

Quantitative saccadic testing is a non-invasive method of evaluating the **neural networks** involved in the control of **eye movements**. The aim of a study of Nij Bijvank et al., from the Neuro-ophthalmology Expertise Center, **Amsterdam** and Moorfields Eye Hospital and The National Hospital for Neurology and Neurosurgery, **London**, is to provide a standardized and reproducible protocol for **infrared oculography** measurements of eye movements and analysis, which can be applied for various **diseases** in a multicenter setting.

Development of a protocol to Demonstrate Eye Movement Networks with **Saccades** (DEMoNS) using **infrared oculography**. Automated analysis methods were used to calculate parameters describing the characteristics of the saccadic eye movements. The two measurements of the subjects were compared with descriptive and reproducibility statistics.

Infrared oculography measurements of all subjects were performed using the DEMoNS protocol and various saccadic parameters were calculated automatically from 28 subjects. Saccadic parameters such as: peak velocity, latency and saccade pair ratios showed excellent reproducibility (intra-class correlation coefficients > 0.9). Parameters describing performance of more complex tasks showed moderate to good reproducibility (intra-class correlation coefficients 0.63-0.78).

This study provides a standardized and transparent protocol for measuring and analyzing saccadic eye movements in a multicenter setting. The DEMoNS protocol details outcome measures for treatment trial which are of excellent reproducibility. The DEMoNS protocol can be applied to the study of saccadic eye movements in various neurodegenerative and motor diseases ¹⁾.

¹⁾

Nij Bijvank JA, Petzold A, Balk LJ, Tan HS, Uitdehaag BMJ, Theodorou M, van Rijn LJ. A standardized protocol for quantification of saccadic eye movements: DEMoNS. PLoS One. 2018 Jul 16;13(7):e0200695. doi: 10.1371/journal.pone.0200695. eCollection 2018. PubMed PMID: 30011322.

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Last update: **2024/06/07 02:57**

