

CLINICAL EXERCISE PHYSIOLOGIST REQUIREMENTS

Minimum requirements for the clinical exercise physiologist is comprised of academic preparation and hands-on clinical experience. To be eligible to take the exam, candidates must possess the following:

*Master's degree in Clinical Exercise Physiology or equivalent and
600 hours of hands-on clinical experience*

OR

*Bachelor's degree in Exercise Science, Exercise Physiology, or equivalent and
1,200 hours of hands-on clinical experience*

DEGREE REQUIREMENTS

1. Official transcripts from a regionally accredited college or university
2. CoAES accredited degree programs – candidates who graduate from a CAAHEP/CoAES accredited **Exercise Physiology** degree program may skip steps 3 through 4.
 - a. Additional information about CoAES accreditation may be found here:
<http://www.coaes.org/>.
3. Candidates must submit the following support documents:
 - a. Course curriculum
 - b. Course descriptions
 - i. Syllabi and learning objectives may be requested if the course description lacks sufficient detail
4. Content requirements – candidates are required to document formal preparation in the content areas listed below. Additional details are provided in Appendix A. Candidates may be required to map their course curriculum to the content requirements.
 - a. Clinical exercise testing and prescription
 - b. Advanced exercise physiology
 - c. Clinical exercise physiology/pathophysiology

HANDS-ON CLINICAL EXPERIENCE HOUR REQUIREMENTS

Candidates are required to provide documented clinical experience; master's prepared – 600 hours, bachelor's prepared – 1,200 hours. Experiential hours must be gained exclusively from a clinical setting. Additional restrictions are provided in Table 1. Clinical hours may be earned through internships, volunteer hours and/or work experience.

Table 1. Restrictions for clinical experience

<u>Applicable experience</u>	<u>Non-applicable experience</u>
1. Clinical hours related to: a. clinical assessment b. exercise testing c. exercise prescription d. exercise training e. electrocardiography f. patient education and counseling	1. Observation hours 2. Non-clinical experience 3. Hours with athletes or apparently healthy population 4. Personal training

g. disease management of cardiovascular, pulmonary, metabolic, orthopedic/musculoskeletal, neuromuscular, neoplastic, immunologic and hematologic disorders 2. Assisted or direct role in providing services for: a. exercise assessment b. exercise prescription c. supervision d. counseling e. education	
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RECOMMENDED QUALIFICATIONS

Successful candidates will have a well-rounded academic and hands-on clinical experience that addresses the competencies presented in Table 2. Further, the distribution of clinical experience hours would align to what is provided in Table 3.

Table 2. 2024 Clinical Exercise Physiologist Job Task Analysis

<i>Domain I. Patient Assessment</i>
A. Assess a patient's medical record for information related to their visit.
B. Interview patient regarding medical history for their visit and reconcile medications.
C. Obtain and assess resting biometric data (for example, oxygen saturation, blood pressure, body composition, ECG).
D. Determine a sufficient level of monitoring/supervision based on a preparticipation health screening.
E. Assess patient goals, needs and objectives based on health and exercise history, motivation level and physical activity readiness.
<i>Domain II. Exercise Testing</i>
A. Select, administer, and interpret submaximal aerobic exercise tests (for example, treadmill, cycle, step test, 6-minute walk).
B. Select, administer and interpret tests to assess musculoskeletal fitness, mobility, and balance.
C. Select, prepare and administer maximal, symptom-limited exercise tests.
D. Evaluate and report results from a symptom-limited exercise test to medical providers and in the medical record as required.
E. Identify relative and absolute indications for test termination and report to medical personnel as needed.
<i>Domain III. Exercise Prescription</i>

