The Effects of an Eight Week Circuit Training Program on Individuals With Parkinson's Disease

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Parkinson's disease is the second most prevalent neurodegenerative disorder in adults 65 and older. Various forms of exercise have been shown to decrease the disabling effects of this progressive disease. The purpose of this study was to determine if a circuit-based exercise program improved strength and balance, which could be key factors in a fall prevention program for this population. Fourteen participants completed a circuit exercise program, attending two sessions per week, for eight weeks. Exercise sessions included treadmill walking, upper and lower body strengthening, stretching, balance and coordination exercises utilizing free weights and Therabands. Baseline and eight-week measurements were recorded. Paired t-tests were used to analyze changes between pre and post-test data gathered from the 10 meter walk test, scores on the Berg Balance Scale, Timed Up and Go, and lower extremity strength utilizing a hand-held dynamometer. Significant differences were noted by an increase in the Berg Balance Scale (+5.5 pts) and muscle strength of knee extension (R = +16.10 lbs, L = +12.33 lbs) and knee flexion (R = +4.65 lbs, L = +10.88 lbs). The results of this study suggest that circuit training programs may be beneficial for increased balance and strength in individuals with Parkinson's disease.