In this study we examined dynamic visual acuity as a functional testing of the vestibulo-ocular reflex. Two groups were examined: 22 healthy seniors and 22 healthy young people as controls. We used two types of situations for testing: while walking on a treadmill at a speed of 2, 4 and 5 kmph, and with a subject´s head passively moved in yaw and pitch plane. Visual acuity was measured with optotype charts (for the walking test it was a standard Snellen optotype chart at 6 m distance, for the test of head moves it was a Jaeger chart at 30 cm distance). The values obtained in these ways we related to values of a subject´s static visual acuity, measured in the same conditions, just before the dynamic situations were examined. We found significant difference of dynamic visual acuity in senior group within each condition tested. We also found a significant decline as for difference of dynamic visual acuity in the senior group compared to young subjects – in the walking test at 4 and 5 kmph and in both head-moving conditions. These results indicate age-related impairment in function of vestibulo-ocular reflex. Based on our results, the test of passive head moves appears to be more suitable for ordinary clinical examination of dynamic visual acuity.