abide with the spirit of the code of professional conduct and ethical procedure of CEPNZ. All clinical exercise physiologists registered with CEPNZ, including those who may not be engaged directly in clinical practice, will acknowledge and accept the following Principles of Ethical Behaviour:

1. Consider the health and wellbeing of the client to be your first priority.
2. Respect the rights, autonomy and freedom of choice of the client.
3. Avoid exploiting the client in any manner and adhere to honest and fair marketing practices.
4. Practice the science and art of clinical exercise physiology to the best of your ability with moral integrity, compassion and respect for human dignity.
5. Protect the client's private information throughout his/her lifetime and following death, unless there are overriding considerations in terms of public interest or client safety.
6. Strive to improve your knowledge and skills so that the best possible advice and treatment can be offered to the client.
7. Continue their professional development.
8. Adhere to the scientific basis of clinical exercise physiology practice while acknowledging the limits of current knowledge.
9. Honour the clinical exercise physiology profession, including its values and its principles, in ways that best serve the interests of the client.
10. Recognise your own limitations and the special skills of others in the prevention and treatment of disease.
11. Accept a responsibility to assist in the protection and improvement of the health of the community.
12. Accept a responsibility to advocate for adequate resourcing of clinical exercise physiology services.
13. Accept a responsibility for maintaining the standards of the profession.

### **Ethical Competency**

- Understand the code of professional conduct and ethical practice.
- Be able to apply the code of professional conduct and ethical practice.
- Demonstrate ability to obtain informed and valid consent from participants within an exercise programme.
  - Demonstrate an ability to maintain confidential client records of health status, exercise tests, exercise programming and counselling.
  - Have knowledge of the challenges and opportunities for developing appropriate exercise and healthy lifestyle programmes for communities and individuals from culturally and linguistically diverse backgrounds.



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## **COMPLAINTS ASSESSMENT**

Anyone can make a complaint in writing to the CEPNZ Board regarding the behaviour of a registered member of CEPNZ. The complaints process is based on the processes adopted by other health practitioners' professional societies or statutory regulated professions. The cost of the Complaints Tribunal and hearing costs including room hire are covered by CEPNZ. The complainant and practitioner will not be reimbursed for any of their costs including but not limited to their time, travel, and accommodation.

### **Pre-hearing procedures**

When the Secretary of CEPNZ receives a written complaint about a member, the CEPNZ Board is required to establish a Complaints Tribunal made up of one Board member, one practicing member and one lay member<sup>1</sup>. The Board member will chair the Tribunal. Within 10 working days of receiving a complaint that contains all the information in the 6 bullet points below, the secretary will circulate the complaint to the members of the Tribunal. Based on this written information, members of the Tribunal will make one of two recommendations to the Board: 1) complaint warrants investigation; or 2) complaint does not warrant investigation. The Tribunal's recommendation will be returned to the Secretary within 7 days. The Board will usually accept the Tribunal's recommendation, however, based on the complaint letter and Tribunal members' recommendations, the Board has the authority to choose whether to investigate or not investigate the complaint.

Upon receipt of a complaint, if the letter does not contain the following information, the Secretary will request missing information so that the following is available to the Board and the Tribunal:

1. The names of all of the people involved, including any witnesses;
2. The date(s) that the incident(s) occurred;
3. The place(s) where the incident(s) occurred;
4. A detailed description of what happened including the particular factors that led to the complaint;
5. Whether the practitioner has been informed of complaint and if so, his/her response;
6. Any additional information that will assist an investigation.

Within 7 days of the Board's decision to hear the complaint, the Tribunal is notified, the practitioner is notified, and a date, time and locality is set for the hearing to be held within 60 days of when the practitioner was notified. Within this time-frame the Secretary and practitioner are able to negotiate the hearing date, time and locality. The Secretary will, upon the request of the Tribunal, seek written evidence, copies of clinical notes and any other records that may help the Tribunal at the hearing.

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<sup>1</sup> This person is preferably a lawyer or someone who has experience in hearing complaints procedures.

## Hearing procedures

The Board member appointee to the Tribunal will chair the hearing.

The rules of natural justice will apply.

The complainant and practitioner are able to provide additional written, visual or oral evidence.

The Tribunal Chair will:

- a) Describe the hearing procedures
- b) Invite each party to introduce themselves to the Tribunal
- c) Invite the complainant to make an opening statement regarding the complaint
- d) Invite the practitioner to make an opening statement regarding the complaint
- e) Invite the complainant to present the evidence
- f) Tribunal members may ask questions of the complainant
- g) Invite the practitioner to respond to the evidence
- h) Tribunal members may ask questions of the practitioner
- i) Invite the complainant to make a closing statement
- j) Invite the practitioner to make a closing statement
- k) Conclude the proceedings explaining the post-hearing process and possible outcomes.

