

# Epilepsy epidemiology

Epilepsy is one of the most common chronic neurological [disorders](#) with extensive socioeconomic and [health](#) consequences, impacting an estimated 68 million patients worldwide <sup>1)</sup>.

Fiest et al., searched MEDLINE and EMBASE for articles published on the prevalence or incidence of epilepsy since 1985. Abstract, full-text review, and data abstraction were conducted in duplicate. Meta-analyses and meta-regressions were used to explore the association between prevalence or incidence, age group, sex, country level income, and study quality.

A total of 222 studies were included (197 on prevalence, 48 on incidence). The point prevalence of active epilepsy was 6.38 per 1,000 persons (95% confidence interval [95% CI] 5.57-7.30), while the lifetime prevalence was 7.60 per 1,000 persons (95% CI 6.17-9.38). The annual cumulative incidence of epilepsy was 67.77 per 100,000 persons (95% CI 56.69-81.03) while the incidence rate was 61.44 per 100,000 person-years (95% CI 50.75-74.38). The prevalence of epilepsy did not differ by age group, sex, or study quality. The active annual period prevalence, lifetime prevalence, and incidence rate of epilepsy were higher in low to middle income countries. Epilepsies of unknown etiology and those with generalized seizures had the highest prevalence.

This study provides a comprehensive synthesis of the prevalence and incidence of epilepsy from published international studies and offers insight into factors that contribute to heterogeneity between estimates. Significant gaps (e.g., lack of incidence studies, stratification by age groups) were identified. Standardized reporting of future epidemiologic studies of epilepsy is needed <sup>2)</sup>.

<sup>1)</sup>

Ngugi AK, Bottomley C, Kleinschmidt I, Sander JW, Newton CR. Estimation of the burden of active and life-time epilepsy: a meta-analytic approach. *Epilepsia*. 2010;51(5):883-890.

<sup>2)</sup>

Fiest KM, Sauro KM, Wiebe S, Patten SB, Kwon CS, Dykeman J, Pringsheim T, Lorenzetti DL, Jetté N. Prevalence and incidence of epilepsy: A systematic review and meta-analysis of international studies. *Neurology*. 2016 Dec 16. pii: 10.1212/WNL.0000000000003509. [Epub ahead of print] PubMed PMID: 27986877.

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