

National Athletic Trainers' Association Links

- [NATA Home](#)
- [Online Manuscript Submission and Review](#)
- [Advertising](#)
- [Facts & Figures](#)
- [Editor-in-Chief](#)
- [Journal Editors](#)
- [Editorial Board](#)
- [NATA Position Statements](#)
- [PubMed Central](#)
- [Search PubMed](#)
- [Contact Us](#)

◀ [Previous Article](#) [Volume 43, Issue 1 \(January/February 2008\)](#) [Next Article](#) ▶

 [Add to Favorites](#)  [Share Article](#)  [Export Citations](#)

 [Track Citations](#)  [Permissions](#)

[Full-text](#)

[PDF](#)

Article Citation:

Scott E. Ross, Kevin M. Guskiewicz, Michael T. Gross, Bing Yu (2008) Assessment Tools for Identifying Functional Limitations Associated With Functional Ankle Instability. *Journal of Athletic Training*: January/February 2008, Vol. 43, No. 1, pp. 44-50.

doi: 10.4085/1062-6050-43.1.44

Original Research

Assessment Tools for Identifying Functional Limitations Associated With Functional Ankle Instability

Scott E. Ross, PhD, ATC¹, Kevin M. Guskiewicz, PhD, ATC, FACSM², Michael T. Gross, PhD², and Bing Yu, PhD²

¹Virginia Commonwealth University, Richmond, VA

²University of North Carolina at Chapel Hill, Chapel Hill, NC

Abstract

Context: Assessment tools should identify functional limitations associated with functional ankle instability (FAI) by discriminating unstable from stable ankles.

Objective: To identify assessment tools that discriminated FAI from stable ankles and determine the most accurate assessment tool for discriminating between FAI and stable ankles.

Design: Case-control study.

Setting: Research laboratory.

Patients or Other Participants: Fifteen individuals with FAI and 15 healthy individuals; participants with unilateral FAI reported "giving-way" sensations and ankle sprains, whereas healthy participants did not.

Intervention(s): Participants answered 12 questions on the Ankle Joint Functional Assessment Tool (AJFAT). They also performed a single-leg jump landing, which required them to jump to half their maximum jump height, land on a single leg, and stabilize quickly on a force plate.

Main Outcome Measure(s): Receiver operating characteristic curves determined cutoff scores for discriminating between ankle groups for AJFAT total score and resultant vector (RV) time to stabilization. Accuracy values for discriminating between groups were determined by calculating the area under the receiver operating characteristic curves.

Results: The cutoff score for discriminating between FAI and stable ankles was ≥ 26 (sensitivity = 1, specificity = 1) and ≥ 1.58 seconds (sensitivity = 0.67, specificity = 0.73) for the AJFAT total score and RV time to stabilization, respectively. The area under the curve for the AJFAT was 1.0 (asymptotic

Volume 43, Issue 1
(January/February 2008)

[Next >](#)



[Current Issue](#)
[Available Issues](#)

Journal Information

Print ISSN 1062-6050

eISSN 1938-162X

Frequency Bimonthly:

January/February
March/April
May/June
July/August
September/October
November/December

Register for a Profile

Not Yet [Registered?](#)

Benefits of Registration Include:

- A Unique User Profile that will allow you to manage your current subscriptions (including online access)
- The ability to create favorites lists down to the article level
- The ability to customize email alerts to receive specific notifications about the topics you care most about and special offers

[Register Now!](#)

Related Articles


Articles Citing this Article

[Google Scholar](#)

Search for Other Articles By Author

- ☞ Scott E. Ross
- ☞ Kevin M. Guskiewicz
- ☞ Michael T. Gross
- ☞ Bing Yu

Search in:

 Athletic Training

Search

significance <.05), whereas the RV time to stabilization had an area under the curve of 0.72 (asymptotic significance <.05).

Conclusions: The AJFAT was an excellent assessment tool for discriminating between ankle groups, whereas RV time to stabilization was a fair assessment tool. Although both assessments discriminated between ankle groups, the AJFAT more accurately discriminated between groups than the RV time to stabilization did. Future researchers should confirm these findings using a prospective research design.

Keywords: [balance](#), [ankle sprains](#), [time to stabilization](#), [Ankle Joint Functional Assessment Tool](#)

Scott E. Ross, PhD, ATC; Kevin M. Guskiewicz, PhD, ATC, FACSM; Michael T. Gross, PhD; and Bing Yu, PhD, contributed to conception and design; acquisition and analysis and interpretation of the data; and drafting, critical revision, and final approval of the article.

Scott E Ross, PhD, ATC, Virginia Commonwealth University, Department of Health and Human Performance, 1015 W. Main Street, PO Box 842020, Richmond, VA 23284-2020, e-mail: seross@vcu.edu

Cited by

Kathryn A. Webster and Phillip A. Gribble. (2010) Time to Stabilization of Anterior Cruciate Ligament-Reconstructed Versus Healthy Knees in National Collegiate Athletic Association Division I Female Athletes. *Journal of Athletic Training* **45**:6, 580-585

Online publication date: 1-Nov-2010.

[Abstract](#) | [Full Text](#) | [PDF \(209 KB\)](#)

Phillip A. Gribble and Richard H. Robinson. (2009) Alterations in Knee Kinematics and Dynamic Stability Associated With Chronic Ankle Instability. *Journal of Athletic Training* **44**:4, 350-355

Online publication date: 1-Jul-2009.

[Abstract](#) | [Full Text](#) | [PDF \(219 KB\)](#)

[top](#) 