

Effects of Twenty Sessions Core Stability Exercise on Functional Movement and Balance

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ABSTRACT

People often experience lower limb injury due to sport activities or falls in their daily life. Core stability exercise may contribute to prevent or minimize the chronic discomfort in skeletal muscle. **PURPOSE:** The purpose of this study is to investigate the effect of core stability exercise for subjects who have mild discomfort of the lower limb. **METHODS:** Participants (N=20, 32.3±8.6 yrs, male and female) were randomly divided in two different groups: 10 in the control group and 10 in the exercise group performing core stability exercise program. The core stability exercise consisted of ten main exercises including modified mat pilates program and took 30 minutes per session. Functional Movement test (Professional FMS Test Kit, USA), and Y balance test (Professional FMS Test Kit, USA) were measured before and after the 20 sessions of core stability exercise for 4 weeks. Data were analyzed with two-way ANOVA analysis of variance and LSD post hoc test. All values are expressed as mean (SEM). $P < .005$ was considered significant (SPSS inc, Chicago, USA). **RESULTS:** There was no significant interaction effect between group and time for total FMS score. However, a significant time effect was observed in total FMS score ($F=13.634$, $p=.005$), and post-hoc analysis showed that total FMS score was significantly increased from baseline in the exercise group ($p=.001$). Y-balance test showed that there was a significant time effect on the left and the right lower body respectively ($F=10.216$, $p=.011$; $F=11.870$, $p=.007$) and post-hoc analysis showed that it increased from baseline in the exercise group ($p < .01$). **CONCLUSION:** These results indicate that 20 sessions core stability exercise positively effect the lower limb's balance ability of people with mild discomfort.