Context: Handheld dynamometry is considered a clinically useful method to objectively assess patient strength. However, reliability of handheld dynamometry of the lower extremity has not been established for alternate testing positions. Objective: The objective of this study was to investigate the intratester and intertester reliability of handheld dynamometry of the quadriceps and hamstring musculature utilizing a unique patient position. Design: The experimental design for this study consisted of randomly assigned, repeated measures. Setting: The study was conducted in a University research laboratory. Patients or Other Participants: Subjects in the study consisted of 39 asymptomatic, healthy, college-aged adults (25 male, 14 female) selected from a sample of convenience (mean age= 20.7 years, ± 1.5 years). Interventions: Strength measures were taken during a single data collection session. Two examiners performed three repeated measures each of right quadriceps and right hamstring strength using a commercial handheld dynamometer. For each assessment, the subject was positioned in sidelying, utilizing a technique described by Berryman-Reese. Strength testing was performed using the “make technique”, where the dynamometer is held stationary and the subject exerts maximal force against the dynamometer and the examiner. Main Outcome Measures: The main outcome measures were intraclass correlation coefficient (ICC) measures for within and between tester reliability. Results: Intratester ICC range was 0.92 for quadriceps testing (95% CI: 0.88-0.95) and 0.89 for hamstring testing (95% CI: 0.78-0.94). Intertester ICC was .79 for quadriceps testing (95% CI: 0.44-0.81) and .44 for hamstring testing (95% CI: 0.33-0.72). Conclusions: The findings indicate that handheld dynamometric measures of quadriceps and hamstring strength, using a sidelying patient position, are reliable within a single tester on repeated measures. However, the intertester reliability of handheld dynamometry could only be established for sidelying quadriceps testing and not for hamstring testing in this study. Word Count: 294.