

# TREMOR12

Evaluating the effect of treatment of [tremor](#) is mostly performed with clinical rating scales. [Mobile applications](#) facilitate a more rapid, objective, and quantitative evaluation of treatment effect. Existing mobile apps do not offer raw data access, which limits algorithm development.

TREMOR12 is an [open source](#) mobile app that samples acceleration, rotation, rotation speed, and gravity, each in 3 axes and time-stamped in a frequency up to 100 Hz. The raw measurement data can be exported as a comma-separated value file for further analysis in the TREMOR12P data processing module. The app was evaluated with 3 patients suffering from essential tremor, who were between 55 and 71 years of age.

This proof-of-concept study shows that the TREMOR12 app is able to detect and register tremor characteristics such as acceleration, rotation, rotation speed, and gravity in a simple and nonburdensome way. The app is compatible with current regulatory oversight by the European Union (MEDDEV regulations) and the Food and Drug Administration (FDA) guidance on mobile medical applications.

TREMOR12 offers low-cost tremor quantification for research purposes and algorithm development, and may help to improve treatment evaluation <sup>1)</sup>.

<sup>1)</sup>

Kubben PL, Kuijf ML, Ackermans LP, Leentjes AF, Temel Y. TREMOR12: An Open-Source Mobile App for Tremor Quantification. *Stereotact Funct Neurosurg*. 2016 Jul 9;94(3):182-186. [Epub ahead of print] PubMed PMID: 27395052.

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