Background: A trend for increased leg strength in the leg positioned in the back compared to front of the surfboard has been reported previously in a study with limited sample size. This preliminary data suggests that an asymmetry may exist in surfer's leg strength and that this may be influenced by surfer's stance on the surfboard. Purpose: The purpose of this investigation was to test the hypothesis that leg strength in surfers, as assessed by isokinetic knee extension and flexion at contraction velocities ranging from 60-3000 deg/sec, would be greater in the leg positioned in the back compared to front of the surfboard. Methods: Forty-four recreational surfers (5 females, 39 males) were tested. Subjects performed five repetitions of maximal knee extension and flexion at contraction velocities of 60, 120, 180, 240, and 300 deg/sec. A thirty-second recovery period was provided between each contraction velocity. Results: All subjects reported surfing to be their primary form of physical activity with 8.6±0.3 hrs/wk and 23.9±3.2 y of surfing experience. Significant differences in torque between legs for back extension (60 deg/sec: 41.4±5.3 vs 150.7±5.9, 120 deg/sec: 107.2±4.2 vs 109.8±4.7, 180 deg/sec: 84.4±5.8 vs 72.7±3.7, 240 deg/sec: 77.9±5.5 vs 72.2±5.2, 300 deg/sec: 61.2±4.4 vs 63.0±5.9), and flexion (60 deg/sec: 86.8±3.5 vs 87.2±3.4, 120 deg/sec: 72.1±2.2 vs 72.3±2.7, 180 deg/sec: 62.1±2.6 vs 62.3±2.5, 240 deg/sec: 56.3±2.6 vs 56.5±2.4, 300 deg/sec: 49.6±2.4 vs 49.2±2.5) across all contraction velocities. Conclusions: Contrary to previously reported data, the current results suggest that recreational surfers' leg strength is not influenced by surfing stance.

Conclusions

- There were no significant differences in torque between the front and back leg for knee extension in a subgroup of subjects whose back leg was not their dominant leg (Figures 1 & 3).
- There were no significant differences in torque between front and back legs for knee flexion across all contraction velocities (60-3000 deg/sec) (Figures 2 & 4).
- Contrary to previously reported data, the current results suggest that recreational surfers’ leg strength is not influenced by surfing stance.

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References