



**ABOUT NEUROBIOLOGY OF AGING**  
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**When does age-related cognitive decline begin?**  
**Timothy A. Salthouse**

**Abstract**

Cross-sectional comparisons have consistently revealed that increased age is associated with lower levels of cognitive performance, even in the range from 18 to 60 years of age. However, the validity of cross-sectional comparisons of cognitive functioning in young and middle-aged adults has been questioned because of the discrepant age trends found in longitudinal and cross-sectional analyses. The results of the current project suggest that a major factor contributing to the discrepancy is the masking of age-related declines in longitudinal comparisons by large positive effects associated with prior test experience. Results from three methods of estimating retest effects in this project, together with results from studies comparing non-human animals raised in constant environments and from studies examining neurobiological variables not susceptible to retest effects, converge on a conclusion that some aspects of age-related cognitive decline begin in healthy educated adults when they are in their 20s and 30s.

## **Old Age Begins at 27, Study Finds**

Monday, March 16, 2009

<http://www.news.com.au/couriermail/story/0,,25191805-23272,00.html>

### **Feeling old? You're not alone.**

New research suggests that old age actually begins even before we hit the ripe old age of 30. The research, done at the University of Virginia, indicates that our mental abilities begin to decline from the age of 27, after reaching a peak at 22.

The researchers studied 2,000 men and women aged 18 to 60 over a seven year period. The people involved, mostly in good health and well-educated, had to solve visual puzzles, recall words and story details and spot patterns in letters and symbols.

Similar tests are often used to diagnose mental disabilities and diseases, such as Alzheimer's and other forms of dementia.

The research, led by Professor Timothy Salthouse, reported in the academic journal *Neurobiology of Aging*, found that in nine out of 12 tests the average age at which the top performance was achieved was 22.

The first age at which performance was significantly lower than the peak scores was 27 — for three tests of reasoning, speed of thought and spatial visualization. Memory was shown to decline from the average age of 37. In the other tests, poorer results were shown by the age of 42.

Salthouse said the results suggested that therapies designed to prevent or reverse age-related conditions may need to start earlier, long before people retire.