HUBER system assessment for control and improvement of balance in aging subjects

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Introduction

The overall balance of the body and the posture are totally dependent on the spine, its bearing and sturdiness. Aging is often associated with fragility, characterized by a gradual degradation of the subject's postural and homeostatic capacities and by a reduction in strength and muscle resistance leading to an imbalanced body and deterioration of the posture.

Material and Methods

40 subjects (divided into 2 age brackets: 55-65 and 65-75) were randomized into 2 groups:

Group A: 3 months' training with HUBER®.

Group B: 3 months' training with a classic rehabilitation protocol (proprioceptive platform + isotonic training = Control).

The subjects were assessed before the training (T0), after 3 months' of training, 3 sessions per week (T1), 6 and 12 months after the end of the training (T2 and T3). Assessment included an analysis of each subject's walk (Dynamic Foot System), a stabilometry test (stabilometry platform), measurement of the energy used during a 400m walk (K4 Cosmed) and an isokinetic analysis of the extension-flexion of the trunk (Cybex TEF System).

Results :

First results obtained for the HUBER group show an improvement of walk and equilibrium, a recess of trunck musculature and a better control of energetic cost linked to motion after 3 months training (T1). Evaluation of the remanent effect at 6 and 12 months (T2 and T3) is in progress.