## Outcomes

The potential outcomes are:

- a) The Tribunal determines no further action should be taken;
- b) That the Board counsels the practitioner;
- c) The practitioner is fined a sum commensurate with the nature of the complaint;
- d) The Board requires a course of remedial training the cost of which is born by the practitioner;
- e) The Board suspends the practitioner's membership of CEPNZ for a period not exceeding 12 months;
- f) The Board removes the practitioner permanently from the CEPNZ Register.

## Appeals

If the complainant or the practitioner believes that their case was not adequately addressed at the hearing, or if the outcome is considered to be inconsistent with the nature of the complaint, an appeal may be lodged. An appeal must be made in writing and include details of the reasons for the appeal. Notice of an appeal must be received by the Secretary of the CEPNZ Board within 30 days for the parties receiving notification of the hearing's outcome.

The appeal will be heard by the Board within 60 days of its receipt. The Board's decision is final. The complainant and the practitioner have the right to take their case to the Ministry of Justice Disputes Tribunal, or pursue any other form of resolution allowed by NZ law.

## Penalties

The significance of suspension is that, for the period of the suspension, the practitioner will not be able to retain employment as a Registered NZ Clinical Exercise Physiologist with a district health board or other organisation that requires registration as a term of employment, nor receive remuneration from any compensation scheme or insurance company that provides coverage for clinical exercise services conducted by practitioners with CEPNZ registration. In the case of de-registration, these penalties are permanent.

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## **MAINTAINING COMPETENCY & CONTINUING PROFESSIONAL DEVELOPMENT**

To ensure the currency of clinical exercise physiology knowledge and clinical competencies, CEPNZ requires that all registered Clinical Exercise Physiologists be engaged in annual continuing professional development. The focus of professional development will be on the knowledge of current research and implications for clinical exercise physiology practice, maintaining currency of first aid, maintaining cultural competency (the ability to respectfully and effectively interact with people of different cultures and socio-economic backgrounds), and making a contribution to the development of the CEP profession and of clinical exercise physiologists entering the profession.

Registered Clinical Exercise Physiologists are required to achieve the following and provide adequate documentation to CEPNZ to maintain their registration:

- **Practice Requirements**

- A minimum of 200 hours over a two-year period of Clinical Exercise Physiology Professional Practice
  - Attestation of Clinical Exercise Physiology Practice must be provided from an employer.
  - Clinical Exercise Physiologists in private practice will be required to make a declaration regarding their annual practice hours when they apply for their annual registration renewal.

Note: Clinical exercise physiology academics and tutors employed by a tertiary institution to teach and supervise the delivery of clinical services to clients are deemed to be in engaged in “professional practice”.

- **Continuing Professional Development**

The registered Clinical Exercise Physiologist will choose a mix of activities from Categories A & B, and must include at least 10 hours per year from one category.

- Attestation of hours must be provided from conference organisers, course coordinators etc.
- Where attestation is not available the Clinical Exercise Physiologists will be required to make a declaration regarding their Continuing Professional Development hours when they apply for their annual registration renewal.

### **Category A: Research and Education**

Attending and presenting at conferences and seminars; enrolment in a higher education programme related to exercise physiology (e.g., doctoral studies); conducting research (formal i.e., in a tertiary educational institution, or informal i.e., self-directed writing and publication of case studies, publishing review papers, critical commentaries etc.); as a guest, honorary, or part-time lecturer/tutor in a clinical exercise physiology programme in a tertiary educational institution.

### **Category B: Service, Safety, Cultural competency, Clinic Practice Development**

Serving on the CEPNZ Board; CEPNZ clinical competency examiner; serving on a tertiary institutional advisory board for clinical exercise physiology programmes; maintenance of or extending formal first aid or resuscitation certification/s; attending cultural safety programmes; attendance at clinical case review meetings with colleagues; supervising/mentoring junior clinical exercise physiologists; conducting and documenting clinic audits.

In the case of an individual who has not entered practice after graduation, or has taken an extended period of time away from practice, a letter explaining their circumstances must be provided to the Secretary of CEPNZ. Registration of those who take an extended time off from practice will be categorised as “non-practising” until such time as they return to practice. Registered Clinical Exercise Physiologists must not practice while their registration is categorised as “non-practising”. Continuing professional development hours and annual fees are not required to remain on the register for those categorised as “non-practising”. A letter informing CEPNZ of their return to practice will revert their categorisation to “practising”. This letter must be accompanied by a payment equivalent to the current annual fee. The letter must also provide an explanation of why the registrant believes they have maintained competency and currency in the practice of clinical exercise physiology. The explanation may be that insufficient time has passed (e.g., maternal leave) or evidence of full time teaching in the field, enrolment in a higher degree programme, or conducting research. In some cases (e.g., an extended period away from practice) the Board of CEPNZ may require the registrant to take an interview with the Board or their nominees, or undergo a competency assessment before full practising status is restored.

