

CONNIE BURRIS, MARIA MARTINEZ, RAE MOORE, SARAH ZAMZOW, NATALIA OMELCHENKO-COMER, STEM and Business Division, WVNCC, Wheeling, WV, 26003. The somatosensory and visual systems adaptation times demonstrate a strong positive correlation.

Multiple studies demonstrated that sensory systems adapt their sensitivity levels to improve responsiveness to changes in stimulation and to accelerate CNS processing. The aim of the study was to determine if the time of adaptation observed for the somatosensory system correlates with the adaptation time observed for the visual system. The data collection was performed on 9 male and female healthy volunteers (the average age of those was 22.2 ± 4.60) in a seated position. The adaptation time for the somatosensory system was measured by recording the time of the perception loss after placing a 1 penny coin onto the dorsal hand surface. The adaptation time for the visual system was measured by recording the time of the perceived loss of the component of a small pastel color abstract image while staring at this image. The average adaptation time for somatosensory perception was 22.0 ± 16.15 seconds ranging from 4 to 42 seconds. The average adaptation time for visual perception was 30.7 ± 16.04 seconds ranging from 12 to 51 seconds. There was a statistically significant difference between the adaptation time for these sensations as determined by paired T-test ($t(8) = 3.1, p = .01$). Nonetheless, the correlation analysis demonstrated a strong positive correlation between values ($r(8) = 0.86, p = .003$). Our data indicate that the time of somatosensory and visual adaptation is strongly correlated. The finding of this study can be used for the development and improvement of neurobehavioral evaluation tests.