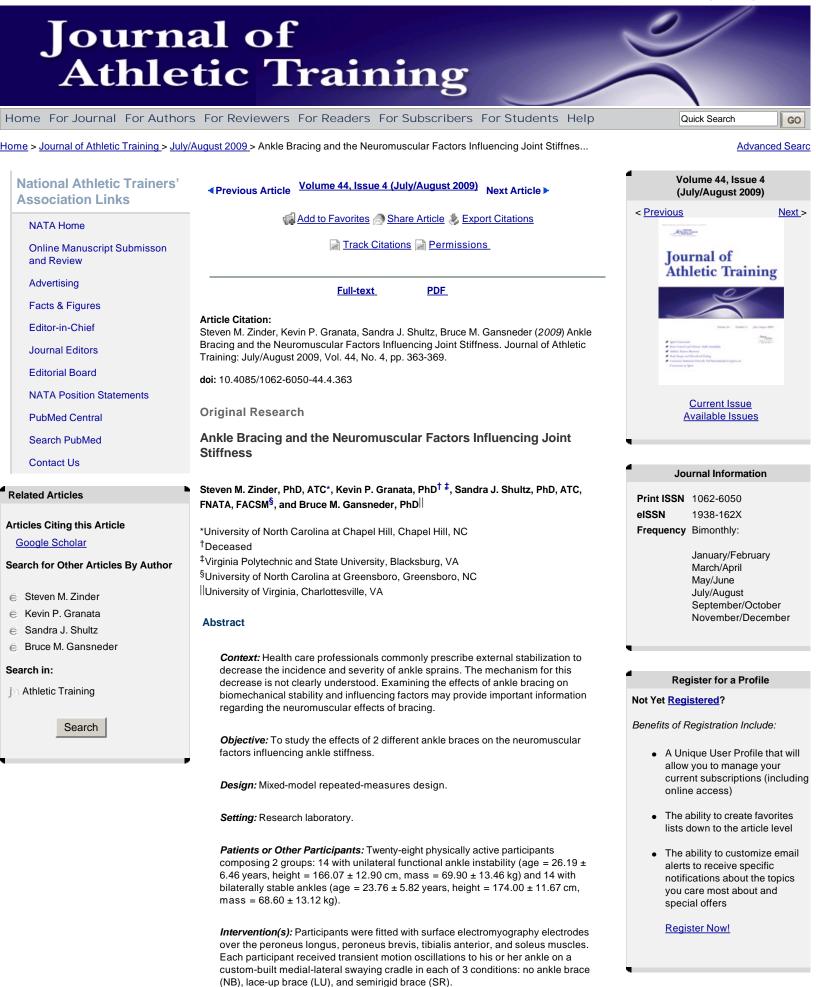
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Main Outcome Measure(s): Ankle stiffness as measured by the cradle and preactivation levels (percentage of maximal voluntary isometric contraction) of the 4

test muscles.

Results: Stiffness levels increased across brace conditions (NB = 24.79 ± 6.59 Nm/rad, LU = 28.29 ± 7.05 Nm/rad, SR = 33.22 ± 8.78 Nm/rad; $F_{2,52}$ = 66.185, P < .001). No differences were found between groups for rotational stiffness (stable = 27.36 ± 6.17 Nm/rad, unstable = 30.18 ± 8.21 Nm/rad; $F_{1,26}$ = 1.084, P = .307). Preactivation levels did not change for any of the tested muscles with the application of an ankle brace ($F_{2,52}$ = 1.326, P = .275).

Conclusions: The increase in ankle rotational stiffness with the addition of an ankle brace and the lack of any demonstrable neuromuscular changes suggested ankle braces passively contributed to the stability of the system.

Keywords: stability, preactivation, reflexes, orthoses

Steven M. Zinder, PhD, ATC, contributed to conception and design; acquisition and analysis and interpretation of the data; and drafting, critical revision, and final approval of the article. Kevin P. Granata, PhD; Sandra J. Shultz, PhD, ATC, FNATA, FACSM; and Bruce M. Gansneder, PhD, contributed to conception and design; analysis and interpretation of the data; and critical revision and final approval of the article.

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