

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

The supine hip extensor manual muscle test: a reliability and validity study.
Perry J, Weiss WB, Burnfield JM, Gronley JK. Arch Phys Med Rehabil.
2004;85:1711-7

OBJECTIVES: To define the relative hip extensor muscle strengths values identified by the 4 grades obtained with a supine manual muscle test (MMT) and to compare these values with those indicated by the traditional prone test.

DESIGN: Comparison of 4 manual supine strength grades with isometric hip extension joint torque; kappa statistic-determined interrater reliability, and analyses of variance identified between grade differences in torque.

SETTING: Pathokinesiology laboratory.

PARTICIPANTS: Adult volunteers recruited from local community and outpatient clinics. Reliability testing: 16 adults with postpolio (31 limbs). Validity testing (2 groups): 18 subjects without pathology (18 limbs), and 26 people with clinical signs of hip extensor weakness (51 limbs).

INTERVENTIONS: Not applicable.

MAIN OUTCOME MEASURES: Supine hip extensor manual muscle grade and isometric hip extension torque.

RESULTS: Reliability testing showed excellent agreement (82%). Subjects with pathology had significant differences in mean torque ($P<.01$) for the assigned grade 5 (176 Nm), grade 4 (103 Nm), grade 3 (67 Nm), and grade 2 (19 Nm). Healthy adults showed significant differences between grade 5 (212 Nm) and grade 4 (120 Nm) in mean torque ($P<.05$).

CONCLUSIONS: The supine MMT is a reliable and valid method with which to assess hip extension strength.
