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Effects of a three-year exercise program on motor function and cognitive processing speed in older women.

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This study evaluated the effects of a three-year exercise program on motor performance and cognitive processing speed of previously sedentary older women, ages 57-85. Variables tested were simple and choice reaction time (CRT), balance, sit and reach flexibility, shoulder flexibility, and grip strength. Subjects participated three times a week in exercise performance classes designed to meet American College of Sports Medicine guidelines. Results indicate that performance was significantly improved on all measures during the course of the study (p less than .01) except for the sit and reach test (SRT), where significance was approached (p less than .027), but not reached. A comparison of the exercise subjects with a comparable group of nonexercising control subjects revealed significant interactions between treatment and time on all variables except CRT and grip strength. Pretest to posttest scores of the exercise subjects tended to improve over the three-year period, whereas the scores of the control subjects declined. Improved reaction time indicated exercise is effective in reversing or at least slowing certain age-related declines in motor performance and in speed of cognitive processing

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