In golf, play on the green has a large impact on the final score (Pelz 2000, Dave Pelz’s Putting Bible) and a great amount of time is spent on practice greens to perfect the putting technique. There has been significant research carried out on putting styles, equipment and mechanics (Gwyn & Patch, 1993 Comparing two putting styles for accuracy, *Perceptual and Motor Skills*, 79, 387-390) however with technology constantly evolving there is a need for continued research. The studies also refer to overall kinematics of the putt rather than the outcome and there is little evidence to date of a comparison between low handicap golfers (LHG - Category 1, Handicap <5) and high handicap golfers (HHG - Categories 3 and 4, Handicaps 13-18 and >18 respectively). The aim of this study was to examine putting performance and establish if there is an advantage to be gained by using an anchored putter such as the belly or long putter. This study directly measured the accuracy of different putters used by different categories of golfers both male and female. 72 golfers were asked to execute 10 puts using standard, belly and long putters from 1.83 m (6 ft) and 3.66 m (12 ft), a total of 60 puts. Putting mechanics in relation to Back Swing Time (BSTIME), Forward swing time (TIMP), Face angle at impact (FACEIMP), Face Rotation (ROTIMP) and Horizontal impact spot (SPOTIMP) were assessed using SAM PuttLab™ software. All variables including putting performance outcome measures were amalgamated in tabular form using MST™ Excel v9.0 before being transferred into SPSS™. Results of this study show that LHG were most successful in percentage of puts holed with the standard putter from 1.83 m (6 ft) and 3.66 m (12 ft) with 87.3% and 61.8% success rate respectively, in comparison to the belly (83.6% and 60.9%) and long (72.7% and 51.8%) putters. HHG scored 77.7%, 76.2% and 75.2% from 1.83 m (6 ft) and 45.5%, 44.5% and 44.5% from 3.66 m (12 ft) with the standard, belly and long putters respectively. There was a significant difference in putting kinematics in relation to BSTIME, TIMP, ROTIMP and SPOTIMP between the standard, belly and long putter. These differences were most pronounced for the longer distance. In conclusion it can be seen from the variables tested in this study that using an anchored putter will not necessarily give you an advantage over using a standard putter. The testing procedure shows that LHG have a greater consistency in their putting action which can be attributed to the large amount of practice they do in comparison to HHG.