

## Bat Quickness and Bat Velocity for Left- and Right-Handed Softball Swings

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**PURPOSE:** Bat quickness (BQ) and bat velocity (BV) are two factors that influence hitting success in softball. Previous researchers have analyzed BQ and BV values without separating left-handed (LH) and right-handed (RH) batters. The purpose of this study was to check for differences in BQ and BV between LH and RH batters. **METHODS:** Five LH and nine RH female NCAA Division II softball players participated in the study. Participants performed their swings during an intra-squad scrimmage against a live pitcher, and the best swing taken was used in the analysis. Differences between measures were tested for statistical significance using ANOVA (criterion of  $p = 0.05$ ). **RESULTS:** Mean BQ and BV for LH batters were  $0.212 \pm 0.054$  sec and  $27.02 \pm 4.46$  m/s, respectively. For RH batters, the mean BQ was  $0.218 \pm 0.028$  sec and the mean BV was  $29.24 \pm 2.34$  m/s. No statistically significant differences were found for BQ or BV measures ( $p > 0.05$ ). **CONCLUSION:** The results of this project indicate that for a small sample of NCAA Division II softball players, LH batters have smaller BQ and BV values than their RH counterparts. Although the BV difference between LH and RH was not statistically significant, the observed 2 m/s difference in BV may be a contributing factor to the outcome of the at-bat. The BQ and BV values were similar to the values obtained for NCAA Division I players. Future studies should explore the relationship of BQ and BV to pitch type and batting strategy.

