

Prevalence of Epilepsy Among Minnesota Adults, 2005

What is Epilepsy?

Epilepsy is a chronic neurological condition encompassing more than twenty types of seizure disorders. Seizures are produced when a change in the normal functioning of the brain's electrical system causes a surge of electrical activity. Epilepsy may cause impaired physical and psychological functioning, which in some cases can result in increased disability, loss of economic opportunities, and stigma.

Assessing Prevalence of Epilepsy in Minnesota

The Minnesota Department of Health, Center for Health Statistics used the Behavioral Risk Factor Surveillance System (BRFSS) to assess the prevalence of epilepsy and its demographic characteristics in Minnesota.

The BRFSS is a monthly telephone survey that tracks health practices, conditions, and risk behavior of adults in Minnesota. The BRFSS uses a random digit dialing sampling strategy, with one adult selected at random among all adults who live in a selected household to be interviewed. BRFSS data are weighted to reflect the number of adults in a household, the number of residential telephone numbers that reach a household, and the age group and sex distribution of the state's estimated population, so that the sample data correspond more closely to the state population. To assess the prevalence of epilepsy in Minnesota, three questions about epilepsy were added to a BRFSS type survey conducted in 2005.

Persons with epilepsy were defined as those that responded 'yes' to the question, "Have you ever

been told by a doctor that you have a seizure disorder or epilepsy?" Those who answered yes to this question were asked two additional questions to define active and inactive epilepsy: "Are you currently taking any medication to control your seizure disorder or epilepsy?" and "How many seizures of any type have you had in the past three months?"

Individuals with active epilepsy included those who reported ever being told they had epilepsy, and reported currently taking medication for their epilepsy or seizure disorder or having one or more seizures in the last three months. Individuals with inactive epilepsy included those who reported being told they had epilepsy and reported not being on medication and not having any seizures in the past three months, or reported they no longer have the disorder.

Characteristics of Adults with Epilepsy in Minnesota

- In 2005, eighty-four adults (1.6%) out of 5,864 reported having been told by a doctor that they have a seizure disorder or epilepsy.
- Among those with epilepsy, 40% are men and 60% are women.
- Among the individuals with epilepsy, 47% indicated having active epilepsy and 53% inactive epilepsy.
- Seventy percent of adults with epilepsy are 18-44 years old and 30% are 45 and older.



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- The educational attainment of persons with epilepsy is similar to that of individuals without epilepsy. In both groups, about 70% have more than a high school education.
- When asked whether their health was, in general, excellent, very good, good, fair or poor, persons with epilepsy were twice as likely to report fair or poor health status as those without epilepsy (21.5% versus 10.3%). However, the difference in health status may not be due to epilepsy alone. Other factors, such as whether or not individuals with epilepsy were more likely to also have other conditions, may have contributed to this difference.
- Forty five percent of individuals with epilepsy indicated that they are limited in some way because of physical, mental, or emotional problems, versus 16% of individuals without epilepsy.
- The same differences existed with regard to the use of special equipment. When respondents were asked whether they had any health problem that required them to use special equipment, such as a cane, a wheelchair, special bed, or a special telephone, 20.4% of individuals with epilepsy answered yes, compared with 4.7% of individuals without epilepsy.
- In the area of employment status, only about 2% of adults without epilepsy were unable to work, versus 12% of those with epilepsy.
- Respondents were also asked about the number of days during the past 30 days in which they experienced poor physical or mental health. For both unhealthy physical days and unhealthy mental days, the average number was 5.2 days among persons with epilepsy and 2.7 days for individuals without epilepsy. Again, epilepsy may not be the sole cause for the difference between those with epilepsy and those without.
- While the sample of persons with active and inactive epilepsy is very small, there was little difference between the two groups in terms of age, gender, educational attainment, limitation of activity, use of special equipment, or the average number of unhealthy mental days.
- The only observed differences between the active and inactive groups are in the category ‘unable to work,’ which included 20.5% of those with active epilepsy and 5.2% of those with inactive epilepsy, and in average number of unhealthy physical days, which was 6.8 for those with active epilepsy and 3.9 for those with inactive epilepsy.

Limitations

The BRFSS program provides seasonally adjusted behavioral risk data and prevalence data related to various health conditions. There are some limitations related to telephone survey data, which can be subject to bias, including telephone non-coverage (cell phones, non-response), and self-reporting of data.

For the assessment of epilepsy, additional limitations may be present, such as perceived social desirability and stigma, where individuals with epilepsy may choose not to report their condition. In addition, BRFSS excludes institutionalized populations, where some individuals with severe cases of epilepsy may reside. Given that the prevalence of epilepsy is about 1.5% of the adult population, it is very difficult to study those with active and inactive epilepsy, even in the aggregate at the state level, without a large sample of adults.