

# E-Cigarette Use Linked to Higher Dementia Risk



**E-CIGARETTE** use in young adults was linked to a significantly higher risk of early cognitive decline, according to new research analysing brain function and behavioural outcomes in individuals aged 18–25 years.

The rise of e-cigarette use among adolescents and young adults has prompted growing concern about its long-term neurological effects.

Nicotine exposure during critical periods of brain development has previously been associated with impaired cognition, but its relationship with emotional intelligence, attention-deficit/hyperactivity disorder (ADHD) symptoms, and dementia risk has remained unclear.

## **E-Cigarette Use and Dementia Risk in Young Adults**

In this cross-sectional study, researchers evaluated 232 participants in Thailand, equally divided between e-cigarette users and non-smokers. Cognitive function was assessed using the Montreal Cognitive Assessment, alongside validated tools measuring ADHD symptom tendencies and emotional intelligence.

The findings showed no significant differences between groups in ADHD-related symptoms or emotional intelligence scores.

However, e-cigarette use was associated with a markedly higher proportion of individuals classified as being at risk of dementia. Notably, those who reported no intention to quit within one month had a sixfold increased risk, while those with no plans to quit within six months had a fourfold increase.

These results suggest that while behavioural and emotional measures may remain unaffected in the short term, underlying neurocognitive changes linked to e-cigarette use could already be emerging in early adulthood.

## **Interpreting the Findings and Future Directions**

Dementia risk in this study was inferred from cognitive screening scores rather than clinical diagnosis, reflecting early indicators rather than established disease.

The absence of differences in emotional intelligence and ADHD symptoms may indicate that these domains are less sensitive to early nicotine-related effects, or that longer exposure is required for measurable impact.

Importantly, the study's cross-sectional design limits causal interpretation. It remains unclear whether e-cigarette use directly contributes to cognitive decline or whether other behavioural or environmental factors may also play a role.

Nevertheless, the findings raise important public health concerns.

With e-cigarette use continuing to rise globally among younger populations, early cognitive changes could have significant long-term implications if confirmed by longitudinal research.

The authors called for further studies to clarify causality and to explore whether reducing or discontinuing e-cigarette use may mitigate potential cognitive risks.