

Subtle nervous system abnormalities appear to predict risk of death in older individuals

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Subtle but clinically detectable neurological abnormalities, such as reduced reflexes and an unstable posture, may be associated with the risk of death and stroke in otherwise healthy older adults, according to a report in the June 23 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

Previous research has linked subtle neurological abnormalities—which also include resting tremors and differences in hand strength—to poor physical function and to falls, according to background information in the article. In addition, other studies of apparently healthy older individuals have shown that those with subclinical diseases of different organs, such as subtle signs of heart trouble that have not yet led to a heart disease diagnosis, are more likely to become physically or mentally impaired.

Marco Inzitari, M.D., of the University of Florence, Italy, and colleagues studied 506 individuals (average age 72.5) who did not have neurological disease beginning in 1995. A neurological examination was administered then and again four years later. Deaths and cerebrovascular events, such as stroke, were tracked for an average of eight years.

At the beginning of the study, 59 percent of the participants had at least one subtle neurological abnormality, with an overall average of 1.1 per individual. After adjusting for age and sex, an increasing number of such abnormalities was associated with more severe disabilities, more symptoms of depression and declining cognitive (thinking, learning and

memory) and functional status. Compared with individuals who had fewer than three subtle neurological abnormalities, those who had three or more subtle neurological abnormalities were more likely to die or experience a cerebrovascular event over eight years.

Based on these findings, "a simple neurological examination seems to be an additional prognosticator of hard outcomes, particularly death, above and beyond other measures used in clinical practice," which currently include other performance-based tests for cognitive and physical function and depressive symptoms, the authors write. "It is likely that the neurological examination might capture additional information about the integrity of the nervous system in apparently healthy older adults."

"Our data support the hypothesis that subtle neurological abnormalities in elderly individuals are a manifestation of early brain damage, a finding that may have important implications in research studies on the prevention of age-related cognitive and functional decline. Understanding the nature of dysfunctions underlying the decline in physical performance and disability contributes to planning specific preventive interventions," they conclude.

Source: JAMA and Archives Journals

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