- CEPNZ requires that registered Clinical Exercise Physiologists maintain financial status with CEPNZ and carry current professional liability insurance, either as individuals or through an employer’s policy.
- Registered Clinical Exercise Physiologists must maintain a current Level 3 First Aid Certificate (or higher) at all times. The requirements for this are a current Level 3 First Aid Certificate where working in a medical setting with Level 4 First Aid qualified staff onsite. All other settings require Level 4 First Aid Certification.

### **Continuing Education – Registration of On-Going Education Opportunities**

Courses being offered for the professional development of Clinical Exercise Physiologists can be registered as approved CEPNZ courses. This ensures the course is recognised and the benefit for the RCEP is that they do not have to prove any additional evidence other than a certificate of attendance / successful completion of the course for reaccreditation purposes.

There will be a cost for providers for registering an approved course. Costs will be determined on an ad hoc basis. Organisers of courses should contact the Secretary of CEPNZ at their earliest convenience for guidance regarding the nature of approvable courses and the costs. Approved courses will be profiled on the CEPNZ website. This is to ensure professional development activities meet CEPNZ requirements for ongoing professional development.

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## **REGISTRATION PROCEDURE**

Applications to CEPNZ must include the following:

1. A completed CEPNZ Application for Registration form.
2. A non-refundable application fee of \$50.
3. Evidence of citizenship - usually a photocopy of the photo page of your passport. If you are a permanent resident, you will submit a copy of your residency documentation. If you are on a work visa, you will submit a copy of your work visa. Your CEPNZ registration will be valid until your work visa expiration date after which it will be suspended.
4. Two character references. At least one of these must be from an academic member of a recently attended tertiary education institution, a past but recent employer, or a colleague who is a clinical exercise physiologist. A referee who is an academic must also include comments regarding the applicant's education and clinical experiences.
5. A biosketch and an academic transcript of the tertiary programme/s you consider render you eligible for registration with CEPNZ. The biosketch should contain details of your clinical experience.
6. A letter from the tertiary institute's clinical exercise physiology programme director (or Head of Department) certifying that you have successfully completed the clinical training hours as set out in the application form.
7. Where point 6 above does not apply – documented evidence of clinical experience and hours.
8. If appropriate, provide a copy of your certificate of accreditation, certification, or registration with a non-New Zealand clinical exercise physiology body.

If registration is conferred, a fee is payable at the time of registration of \$200, and this sum is payable annually, due on the initial date of registration.

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## **COMPETENCY STANDARDS**

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### **1. NON-DIAGNOSIS-SPECIFIC**

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- 1.1 An understanding of the physiological responses and health hazards due to physical inactivity in disease conditions and individuals of all ages including children and the frail elderly (where appropriate refer to diagnosis-specific competencies below). The benefits of, and responses to exercise, and the recognition of, and appropriate responses to abnormal signs and symptoms during exercise.

Evidence:

*Demonstrates knowledge of normal and abnormal responses to exercise.*

*Demonstrates knowledge of appropriate responses to abnormal signs and symptoms.*

*The ability to differentiate between a deconditioned individual's response to exercise and an abnormal response to exercise requiring medical evaluation.*

- 1.2 An understanding of health appraisal (history and prognosis) and risk stratification, design and implementation, incremental goal setting, and the ability to conduct fitness and health appraisals.

Evidence:

*Demonstrates knowledge of components of a health appraisal and risk stratification, their purpose, and data interpretation.*

*The ability to use data to plan an incremental exercise programme design, including goal setting that is appropriate, realistic and measurable.*

*Demonstrates an understanding of exercise prescription progression, goal setting using the SMART guide (specific, measurable, attractive, realistic, and timely), and behaviour modification.*

*Ability to use SOAP notes as part of the client assessment and rehabilitation management process.*

- 1.3 The ability to assess, interpret, and report the results of exercise tests for individuals with medical conditions, including identification of contraindications, and the use of clinical functional tests, ECG, gas analysis, strength, aerobic capacity, and body composition evaluation.

Evidence:

*Demonstrates the ability to take a case history and evaluate which exercise protocol will safely and effectively measure aerobic capacity, strength, and give information needed for exercise prescription.*

*Demonstrates the ability to identify client requirements, target deficient areas including strength, aerobic capacity, balance and flexibility, implement appropriate tests, and document findings.*

*Demonstrates the ability to identify when clinical evaluations such as ECG, expired gas analysis or body composition evaluations are warranted.*

*Demonstrates the ability to conduct a case study analysis where the applicant can recommend appropriate testing protocols and give a rationale for their inclusion.*

*Demonstrates the ability to conduct all exercise testing protocols and the ability to implement them on varying population groups with accurate and complete documentation.*

*Demonstrates the ability to recognize abnormal test results or signs and symptoms inconsistent with the client's expected health status, and refer the client for medical assessment or call emergency medical services if appropriate.*

- 1.4 An understanding of exercise prescription modification for clinical populations; the relationship between oxygen cost, biomechanical efficiency, and performance; and the muscular, cardiorespiratory, and metabolic effects of deconditioning.

