

Physical Function in Young and Older Adult Active Pickleball Players

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ABSTRACT

Limited information exists on pickleball's impact on physical function in adults, especially older adults (65+ years), despite reported health benefits. **PURPOSE:** This study evaluated the physical function of active older adult (OA) female and male recreational pickleball players via handgrip strength and fatigue, 6-minute walk distance (6MWD) test, as well as the short physical performance battery (SPPB) compared to sex-matched young adult (YA) controls. **METHODS:** Thirty YA (18-26 years; n=15 female/male) participants and 27 OA (65-89 years; n=13 female, n=15 male) participants who played pickleball at least three times per week were assessed for physical function outcomes of handgrip strength (HGS) and fatigue (HGF), 6-minute walk distance (6MWD), and the short physical performance battery (SPPB). A two-way ANOVA (age x sex) with repeated measures and Sidak post-hoc test were used ($p < 0.05$). **RESULTS:** Compared to sex-matched YA, OA women and men had significantly ($p < 0.05$) lower absolute HGS (OA women: 22.4 ± 5.8 vs YA women: 31.7 ± 5.6 kg; OA men: 40.8 ± 7.3 vs YA men: 50.5 ± 8.9 kg) and relative HGS (OA women: 8.7 ± 2.3 vs YA women: 11.1 ± 1.9 kg/m²; OA men: 12.3 ± 1.8 vs YA men: 15.0 ± 2.7 kg/m²). Absolute HGF followed the absolute HGS results. In contrast, compared to sex-matched YA, no significant differences ($p > 0.05$) were observed in OA women and men for 6MWD percent predicted (which factored in anthropometrics, age, gender, and activity levels; range: 104.6-115.4%) and the overall SPPB (range: 11.3-12.0) as well as each portion of the SPPB (balance, gait speed, and lower limb strength). **CONCLUSION:** In OA female and male recreational pickleballers, lower body physical function (e.g., walking speed/distance, balance, lower body strength) is largely maintained compared to sex-matched YA pickleballers, but upper body strength/fatigue were not. Pickleball should be combined with meeting resistance training guidelines to maintain whole body physical function with aging.