

## "Wake-up time activation" in older adults: first randomized experimental clinical trial

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Balance main rely on vestibular, proprioceptive and visual apparatus integrity. In elderly, postural control fails also due to deficit of sensory functions, atrophy of the musculoskeletal system and neuronal reduction. Deterioration of these functions finally lead to abnormality in performing voluntary muscle movements, subjective feeling of vulnerability, insecurity and depression. Besides, physical inactivity (hypokinesia) is a major risk factor for developing coronary artery disease and stroke, contributing to obesity, high blood pressure, hypercholesterolemia and diabetes. For these reasons, especially in elderly, it is important to include physical activity as part of a regular routine.

Aim of this randomized controlled trial was to demonstrate that daily subministration of "Wake-up Time Activation" protocol allow individual recovery of balance and tensile properties of periarticular and intra-articular structures, so preventing morning stiffness and reduction of the Range Of Motion (R.O.M.), mainly in the Vertebral Columna.

Therefore, we propose to 50 Healthy individuals (age 45-86) of both sexes a peculiar sequence of movements that allow individual recovery of balance and tensile properties of periarticular and intra-articular structures, so preventing morning stiffness and reduction of the Range Of Motion (R.O.M.), mainly in the Vertebral Columna.

To verify the effectiveness of this exercises, we scientifically detected, by mean of validated test and instruments, different parameters at different time, for each individual, for two months.

Tests were detected at T0 (before starting daily exercises), T1 (after one month of daily exercises), T2 (at the end of the second month of exercises).

At each time, on every person, we performed: Cervical Test, Spinal motility, Pelvic motility (mobility); Standing one leg Test (balance); Get up and Go (reactivity); SF-36 (mood/depression); Paint Rating Scales (joint pain).

Statistical analysis of obtained results, discussed in detail in the Postrer, scientifically demonstrate that performing of "Wake-up Time Activation" protocol of adapted fisical activity lead to immediate and persistent back pain reduction, articular R.O.M. increase, recovery of balance and coordination, improved autonomy and mood, also in elderly.

Keywords: adapted physical activity, personal autonomy, elderly.