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The Hierarchy of Functional Loss Associated With Cognitive Decline in Older Persons FREE

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The Journals of Gerontology: Series A, Volume 56, Issue 10, 1 October 2001, Pages M638–M643, <https://doi.org/10.1093/gerona/56.10.M638>

Published: 01 October 2001 **Article history** ▼

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Abstract

Objectives. We studied a representative cohort of community-dwelling elderly persons to (i) examine the relationship between the loss of specific functional activities and cognitive status at the time of these losses, (ii) compare the cognitive status of participants who have and have not lost independence in these functional activities, and (iii) determine whether a hierarchical scale of functional loss is associated with declining cognitive status.

Methods. A cohort of 5874 community-dwelling persons aged 65 years and older from the Canadian Study of Health and Aging I and II were analyzed. At baseline and 5 years later, cognitive status with the Modified Mini-Mental State Examination (3MS) and functional status with 14 Older American Resources and Services (OARS) items were measured. For each OARS functional item, the mean 3MS scores for persons who lost independence during the 5-year period versus those who did not were compared.

Results. For each functional item, the 5-year decline in 3MS scores of persons who lost independence were significantly greater than those who remained independent (e.g., ability to do finances), with an 18-point decline for those who lost independence and a 2-point decline for those who retained independence. A hierarchy of functional items existed, with instrumental activities of daily living (ADLs) (e.g., shopping, banking, and cooking) being lost at higher cognitive scores than basic ADL items (e.g., eating, dressing, and walking), although there was some overlap.

Conclusions. This is the first prospective study using a large representative cohort of elderly persons to demonstrate that progressive cognitive decline is associated with a specific pattern of loss of functional tasks. Clear

cognitive thresholds at which development of dependency in OARS functional items occurred. By providing estimates of the cognitive status of persons at the time at which they developed dependency in specific functional items, a natural hierarchy of functional loss associated with cognitive decline emerged. For caregivers, clinicians, and health policy makers, this information can help anticipate the pattern of functional decline and the subsequent care needs of persons with declining cognition, potentially improving the quality of life of these persons and their caregivers and playing an important part in health care planning.

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