

# Abstract

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## Association Between ApoE Phenotypes and Telomere Erosion in Alzheimer's Disease.

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**OBJECTIVE:** Although several reports suggest that Alzheimer's disease (AD) is associated with shortened telomere length, the clinical relevance of this has not yet been fully elucidated. This study was conducted to clarify the correlation of telomere length with clinical characteristics and ApoE phenotypes in 74 AD patients.

**METHODS:** Telomere length was determined from genomic DNA extracted from whole blood by quantitative real-time polymerase chain reaction.

**RESULTS:** We found no significant difference in telomere length between the AD and non-dementia elderly control ( $n = 35$ ) groups. Furthermore, no significant correlation was found among telomere length and the severity of cognitive decline and disease duration, age, or gender difference. However, telomere length was significantly shorter in AD patients with the ApoE4 homozygote than in those with the ApoE4 heterozygote ( $p < .001$ ) and noncarriers ( $p < .001$ ).

**CONCLUSION:** These findings suggest that shortened telomere length may be associated with the ApoE4 homozygote in AD patients.

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