A. Develop individualized exercise prescription to support patient needs and goals for various exercise environments (for example, home/community based, medical facility or fitness facility based, virtual).
B. Communicate the exercise prescription, the proper use of exercise equipment, and the importance of promptly reporting any adverse reactions or symptoms.
C. Explain and confirm patient understanding of exercise intensity and measures to assess exercise intensity (for example, target heart rate, RPE, signs/symptoms, talk test).
D. Evaluate and modify the exercise prescription based on the patient's compliance, signs/symptoms and physiologic response to the exercise program, as needed.
E. Discuss the importance of addressing barriers to exercise adoption and implement strategies to optimize adherence.
<i>Domain IV. Exercise Training and Leadership</i>
A. Discuss and explain the exercise training plan, patient and clinician expectations and goals.
B. Instruct and modify in cardiorespiratory fitness, muscular strength and endurance, flexibility, coordination and agility exercise modes.
C. Provide patient monitoring (for example, pulse oximetry, biometric data) and supervision during exercise.
D. Evaluate the patient's contraindications to exercise training and associated risk/benefit and modify the exercise/activity recommendations accordingly.
E. Evaluate, document and report patient's clinical status and response to exercise training in medical records.
F. Discuss clinical status and response to exercise training with patients and modify the exercise program, as indicated.
G. Promptly report new or worsening symptoms and adverse events in the patient's medical record and consult with the responsible health care provider.
<i>Domain V. Education and Behavior Change</i>
A. Continually evaluate patients using observation, interaction and industry-accepted tools to identify those who may benefit from counseling or other behavioral health services using industry-accepted screening tools.
B. Assess patient understanding of their disease and/or disability and conduct education to teach the role of lifestyle in the prevention, management and treatment of the disease/disability.
C. Use motivational interviewing techniques to engage patients in collaborative conversations, exploring and strengthening their motivation for behavior change.
D. Promote adherence to healthy behaviors through a patient-centered approach (for example, addressing barriers, engaging in active listening, expressing interest and empathy, increasing self-efficacy, teaching relapse prevention techniques and identifying support).
<i>Domain VI. Legal and Professional Considerations</i>
A. Evaluate the exercise environment and perform regular inspections of any emergency equipment and practice emergency procedures (for example, crash cart, activation of emergency procedures) per industry and regulatory standards and facility guidelines.
B. Follow industry-accepted scopes of practice, ethical, legal (for example, data privacy, informed consent) and business standards.

Table 3. Recommended distribution of clinical experience

Condition or disease	Weighting	Master's hours	Bachelor's hours
Cardiovascular	30%	180	360
Pulmonary	7%	40	80
Obesity/Metabolic	25%	150	300
Orthopedic/Musculoskeletal	7%	40	80
Neoplastic	7%	40	80
Frailty	7%	40	80
Behavior Change/Education	12%	70	140
Neuromuscular	<u>7%</u>	<u>40</u>	<u>80</u>
Total:	100%	600	1,200

Appendix A. Content Requirements

- 1) Clinical exercise testing and prescription
 - a) Pre-exercise screening procedures
 - b) Indications and contraindications for exercise testing
 - c) Exercise testing procedures and protocols
 - d) Interpretation of the exercise response
 - e) Exercise prescription for clinical diseases or conditions (e.g., cardiovascular, pulmonary, obesity/metabolic, orthopedic/musculoskeletal, neoplastic, frailty, neuromuscular)
- 2) Advanced exercise physiology
 - a) Musculoskeletal system, structure and plasticity
 - b) Cardiopulmonary structure, function and dynamics
 - c) Nervous system and neuromuscular function
 - d) Macronutrient metabolism, bioenergetics, and mitochondrial biogenesis
 - e) Endocrine and immune systems
 - f) Integrated exercise responses
 - g) Environmental exercise physiology
- 3) Clinical exercise physiology/pathophysiology
 - a) Pathophysiology of common cardiovascular diseases, obstructive and restrictive pulmonary diseases, metabolic diseases, neoplastic, immunologic/hematologic disorders and neuromuscular diseases.
 - b) ECG interpretation involving the recognition of the most common abnormalities
 - c) Pharmacokinetics and pharmacodynamics of commonly prescribed drugs (e.g., antibiotics/antivirals, anti-inflammatory drugs, pain medications, muscle relaxers, asthma medications, antihistamines, GI tract medications, hypertension and heart disease medications, antipsychotic medications, diabetes medication)