*Evidence:*

*The ability to identify limiting factors and modify exercise prescriptions to accommodate all stages and aspects of exercise training.*

*Be able to conduct a specific case study analysis where the applicant recommends appropriate prescription modification based on a client's requirements.*

*Demonstrates knowledge of common impairments of function, due to disease, aging or deconditioning and basic exercises that improve functional capacity in biomechanical efficiency, muscular, cardiorespiratory or metabolic effects.*

- 1.5 Knowledge and ability to appropriately modify exercise prescription for clinical populations including the elderly, and to provide an appropriate level of supervision, safety, outcomes monitoring, and evaluation.

*Evidence:*

*Demonstrates knowledge of exercise prescription for the elderly including safety, supervision and outcomes monitoring.*

*The ability to use information from an initial fitness testing session to prescribe safe and effective exercise for a wide range of clinical populations.*

*The ability to provide an appropriate level of supervision and schedule clients for follow-up testing that can evaluate whether or not a programme was effective at advancing targeted functional gains.*

- 1.6 Knowledge of health behaviour of clinical populations, its evaluation, and modification with counselling.

*Evidence:*

*Demonstrates knowledge of behaviour change in healthy clients as well as those with a significant mental or physical abnormality or disease process, and when the need for counselling is outside the Clinical Exercise Physiologist's scope of practice.*

*The ability to encourage a client's adoption of healthy behaviour regarding a wide range of areas, including, but not limited to mitigate destructive self-talk, poor self-confidence, high anxiety, poor nutrition, and high stress levels.*

*The ability to make clinical referrals to appropriate health professionals.*

*The ability to analyse given information (physical or mental limitations, the client's personality and level/stage of change), and determine what types of information would be most helpful to them in adoption of targeted health behaviour modification.*

- 1.7 Must hold a current Level 3 First Aid certificate, or higher (or equivalent certification) at all times, as per CEPNZ requirements. Knowledge and ability to implement emergency procedures, their evaluation and administration, staff training, and the maintenance of emergency equipment including AEDs.

*Evidence:*

*Holds a current certificate and demonstrates knowledge of written emergency procedures and their dissemination.*

*Demonstrates basic life support procedures, including first aid, CPR and the use of AEDs.*

- 1.8 Knowledge of the Clinical Exercise Physiologist's Scope of practice, reporting, legal issues, and quality assurance.

*Evidence:*

*Be able to give examples of the implications to the client and to the practitioner of working outside of the Scope of Practice.*

*Demonstrates knowledge of the legal implications of documented safety procedures, incident documentation, treatment notes, ongoing safety training, the legal implications of privacy protection, and data storage.*

*Provide written documentation outlining clinic procedures and the practitioner's understanding of their implementation and importance.*

- 1.9 Research-related skills for accessing and evaluating research evidence.

*Evidence:*

*Demonstrates an understanding of the need for evidence-based practice (the process of using scientific evidence to inform decision making and professional practice).*

*Demonstrates knowledge in searching for scientific literature, acquiring evidence from credible source and differentiating the strength of evidence from available sources.*

- 1.10 Knowledge of the Treaty of Waitangi, cultural competence and safety as it relates to the Clinical Exercise Physiologist's Scope of practice.

New Zealand society includes a large number of ethnicities, cultures and belief systems. It is important that the Registered Clinical Exercise Physiologist has the ability to work with individuals (e.g., other health professionals or clients) across a range of social and cultural backgrounds and beliefs. A key requirement of the New Zealand Health system is to improve the health of Māori and to reduce health disparities for Māori.



It is recognised that the Registered Clinical Exercise Physiologist, alongside or in partnership other health professionals, will play a role in improving the health of Māori from clinical exercise physiology service provision.

As a core requirement for Clinical Exercise Physiologists practicing in New Zealand, it is essential to have an understanding of the Treaty of Waitangi (and the rights of tangata whenua and obligations of the Crown related to the Treaty), have an understanding of Māori Health (including models of health, Te Whare Tapa Wha, and the Whanau Ora framework) and have an awareness of cultural safety requirements for cultural competence. A core understanding of these aspects will support the provision of services in a culturally safe way, by a culturally competent health professional, and will enable the Registered Clinical Exercise Physiologist to work effectively with Māori clients and Māori health providers

Evidence:

*Demonstrates a working knowledge of cultural safety.*

*Is able to analyse their own practice procedures and implement cultural safety measures.*

NOTE:

*Individuals who register with CEPNZ based on their overseas registration will be required to complete a course in cultural competency for health within their first 12 months of practice. The applicant must receive approval in writing from the CEPNZ Board for their course of choice.*

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## 2. CARDIAC

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- 2.1 Understanding of the pathophysiology, epidemiology, risk factors, and treatment options including common cardiac medications related to hypertension, myocardial infarction, revascularization procedures, angina, atrial fibrillation and other arrhythmias, pacemakers, valvular heart disease, aneurysms, chronic heart failure, heart transplant, and peripheral artery disease.

