

# AAIC: Turnover kinetics vary for different amyloid beta isoforms

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(HealthDay)—Amyloid beta ( $A\beta$ )38 has faster turnover kinetics than

A $\beta$ 40 and A $\beta$ 42, according to a study published online July 19 in *Alzheimer's & Dementia* to coincide with presentation at the annual Alzheimer's Association International Conference, held from July 16 to 20 in London.

Vitaliy Ovod, from the Washington University School of Medicine in St. Louis, and colleagues examined the turnover kinetics and concentrations of A $\beta$ 38, A $\beta$ 40, and A $\beta$ 42 in [human plasma](#) using the Stable Isotope Labeling Kinetics protocol.

The researchers found that the half-life of A $\beta$  isoforms was approximately three hours in [plasma](#). Compared with A $\beta$ 40 and A $\beta$ 42, A $\beta$ 38 demonstrated faster turnover kinetics. Amyloid positive participants had faster fractional turnover of A $\beta$ 42/A $\beta$ 40 and lower A $\beta$ 42 and A $\beta$ 42/A $\beta$ 40 concentrations.

"Faster turnover kinetics and lower A $\beta$ 42 concentrations in amyloid positive participants have been seen in prior cerebrospinal fluid A $\beta$  studies, suggesting a blood-brain transportation mechanism of A $\beta$ ," the authors write. "The stability and sensitivity of plasma A $\beta$  measurements [suggest] this may be a useful screening test for central nervous system amyloidosis."

**More information:** [Abstract](#)  
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