

# EVIDENCE-BASED PROCEDURES FOR PERFORMING THE SINGLE LEG SQUAT AND STEP-DOWN TESTS IN EVALUATION OF NON-ARTHRITIC HIP PAIN: A LITERATURE REVIEW

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## ABSTRACT

**Background:** Functional performance tests are commonly utilized in screening for injury prevention, evaluating for athletic injuries, and making return-to-play decisions. Two frequently performed functional performance tests are the single leg squat and step-down tests.

**Purpose:** The purpose of this study was to systematically review the available psychometric evidence for use of the single leg squat and step-down tests for evaluating non-arthritic hip conditions and construct an evidence-based protocol for test administration.

**Study Design:** Review of the Literature

**Materials/Methods:** A search of the PubMed and SPORTSDiscus databases was performed. Psychometric evidence of reliability, validity, and responsiveness to support the use of the both tests were collected. The protocols used for administering these tests were extracted, summarized, and combined.

**Results:** Of the 3,406 articles that were reviewed, 56 total articles met the inclusion criteria and were included in the review. Evidence for reliability and validity was available to support the use of the single leg squat and step-down tests. Both tests assess for neuromuscular control of the hip and surrounding muscular structures. Evaluation of these functional movement patterns enable the clinician to assess for limitations that may cause an increase in hip pain and dysfunction.

**Conclusions:** The single leg squat and step-down tests can assess for kinematic and biomechanical deficiencies and may be useful in the evaluation process for individuals with non-arthritic hip pain. The authors of this review present a comprehensive evidence-based protocol for standardized performance of these tests.

**Level of Evidence:** 2b

**Keywords:** Functional performance testing, non-arthritic hip pain, standardized protocol

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