

Study suggests taller young men may have lower dementia risk

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Men who are taller in young adulthood, as an indicator of early-life circumstances, may have a lower risk of dementia in old age, suggests a study published today in *eLife*.

Finding ways to identify individuals at risk of [dementia](#) is essential. It can help people take preventive measures or plan for their future care. The study, originally posted on bioRxiv, indicates that young adult height might be one potential risk factor to consider.

Previous studies have suggested that height may be a risk factor for dementia, but much of this research was not able to take into account genetic, environmental, or other early-life factors that may be linked to both height and dementia.

"We wanted to see if body height in young men is associated with diagnosis of dementia, while exploring whether intelligence test scores, [educational level](#), and underlying environmental and genetic factors shared by brothers explain the relationship," says lead author Terese Sara Høj Jørgensen, Assistant Professor at the Section of Social Medicine, Department of Public Health, University of Copenhagen, in Denmark.

To do this, Jørgensen and her colleagues analysed data on 666,333 Danish men born between 1939 and 1959, including 70,608 brothers and 7,388 twins, from Danish national registries. They found a total of 10,599 men who developed dementia later in life.

Their adjusted analysis of this group showed that there was about a 10% reduction in the risk of developing dementia for about every 6cm of height in individuals above the average height. When the team took into account the potential role of intelligence or education, the unadjusted relationship between height and dementia risk was only slightly reduced.

They found that the relationship between height and dementia also existed when they looked at brothers with different heights, suggesting that genetics and family characteristics alone do not explain why shorter men had a greater dementia risk. This was also true when they studied data concerning twins, although the results for this group were less

certain.

"A key strength of our study is that it adjusted for the potential role of education and intelligence in young men's dementia risk, both of which may build up [cognitive reserve](#) and make this group less vulnerable to developing dementia," explains senior author Merete Osler, Professor at the Center for Clinical Research and Prevention, Bispebjerg and Frederiksberg Hospital, and at the University of Copenhagen.

'Cognitive reserve' refers to the brain's ability to improvise and solve problems that come up in everyday life. Osler says that adjusting for education and intelligence reduces the likelihood that the relationship between height and dementia is really explained by cognitive reserve.

"Together, our results point to an association between taller body height in young men and a lower [risk of dementia](#) diagnosis later in life, which persists even when adjusted for educational level and [intelligence test scores](#)," Osler says. "Our analysis of the data concerning brothers confirms these findings, and suggests the association may have common roots in early-life environmental exposures that are not related to family factors shared by brothers."

She adds that an important limitation of the study is the uncertainty as to whether these findings are generalisable to women, as previous studies on potential gender differences in the relationship between [height](#) and dementia are mostly inconclusive.

More information: Terese Sara Høj Jørgensen et al, Body height in young adult men and risk of dementia later in adult life, *eLife* (2020). [DOI: 10.7554/eLife.51168](https://doi.org/10.7554/eLife.51168)

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