The aim of the study was to compare differences in parameters of postural stability in a dynamic test between the group of active, non-active men and young men. In the study participated three groups of men: A – 38 elderly healthy men (aged 60 – 80 years) trained Tai Chi (4 month), B – 67 community dwelling healthy men (aged 60-80 years), and C – 30 physical education students (aged 20-25 years).

The stability of posture was measured with a computer posturographic system PE 90 produced by the Military Institute of Aviation Medicine in Warsaw (a stable platform 400 x 400 x 50 mm with four tensometric force transducers) with modified software made in Pro-Med. The platform allow to measure the forces caused by the pressure of feet on the surface of the platform. This made it possible to set the point of application of the resultant force vector and thus to measure and register the movements of the projection of the centre of body pressure on the plane XY.

During the measurement of body balance, the capacity to perform specific dynamic tasks was analysed (deflections in the set scope and direction). Subject was asked to sway his body in required directions while standing on the platform. The following parameters were analysed: 1) T (s) – time of reaching the set area by a vertical projection of the centre of body pressure, 2) D (mm) – the length of the path to the set area, 3) E (%) – the percentage of task performance, i.e. the time of keeping the body in the set position in proportion to the required 10 seconds, 4) TD (mm) – total length of path covered by the vertical projection of the centre of body pressure.

Kruskal-Wallis ANOVA shown statistically significant differences (p<0.01) in all posturographic parameters between analysed groups of men. Separate statistical analysis (Tukey T-test) showed that participants of Tai-Chi exercise (group A) achieved statistically significant (p<0.01) better results in each dynamic body balance parameters in comparison to non-active elderly men (group B). Elderly men who did not participate in any activity program (group B) were characterised by the lowest results dynamic body balance. Although Tai –Chi elderly men (group A) and students (group C) did not differ statistically in any of the analysed parameters. It suggest a definitely positive influence of Tai –Chi for maintaining of postural stability among elderly men.

**Keywords:** Balance, Elderly