



CAREER VISION

Aging and Cognitive Decline: Gray Matters

As we pass the 50- year mark, do our cognitive abilities or aptitudes naturally decline? Are we up to the challenge of retraining for a new occupation or taking on new job responsibilities? Over the age of 65 years are we mentally capable of keeping up with our younger colleagues or do we become mentally worn-out? Certainly the answer depends on the individual, but research over the past 25 years suggests the following encouraging generalizations.

- For abilities, such as verbal comprehension (e.g., vocabulary) and numerical computation, there is little or no loss, and even some gains are shown up to 70 plus years of age.
- One might experience some decline in abilities such as reasoning, memory, spatial visualization, and clerical (perceptual) speed beginning in middle adulthood. But the decline is gradual, not sudden or stepwise.
- At least up to the seventies, age accounts for only a small amount of the variability in cognitive abilities across people. This strongly suggests that no person's abilities should be judged on the basis of age alone.

Why do abilities decline?

Some scientists point to a reduction in efficiency in the brain's working memory. Others point to a general slowing of brain functions or a reduction in selective attention and an increased susceptibility to distracting information. The brain often undergoes physical changes with age. For example, the frontal lobe is especially prone to shrinking. Researchers are still pursuing reasons for decline.

Do all older adults experience a cognitive decline?

No, recent research suggests that the brain may find ways of compensating for the loss or atrophy of neurons in one area by utilizing a different area. Other research suggests that the cognitive decline might be prevented or even reversed by keeping intellectually and physically active. In retirement years, brain-teasers, crossword puzzles and other cognitive tasks can keep the brain stimulated. A lot remains to be learned in this area of aging research, but there is reason to be encouraged.

Does any aspect of cognitive ability improve with age?

Yes, crystallized ability or the ability that reflects how much skill and knowledge we have acquired from schooling and informal means of learning, can show substantial improvement throughout the lifetime. The breadth and depth of our conceptual knowledge grows with experience, as does our ability to reason and solve problems with that knowledge. A less dramatic increase is also noted in the ability to retrieve information from long-term memory. This means that the knowledge and skills gained throughout a lifetime are cumulative and accessible. You don't lose it when you use it!

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