

# Age associated with amyloid-beta kinetics

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physiological and pathophysiological changes and may be applicable to other proteinopathies."

Several authors disclosed financial ties to C2N Diagnostics, which has licensed related patents from Washington University.

**More information:** [Abstract](#)  
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(HealthDay)—Increasing age is associated with slowed amyloid- $\beta$  ( $A\beta$ ) turnover, according to a study published online July 20 in the *Journal of Neurology*.

Noting that [age](#) is the single greatest risk factor for Alzheimer's disease, Bruce W. Patterson, Ph.D., from Washington University in St. Louis, and colleagues examined the correlation between age, amyloidosis, and  $A\beta$  [kinetics](#) in the central nervous system of humans.  $A\beta$  kinetics were assessed in 112 participants.

The researchers found that increasing age was significantly associated with slowed turnover rates of  $A\beta$  (2.5-fold longer half-life over five decades of age). Specifically in participants with [amyloid deposition](#), there were independent effects on  $A\beta_{42}$  kinetics. Amyloidosis correlated with an increased irreversible loss of soluble  $A\beta_{42}$  (more than 50 percent) and a  $A\beta$  reversible exchange rate that was 10-fold higher.

"These findings reveal a mechanistic link between human aging and the risk of amyloidosis, which may be owing to a dramatic slowing of  $A\beta$  turnover, increasing the likelihood of [protein misfolding](#) that leads to deposition," the authors write. "This study provides an example of how changes in protein turnover kinetics can be used to detect

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