

# Analiza zapisów ENG testów wzrokowo-okoruchowych u osób zdrowych w różnym wieku

Elektronystagmographic outcome of visual ocular-motor tests in different age

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## Summary

Elektronystagmographic outcome of visual ocular-motor tests (smooth pursuit, optokinetic, saccadic) in 67 healthy subjects in different age were used for quantitative analysis. Three groups were studied: 16 young ( $29.8 \pm 5.1$  year), 38 middle-aged ( $53.2 \pm 7.6$  year) and 13 elderly ( $73.6 \pm 4.1$  year). A four-channel ENG system (version 2,4 Toennies Nystagliner, Germany), with DC-coupled amplifiers, separately for each eye was used. The pursuit target was driven by predictable sinusoidal target with velocity  $29^\circ/s$ ,  $38^\circ/s$ ,  $49^\circ/s$  and amplitudes of  $15^\circ$  right and left. Optokinetic nystagmus (OKN) was performed using both clockwise and counterclockwise stimuli with velocity  $28^\circ/s$  and  $37^\circ/s$ . In saccades test targets moved abruptly  $15^\circ$  left and right of the centre. In all tests several parameters were calculated like: morphology, gain, phase, maximum velocity and preponderance, and in saccadic test, saccade latency, duration and accuracy as well. In smooth pursuit test gain decreased with ageing. The differences between age groups (younger — middle-age and younger — elderly) for each target velocity were statistically significant. In this study with our paradigm task there was not significant evidence that age impacts parameters of optokinetic and saccadic tests. The 95% prediction interval (95 PI) was calculated for all tests parameters. These findings suggest that evaluation of electronystagmography outcome especially the diagnosis of smooth pursuit dysfunction should be quantified by the age of the patient and by the target task.