Evidence:

*Demonstrates a working knowledge of the scope of cardiovascular diseases, including risk factors, pathophysiology and current treatment options.*

*Demonstrates knowledge of cardio-pulmonary physiology and the pathophysiology of all types of CVD.*

*Demonstrates knowledge of cardiovascular medications and their effects on cardiovascular function at rest and during exercise.*

*An ability to access and evaluate new and existing research regarding cardiac diseases.*

- 2.2 An understanding of cardiovascular disease diagnosis including exercise testing, contraindications to exercise testing and exercise training, and signs and symptoms of exercise intolerance.

*Evidence:*

*Demonstrates knowledge of cardiovascular diagnostic procedures, and the risk factors or conditions that may require consultation with medical personnel before exercise testing or exercise training.*

*An ability to screen and monitor clients before and during exercise with an understanding of how to manage abnormal exercise responses.*

*Demonstrates knowledge of the effects of cardiovascular disease on cardiorespiratory responses at rest and during exercise.*

*An ability to examine, detect, and manage abnormal changes in heart rate, blood pressure, angina, syncope, or claudication during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*

*An ability to recognize abnormal ECG responses and take appropriate steps to adjust or terminate an exercise programme and/or refer appropriately.*

*Knowledge of absolute and relative contraindications for exercise testing and training.*

- 2.3 An understanding of medical and surgical treatments, practice guidelines, and preventive care.

*Evidence:*

*An ability to explain to the client the common medical and surgical treatments for cardiovascular disease, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect disease progression and prognosis.*

*Evidence of ability to explain how the side effects and drug actions of medications will/may manifest during exercise.*

- 2.4 An understanding of the benefits of effects of exercise in cardiovascular disease prevention and rehabilitation and signs and symptoms of exercise intolerance in cardiac patients.

*Evidence:*

*Identification and use of symptom limits during exercise.*

*Demonstrates knowledge of the effects of cardiovascular disease on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*

*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for cardiovascular disease.*

*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with cardiovascular disease.*

*An ability to counsel individuals on warning signs and symptoms and both the need and the proper use of nitroglycerin treatment.*

*Knowledge of angina treatment including identification (with and without an ECG) of silent angina in diabetic patients.*

- 2.5 An understanding of the comorbidities commonly associated with cardiovascular disease.  
*Evidence:*  
*Demonstrates knowledge of co-morbidities associated with cardiovascular disease.*  
*Demonstrates knowledge of, and the effects of comorbidities, and how exercise testing and exercise prescription are modified for cardiac patients to ensure an exercise programme is safe, effective and achievable.*

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### 3. PULMONARY

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- 3.1 An understanding of the pathophysiology, epidemiology, risk factors and their reduction, and the key clinical findings related to chronic obstructive pulmonary disease, asthma, emphysema, bronchitis, and cystic fibrosis.  
*Evidence:*  
*Demonstrates a working knowledge of the scope of pulmonary diseases, from their risk factors, inception, progression, and treatment as well as ways in which this process can be modified.*  
*An ability to access and evaluate new and existing research regarding pulmonary diseases.*
- 3.2 An understanding of how pulmonary disease is diagnosed, the physical examination and its limitations including exercise testing, contraindications to exercise, and how to respond to abnormal signs and symptoms.  
*Evidence:*  
*Demonstrates knowledge of pulmonary diagnostic procedures, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*  
*Demonstrates knowledge of the effects of pulmonary disease at rest and during exercise.*  
*An ability to examine, detect, and manage inappropriate changes in HR, BP, O<sub>2</sub> saturation, dyspnoea, or syncope during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*  
*Knowledge of the absolute and relative contraindications to lung related disease and how to identify them.*
- 3.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.  
*Evidence:*  
*Demonstrates knowledge of cardio-pulmonary physiology and the pathophysiology of common types of obstructive and restrictive pulmonary disease.*

*An ability to explain to the client the common medical and surgical treatments for lung disease, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*

*An ability to understand the airway management plan that the client might receive at a typical respiratory clinic and its implications during exercise.*

*Demonstrates ability to educate clients on importance of home life and effects on this condition (dehumidification, smoking, etc.)*

3.4 An understanding of the effects of exercise, exercise prescription, and safety instructions.

*Evidence:*

*Demonstrates knowledge of the effects of pulmonary disease on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*

*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for pulmonary disease.*

*An ability to identify and use symptom limits as part of the prescription process.*

*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with pulmonary disease.*

*An ability to counsel individuals on warning signs and symptoms and both the need to use appropriate medication as part of his/her airway management plan.*

3.5 An understanding of the exercise prescription, supervision, safety instructions, and an ability to use supplemental oxygen.

