

Socioeconomic deprivation linked to higher risk of epilepsy related to traumatic brain injury

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Socioeconomic deprivation increases the risk for sustaining a traumatic brain injury (TBI), and in some age groups, it may also increase the risk

for epilepsy after a TBI, according to a research letter [published](#) in the July issue of *Epilepsy & Behavior*.

Kasper Lolk, Ph.D., from Aarhus University in Denmark, and colleagues examined whether the sex- and age-specific risk for TBI and epilepsy after TBI differed by individual- and neighborhood-level indices of [socioeconomic deprivation](#). The analysis included all persons with an incident TBI and a matched (5:1) reference population from the general Danish population (2010 to 2015; 448,666 individuals).

The researchers found that incidence rates of TBI were higher among persons from deprived neighborhoods compared with persons from nondeprived neighborhoods (259.0 per 100,000 person years, versus 231.3). Neighborhood deprivation was not a risk factor for epilepsy in the absence of TBI, although individual-level deprivation was associated with a higher risk for epilepsy in adults.

The risk for epilepsy was higher after a TBI, regardless of age, sex, and neighborhood deprivation, compared with no TBI. The absolute (but not relative) risk for epilepsy after TBI was higher in adults of individual-level socioeconomic deprivation compared with adults without individual-level deprivation, while the relative (but not absolute) risk for epilepsy was higher in children and adolescents from socially deprived neighborhoods versus those not from deprived neighborhoods.

"Jointly, these results suggest that TBI may be involved in the elevated incidence of epilepsy associated with poorer socioeconomic standing," the authors write.

More information: Kasper Lolk et al, Individual and neighborhood-level socioeconomic deprivation and risk of epilepsy after traumatic brain Injury: A register-based cohort study, *Epilepsy & Behavior* (2024). [DOI: 10.1016/j.yebeh.2024.109807](https://doi.org/10.1016/j.yebeh.2024.109807)

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