

**PATHOKINESIOLOGY LABORATORY
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ABSTRACTS FROM PUBLISHED MANUSCRIPTS (2004 – 2005)

Intratester reliability for determining an eight-repetition maximum for three shoulder exercises using elastic bands. Newsam CJ, Leese C, Fernandez-Silva J. *J Sport Rehabil* 2005;14:35-47.

Context – Standardization of training load utilizing the one-repetition maximum (1RM) test cannot be directly applied when using elastic bands as resistance.

Objective – The purpose of this study was to determine the intratester reliability for establishing an eight-repetition maximum (8RM) using elastic bands.

Design – Test – retest

Participants – Fifteen healthy adults (5 men, 10 women; 23–29 years).

Intervention – An 8RM test was established for three shoulder exercises (internal rotation, external rotation, and a diagonal pull-down test) using the Dura-Band™ Exercise System.

Main Outcome Measures – The length of the elastic band was recorded. An analysis of variance was performed and intraclass correlation coefficients (ICC) were calculated for each exercise.

Results – Intratester reliability for determining the elastic band length required to establish an 8RM was very high for internal rotation (ICC=.91) and high for external rotation (ICC=.77). The diagonal pull-down 8RM test had moderate reliability (ICC=.65).

Conclusion – Training load can be reliably standardized in a healthy young adults using moderate to high resistance elastic bands with a goal-based multiple-RM test.

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