*Evidence:*

*Demonstrates adequate understanding of oxygen saturation cut-off levels as it relates to exercise testing and training.*

*Demonstrates knowledge of the effects of pulmonary disease on exercise, and how it will affect the client's exercise prescription.*

*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with pulmonary disease.*

*An ability to counsel individuals on warning signs and symptoms that may occur during exercise.*

*An ability to know when and how to apply supplementary oxygen as part of early in-hospital exercise mobilization rehabilitation.*

3.6 An understanding of the comorbidities commonly associated with pulmonary disease.

*Evidence:*

*An ability to list possible co-morbidities.*

*Demonstrates knowledge of, and the effects of, common comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*

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## 4. METABOLIC

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- 4.1 An understanding of the pathophysiology, epidemiology, risk factors, and the key clinical findings for obesity, chronic renal and liver disease, hyperlipidaemia, dyslipidaemia, poor glucose control consequences, diabetes, gestational diabetes, and peripheral arterial disease.
- Evidence:*  
*Demonstrates a working knowledge of metabolic syndrome and diabetes, including the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*  
*Demonstrates an ability to identify key components of diseases associated with metabolic syndrome; including an understanding of their aetiology/pathophysiology.*  
*An ability to access and evaluate new and existing research regarding metabolic syndrome and renal failure.*
- 4.2 An understanding of how metabolic syndrome and renal failure are diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.
- Evidence:*  
*Demonstrates knowledge of absolute and relative contraindications e.g., glucose and ketone cut offs.*  
*Demonstrates knowledge of metabolic syndrome and renal failure, and the risk and signs and symptoms that may require consultation with medical personnel before testing or training.*  
*Demonstrates knowledge of the effects of metabolic syndrome and renal failure on cardiorespiratory responses at rest and during exercise.*  
*An ability to examine, detect, and manage inappropriate changes in vital signs during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*  
*Demonstrates a knowledge and can verbally explain glucose control – its relevance and importance.*
- 4.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.
- Evidence:*  
*Demonstrates an ability to educate clients on how to navigate diet, exercise and insulin to create a stable glucose response.*  
*Demonstrates knowledge of medical management of metabolic syndrome and renal failure.*  
*An ability to explain to the client the common medical and surgical treatments for metabolic syndrome and renal failure, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*  
*Demonstrates knowledge on how to effectively manage hypo- or hyper-glycaemic situations.*

- 4.4 An understanding of the effects of exercise, exercise prescription, safety instructions.  
*Evidence:*  
*Demonstrates knowledge on how to check for silent angina and understands why this may be an issue with diabetic clients.*  
*Demonstrates knowledge of testing blood glucose pre- and post-exercise testing and training and its importance.*  
*Demonstrates knowledge of the effects of metabolic syndrome and renal failure on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*  
*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for metabolic syndrome and renal failure.*  
*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with metabolic syndrome and renal failure.*  
*An ability to counsel individuals on warning signs and symptoms.*
- 4.5 An understanding of the comorbidities commonly associated with metabolic syndrome and renal failure.  
*Evidence:*  
*Can list comorbidities.*  
*Demonstrates knowledge of, and the effects of, the list of comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*

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## 5. MUSCULOSKELETAL & ORTHOPAEDIC

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- 5.1 An understanding of the epidemiology, pathophysiology, risk factors, and key clinical findings of orthopaedic conditions including; osteoporosis, joint injury, pre- and post-surgery, amputees, chronic back and neck pain, the common forms of arthritis, fibromyalgia, and chronic fatigue syndrome.  
*Evidence:*  
*Demonstrates a working knowledge of musculoskeletal and orthopaedic disorders, including the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*  
*An ability to access and evaluate new and existing research regarding metabolic syndrome and musculoskeletal and orthopaedic disorders.*

- 5.2 An understanding of how musculoskeletal and orthopaedic disorders are diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.

*Evidence:*

*An ability to conduct a musculoskeletal assessment using injury history, observation, palpation, range of movement, special tests and posture analysis.*

*Demonstrates knowledge of musculoskeletal and orthopaedic disorders, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*

*Demonstrates an ability to assess movement patterns as part of musculoskeletal rehabilitation, identify exercises that could worsen the condition, and how to correct abnormal movement patterns with exercise.*

*Demonstrates knowledge of the effects of musculoskeletal and orthopaedic disorders on cardiorespiratory responses at rest and during exercise.*

*Ability to assess the major joints for stability and functionality using ROM and special tests.*

*An ability to examine, detect, and manage inappropriate changes in vital signs and reported pain during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*

- 5.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.

*Evidence:*

*Demonstrates knowledge of medical management of musculoskeletal and orthopaedic disorders.*

*An ability to explain to the client the common medical and surgical treatments for musculoskeletal and orthopaedic disorders, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*

- 5.4 An understanding of the effects of exercise, exercise prescription, safety instructions.

*Evidence:*

*Demonstrates knowledge of the effects of musculoskeletal and orthopaedic disorders on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*

*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for musculoskeletal and orthopaedic disorders.*

*An ability to design effective exercise prescription for individuals with musculoskeletal and orthopaedic disorders.*

*Ability to counsel individuals on warning signs and symptoms.*

- 5.5 An understanding of exercise prescription, work and sport specific, occupational rehabilitation, supervision, safety instructions, and post-surgery modifications.

