

# ABSTRACT

**INTRODUCTION** - The ability to maintain stability while standing given by function of multisensory system consists of vision, somatosensory and vestibular system and integration of the CNS. Due to aging there is a decrease of functional capacity of the organism, including these systems, resulting in a deterioration of the balance. Examination of subjective visual and haptic vertical is sensitive diagnostic criterion for functionality of these systems.

**OBJECTIVE** - To compare the ability of verticality perception in young and elderly.

**METHODS** – We examined 64 probands in visual and haptic subjective vertical. The first group consisted of 30 subjects aged 20 to 30 years. In the second group there were 34 people aged over 60.

**RESULTS** - The values of the subjective visual vertical not differ between groups ( $0.1 \pm 0.75^\circ$  for the young and  $0.1 \pm 1.91^\circ$  for seniors). Results of subjective haptic vertical differed on the significance level of  $p = 0.004$  ( $0.8 \pm 3.67$  in the young and  $3.7 \pm 4.15$  for seniors).

**CONCLUSION** - Because subjective haptic vertical is diagnostic criterion mainly for the somatosensory system, we can assume that this particular system is responsible for a decrease in functional capacity and deterioration of stability in the elderly.