Reviewer's report

Title: A perturbation-based balance training program for older adults: study protocol for a randomised controlled trial

Version: Date: 28 March 2007
Reviewer: Jacques Duysens

Reviewer's report:

General
This paper describes a protocol for a balance training program for older adults for a later to be performed RCT. The paper is well-written and interesting. As positive elements one can mention that measurable goals are proposed which are well-documented on the basis of available literature. The tasks include some novel approaches as well (such as attention switches), again well-documented and based on experimental evidence.

As potential negative elements the following minor objections can be made:

1) How relevant are the type of perturbations trained and studied? In daily life a sudden translation is likely to occur when standing in a bus which is suddenly moved. This occurs very infrequently. Perhaps the training could be expanded by having subjects also walk in place while adding the perturbations. This would already broaden the scope of related ADL situations a little.

2) What is trained and what is tested is still very much overlapping. The authors introduced the waist pull test to counter this objection but it remains that the other test is very close to the training elements.

3) One of the goals is to reduce the latency of responses. This part is weak though since it is unlikely that the fastest parts of the responses can be speeded up. This may not be a major problem though since it has been shown that behavioral reactions are only partly determined by this very early activity and rely more on later components. Instead it may be more interesting to look at how well subjects can use the rail grabbing to restore balance.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after discretionary revisions