

KRS 420 Competencies

Clinical Examination and Diagnosis (CE) of the Lower Extremity

Athletic trainers must possess strong clinical examination skills in order to accurately diagnosis and effectively treat their patients. The clinical examination is an on-going process, repeated to some extent each time the patient is treated. The development of these skills requires a **thorough understanding of anatomy, physiology, and biomechanics**. Athletic trainers must also **apply clinical-reasoning skills** throughout the physical examination process in order to assimilate data, select the appropriate assessment tests, and formulate a differential diagnosis.

The competencies identified in this section should be considered in the context of the competencies identified in other content areas. For example, the knowledge and skills associated with acute care and therapeutic interventions, while applicable for this content area, are not repeated here.

The clinical examination process is comprehensive and may include a **review of the systems and regions** identified below based on the patient's relevant history and examination findings. Consideration must also be given to the patient's **behavioral and cognitive status and history**; competencies addressing this content area are included elsewhere.

SYSTEMS AND REGIONS

a. Musculoskeletal of the Lower Extremity

KNOWLEDGE AND SKILLS

CE-1. Describe the **normal structures and interrelated functions** of the body systems of the Lower Extremity.

CE-2. Describe the normal anatomical, systemic, and physiological **changes associated with the lifespan**.

CE-3. Identify the common **congenital and acquired risk factors and causes** of musculoskeletal injuries and common illnesses that may influence physical activity in pediatric, adolescent, adult, and aging populations of the Lower Extremity.

CE-4. Describe the **principles and concepts of body movement**, including normal osteokinematics and arthrokinematics of the Lower Extremity.

CE-5. Describe the influence of **pathomechanics** on function of the Lower Extremity.

CE-6. Describe the basic principles of **diagnostic imaging and testing** and their role in the diagnostic process of the Lower Extremity.

CE-7. Identify the patient's participation restrictions (**disabilities**) and activity limitations (**functional limitations**) of the Lower Extremity to determine the impact of the condition on the patient's life.

CE-8. Explain the role and importance of **functional outcome measures** of the Lower Extremity in clinical practice and patient health-related quality of life.

CE-9. Identify functional and patient-centered **quality of life outcome measures of the Lower Extremity** appropriate for use in athletic training practice.

CE-14. Differentiate between an **initial injury evaluation and follow-up/reassessment of the Lower Extremity** as a means to evaluate the efficacy of the patient's treatment/rehabilitation program, and make modifications to the patient's program as needed.

CE-15. Demonstrate the ability to modify the diagnostic examination process of the Lower Extremity according to the demands of the situation and patient responses.
CE-17. Use clinical reasoning skills to formulate an appropriate clinical diagnosis of the Lower Extremity for common illness/disease and orthopedic injuries/conditions.
CE-18. Incorporate the concept of differential diagnosis into the examination process of the Lower Extremity.
CE-19. Determine criteria and make decisions regarding return to activity of the Lower Extremity and/or sports participation based on the patient's current status.
CE-20. Use standard techniques and procedures for the clinical examination of the Lower Extremity of common injuries, conditions, illnesses, and diseases including, but not limited to:
CE-20a. history taking
CE-20b. inspection/observation
CE-20c. palpation
CE-20d. functional assessment
CE-20e. selective tissue testing techniques / special tests
CE-20f. neurological assessments (sensory, motor, reflexes, balance, cognitive function)
CE-21. Assess and interpret findings from a physical examination that is based on the patient's clinical presentation of the Lower Extremity This exam can include:
CE-21a. Assessment of posture, gait, and movement patterns
CE-21b. Palpation
CE-21c. Muscle function assessment
CE-21d. Assessment of quantity and quality of osteokinematic joint motion
CE-21e. Capsular and ligamentous stress testing
CE-21f. Joint play (arthrokinematics)
CE-21g. Selective tissue examination techniques / special tests
CE-21h. Neurologic function (sensory, motor, reflexes, balance, cognition)

Clinical Integration Proficiencies (CIP)

The clinical integration proficiencies (CIPs) represent the **synthesis and integration of knowledge, skills, and clinical decision-making into actual client/patient care**. The CIPs have been reorganized into this section (rather than at the end of each content area) to reflect their global nature. For example, therapeutic interventions do not occur in isolation from physical assessment.

In most cases, assessment of the CIPs should occur **when the student is engaged in real client/patient care** and may be necessarily assessed over multiple interactions with the same client/patient. In a few instances, assessment may require simulated scenarios, as certain circumstances may occur rarely but are nevertheless important to the well-prepared practitioner.

The incorporation of **evidence-based practice principles** into care provided by athletic trainers is central to optimizing outcomes. Assessment of student competence in the CIPs should reflect the extent to which these principles are integrated. Assessment of students in the use of Foundational Behaviors in the context of real patient care should also occur.

Clinical Assessment & Diagnosis / Acute Care / Therapeutic Intervention

CIP-4. Perform a **comprehensive clinical examination** of a patient with an **athletic injury or condition**. This exam should incorporate clinical reasoning in the selection of assessment procedures and interpretation of findings in order to **formulate a differential diagnosis and/or diagnosis**, determine underlying impairments, and identify activity limitations and participation restrictions. Based on the assessment data and consideration of the patient's goals, provide the appropriate **initial care and establish overall treatment goals**. Create and implement a **therapeutic intervention** that targets these treatment goals to include, as appropriate, therapeutic modalities, medications (with physician involvement as necessary), and rehabilitative techniques and procedures. Integrate and interpret various forms of **standardized documentation** including both **patient-oriented and clinician-oriented outcome measures** to recommend activity level, make return to play decisions, and maximize patient outcomes and progress in the treatment plan.

CIP-4.b. lower extremity injury or condition: Ankle, Knee, Hip, Leg/Foot