*Evidence:*

*Demonstrates knowledge and ability to work with physiotherapists and occupational therapists, and refer to other health professionals appropriately.*

*Demonstrates knowledge of planning and implementing exercise programmes to meet the client's goal of returning to work.*

*An ability to identify principal biomechanical stresses related to the client's job, provide an appropriate exercise programme, and set realistic goals.*

*An ability to modify exercise programmes to accommodate post-surgical structural and functional vulnerability.*

- 5.6 An understanding of the comorbidities commonly associated with musculoskeletal and orthopaedic disorders.

*Evidence:*

*Demonstrates and can list the common causes and stages of musculoskeletal injuries.*

*Demonstrates knowledge of the causes and the effects of the common comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective*

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## 6. NEUROLOGICAL & NEUROMUSCULAR

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- 6.1 An understanding of the pathophysiology, epidemiology, risk factors, and key clinical findings of Alzheimer's disease, Parkinson's disease, stroke, traumatic brain injury, spinal cord injury, cerebral palsy, muscular dystrophy, and multiple sclerosis.

*Evidence:*

*Demonstrates a working knowledge of neurological and neuromuscular disorders, including the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*

*An ability to access and evaluate new and existing research regarding neurological and neuromuscular disorders.*

- 6.2 An understanding of how neurological and neuromuscular disorders are diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.

*Evidence:*

*Demonstrates knowledge of neurological and neuromuscular disorders, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*



*Demonstrates knowledge of the effects of neurological and neuromuscular disorders on cardiorespiratory responses at rest and during exercise.*

*An ability to examine, detect, and manage inappropriate changes in vital signs and reported pain during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*

*Ability to examine and apply functional and range of motion tests along with postural assessments to prescribe appropriate exercise.*

- 6.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.

*Evidence:*

*Demonstrates knowledge of medical management of neurological and neuromuscular disorders.*

*An ability to explain to the client the common medical and surgical treatments for neurological and neuromuscular disorders, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*

- 6.4 An understanding of the effects of exercise, exercise prescription, safety instructions.

*Evidence:*

*Ability to adapt the exercise prescription based on functional limits and benefits of assistive devices (wheelchairs, crutches or canes).*

*Demonstrates knowledge of the effects of neurological and neuromuscular disorders on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*

*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for neurological and neuromuscular disorders.*

*An ability to design, adapt, communicate, instruct and supervise a safe and effective exercise prescription for individuals with neurological and neuromuscular disorders.*

*An ability to counsel individuals on warning signs and symptoms.*

*An ability to conduct movement analysis and prescribe/adjust rehabilitation exercise to correct abnormal movement patterns.*

- 6.5 An understanding of the comorbidities commonly associated with neurological and neuromuscular disorders.

*Evidence:*

*An ability to list commonly associated co-morbidities.*

*Demonstrates knowledge of, and the effects of comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*

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## 7. CANCER

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- 7.1 An understanding of the pathophysiology, epidemiology, risk factors, and key clinical findings of neoplastic disease and post-oncology clinical findings, especially breast, colorectal, and prostate cancer.  
*Evidence:*  
*Demonstrates a working knowledge of the development of cancer, types of cancer and effects of chemotherapy and surgery on exercise testing and prescription.*  
*Demonstrates knowledge of the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*  
*An ability to access and evaluate new and existing research regarding neoplastic disease.*
- 7.2 An understanding of how neoplastic disease is diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.  
*Evidence:*  
*Demonstrates knowledge of neoplastic disease, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*  
*Demonstrates knowledge of the effects of neoplastic disease on cardiorespiratory responses at rest and during exercise.*  
*An ability to examine, detect, and manage inappropriate changes in vital signs and reported pain during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*
- 7.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.  
*Evidence:*  
*Demonstrates knowledge of medical management of neoplastic disease.*  
*An ability to explain to the client the common medical and surgical treatments for neoplastic diseases, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*
- 7.4 An understanding of the effects of exercise, exercise prescription, safety instructions.  
*Evidence:*  
*Describes the immediate and long-term influence of medical therapies on neoplastic diseases and their responses to aerobic, resistance and flexibility training.*  
*Demonstrates knowledge of the effects of cancer and its treatment on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*  
*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for neoplastic diseases.*

*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with neoplastic diseases.*

*An ability to counsel individuals on warning signs and symptoms.*

*Describes the potential benefits and hazards of aerobic, resistance and flexibility training in individuals with cancer.*

*Understands the contraindication to vigorous exercise in cancer patients*

*Understands the risks and precautions for exercise in cancer patients.*

7.5 An understanding of the comorbidities commonly associated with neoplastic diseases.

*Evidence:*

*Demonstrates knowledge of, and the effects of, comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*

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## **8. IMMUNE & HAEMATOLOGICAL DISORDERS (IHDs)**

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8.1 An understanding of the pathophysiology, epidemiology, risk factors, and key clinical findings of human immunodeficiency syndromes, the anaemias, leukaemia, lymphoma, disorders of the coagulation system.

