

Publication**Evaluation of a summary score of cognitive performance for use in trials in perioperative and critical care****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 1194396**Author(s)** Burkhart, Christoph S.; Birkner-Binder, Dagmar; Gagneux, Alexa; Berres, Manfred; Strebel, Stephan P.; Monsch, Andreas U.; Steiner, Luzius A.**Author(s) at UniBasel** [Steiner, Luzius A.](#) ; [Monsch, Andreas U.](#) ; [Strebel, Stephan P.](#) ;**Year** 2011**Title** Evaluation of a summary score of cognitive performance for use in trials in perioperative and critical care**Journal** Dementia and Geriatric Cognitive Disorders**Volume** 31**Number** 6**Pages / Article-Number** 451-9**Keywords** Cognitive testing, Consortium to Establish a Registry for Alzheimer's Disease, Neuropsychological tests, Postoperative cognitive dysfunction, Practice effects

Background/Aims: Cognitive dysfunction after medical treatment is increasingly being recognized. Studies on this topic require repeated cognitive testing within a short time. However, with repeated testing, practice effects must be expected. We quantified practice effects in a demographically corrected summary score of a neuropsychological test battery repeatedly administered to healthy elderly volunteers. Methods: The Consortium to Establish a Registry for Alzheimer's Disease (CERAD) Neuropsychological Assessment Battery (for which a demographically corrected summary score was developed), phonemic fluency tests, and trail-making tests were administered in healthy volunteers aged 65 years or older on days 0, 7, and 90. This battery allows calculation of a demographically adjusted continuous summary score. Results: Significant practice effects were observed in the CERAD total score and in the word list (learning and recall) subtest. Based on these volunteer data, we developed a threshold for diagnosis of postoperative cognitive dysfunction (POCD) with the CERAD total score. Conclusion: Practice effects with repeated administration of neuropsychological tests must be accounted for in the interpretation of such tests. Ignoring practice effects may lead to an underestimation of POCD. The usefulness of the proposed demographically adjusted continuous score for cognitive function will have to be tested prospectively in patients.

Publisher Karger**ISSN/ISBN** 1420-8008 ; 1421-9824**edoc-URL** <http://edoc.unibas.ch/dok/A6004615>**Full Text on edoc** Available;**Digital Object Identifier DOI** 10.1159/000329442**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/21778726>**ISI-Number** WOS:000293835800009**Document type (ISI)** Journal Article