

# Ocular protein levels may be useful for Alzheimer testing

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(HealthDay)—Patients with poor cognitive function have significantly

lower levels of Alzheimer disease-related biomarkers in the vitreous humor, according to a study published March 8 in the *Journal of Alzheimer's Disease*.

Lauren M. Wright, M.D., from the Boston University School of Medicine, and colleagues analyzed vitreous humor samples from 80 eyes of 80 individuals to quantify levels of beta amyloid- $\beta$  ( $A\beta_{40}$ ,  $A\beta_{42}$ ), phosphorylated tau (pTau), and total tau (tTau). Serum was also used to determine apolipoprotein E (APOE) status. Participants underwent testing with the Mini-Mental State Exam (MMSE).

The researchers found that lower MMSE scores were significantly associated with lower levels of vitreous  $A\beta_{40}$  ( $P = 0.015$ ),  $A\beta_{42}$  ( $P = 0.0066$ ), and tTau ( $P = 0.0085$ ). There was no association between these biomarkers and any preexisting eye conditions. There was a trend toward an association between the presence of the  $\epsilon 4$  allele and the  $\epsilon 2$  allele with reduced  $A\beta_{40}$  level ( $P = 0.053$ ) and increased p-Tau level ( $P = 0.056$ ), respectively.

"Results suggest ocular proteins may have a role for early dementia detection in individuals at-risk for Alzheimer disease," the authors write.

**More information:** [Abstract/Full Text \(subscription or payment may be required\)](#)

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