*Evidence:*

*Demonstrates a working knowledge of immune and haematological disorders, including the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*

*An ability to access and evaluate new and existing research regarding immune and haematological disorders.*

8.2 An understanding of how immune and haematological disorders are diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.

*Evidence:*

*Demonstrates knowledge of immune and haematological disorders, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*

*Demonstrates knowledge of the effects of immune and haematological disorders on cardiorespiratory responses at rest and during exercise.*

*An ability to examine, detect, and manage inappropriate changes in vital signs and reported pain during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*

*Describes the immediate and long-term influence of medical therapies on IHDs and the responses of aerobic, resistance and flexibility training.*

- 8.3 An understanding of the medical and surgical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.  
*Evidence:*  
*Demonstrates knowledge of medical management of immune and haematological disorders. An ability to explain to the client the common medical and surgical treatments for immune and haematological disorders, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*  
*Describes the potential hazards of aerobic and resistance training in individuals with IHDs.*
- 8.4 An understanding of the effects of exercise, exercise prescription, safety instructions.  
*Evidence:*  
*Demonstrates knowledge of the effects of immune and haematological disorders on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*  
*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for immune and haematological disorders.*  
*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with immune and haematological disorders.*  
*An ability to counsel individuals on warning signs and symptoms.*
- 8.5 An understanding of the comorbidities commonly associated with immune and haematological disorders.  
*Evidence:*  
*Lists commonly associated comorbidities.*  
*Demonstrates knowledge of, and the effects of, from the list of comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*

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## 9. PSYCHOLOGICAL & MOOD

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- 9.1 An understanding of the pathophysiology, epidemiology, risk factors, and key clinical findings of common psychological and mood disorders especially depression, anxiety, autism spectrum disorder, Asperger's syndrome, and attention deficit disorder.  
*Evidence:*  
*Demonstrates a working knowledge of psychological and mood disorders, including the risk factors, prevention, progression, and treatment as well as ways in which this process can be modified.*  
*An ability to access and evaluate new and existing research regarding psychological and mood disorders.*

- 9.2 An understanding of how psychological and mood disorders are diagnosed, physical examination and its limitations including exercise testing, contraindications to exercise, and responding to abnormal signs and symptoms.  
*Evidence:*  
*Demonstrates knowledge of psychological and mood disorders, and the risk factors and signs and symptoms that may require consultation with medical personnel before testing or training.*  
*Demonstrates knowledge of the effects of psychological and mood disorders on cardiorespiratory responses at rest and during exercise.*  
*An ability to examine, detect, and manage inappropriate changes in vital signs and reported pain during exercise testing or programme implementation and the ability to modify exercise prescription accordingly.*
- 9.3 An understanding of the medical treatments, practice guidelines, preventive care, drug actions and side effects especially during exercise.  
*Evidence:*  
*Demonstrates knowledge of medical management of psychological and mood disorders.*  
*An ability to explain to the client the common medical treatments for psychological and mood disorders, including commonly used medications, clinical practice guidelines, and preventive care as well as how exercise will affect the progression/outcome of their disease.*  
*Demonstrates an understanding of how prescription medicine affects exercise tolerance.*
- 9.4 An understanding of the effects of exercise, exercise prescription, and safety instructions.  
*Evidence:*  
*Demonstrates knowledge of the effects of psychological and mood disorders on cardiorespiratory responses at rest and during exercise, and how it will affect the client's exercise prescription.*  
*Demonstrates knowledge of the chronic and acute effects and benefits of exercise for psychological and mood disorders.*  
*An ability to design, adapt, communicate and supervise a safe and effective exercise prescription for individuals with psychological and mood disorders.*  
*An ability to counsel individuals on warning signs and symptoms.*
- 9.5 An understanding of the comorbidities commonly associated with psychological and mood disorders.  
*Evidence:*  
*Demonstrates knowledge of, and the effects of, comorbidities and how exercise prescription is modified to ensure an exercise programme is achievable, safe, and effective.*  
*Demonstrates an understanding of how psychological disorders could be associated with clustering of risk factors.*

9.6 An understanding of clinician-client communications, social and cultural pressures.

*Evidence:*

*Awareness of communication and other cognitive and social pressures that could be affected by mental health disorders; and ability of the client to make lifestyle changes.*

*An ability to modify communication strategies to improve effectiveness.*

*An understanding of how group/peer/culture/socio-economic status/society can affect diet, thinking patterns and coping and how this could contribute to psychological disorders.*

*Demonstrates knowledge of the impact of culture and society and why some chronic diseases and obesity may be an ecological issue as well as an individual issue.*



Clinical Exercise Physiology New Zealand  
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