Abstract

Parraca JA, Olivares PR, Carbonell-Baeza A, Aparicio VA, Adsuar JC, Gusi N. Test-Retest reliability of Biodex Balance SD on physically active old people. J. Hum. Sport Exerc. Vol. 6, No. 2, pp. 444-451, 2011. The purpose of this study was to determine the reliability of the Biodex Balance System in elderly. Forty-five subjects aged 66±5.5 years old and weight 71.6±9.8 kg were tested on the Biodex Balance System. In order to calculate the reliability, the Fall Risk Test (FRt) and the Postural Stability Test (PSt) were measured on two separate occasions 7 days apart. Every subject completed the Falls Efficacy Scale-International (FES-I) questionnaire the first day of testing. The Fall Risk Index (FRi) showed a good ICC (.80) and a low percentage of variation of method error. The Overall Stability Index (OSi) showed a good and acceptable reliability measured by the ICC (.69) but a percentage of variation of method error near to 25%. FES-I Score was 23.1 (±7.2). The reliability of the BBS using Bland-Altman method showed that systematic errors (mean difference between test-retest) for the balance test developed were nearly zero and the 95% limits of agreement narrow, indicating a good reliability of the measurement. Biodex balance measures were showed reliable and may be useful for measuring the risk of falls and monitoring programs for prevent falls in elderly. This study revealed that fall risk assessment in older people must be incorporated into the evaluation process of the physical functioning.

Keywords
EQUILIBRIUM, ELDERLY, STABILOMETRY.