

Diabetic polyneuropathy



Field of action 3: Reducing the complications of diabetes

Adults

Background

Over time, elevated blood glucose levels can damage both the autonomic and the somatic nerves. The most common form of nerve damage is distal, that is peripheral sensorimotor polyneuropathy that increases the risk of developing diabetic foot syndrome.

Key facts

- ▶ 13.5% of adults with diabetes have had documented diabetic polyneuropathy in 2013.
- ▶ The proportion of people with diabetes and documented diabetic polyneuropathy increases with age and peaks in the 70- to- 79-year age group.

Figure 1: Temporal comparison of the prevalence of documented diabetic polyneuropathy among adults with diabetes covered by statutory health insurance in % by sex between 2012 and 2013 (age-standardised).

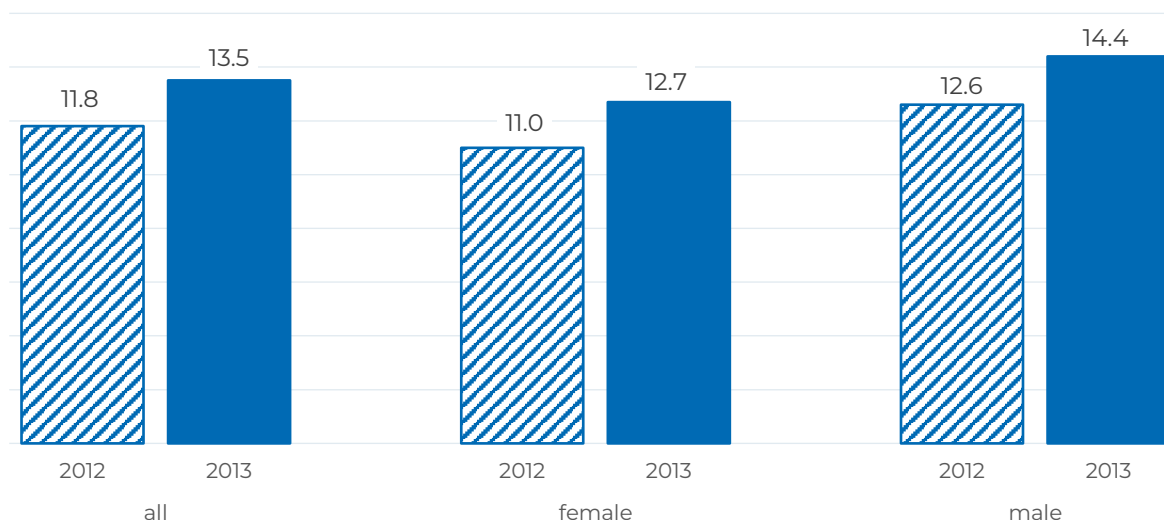
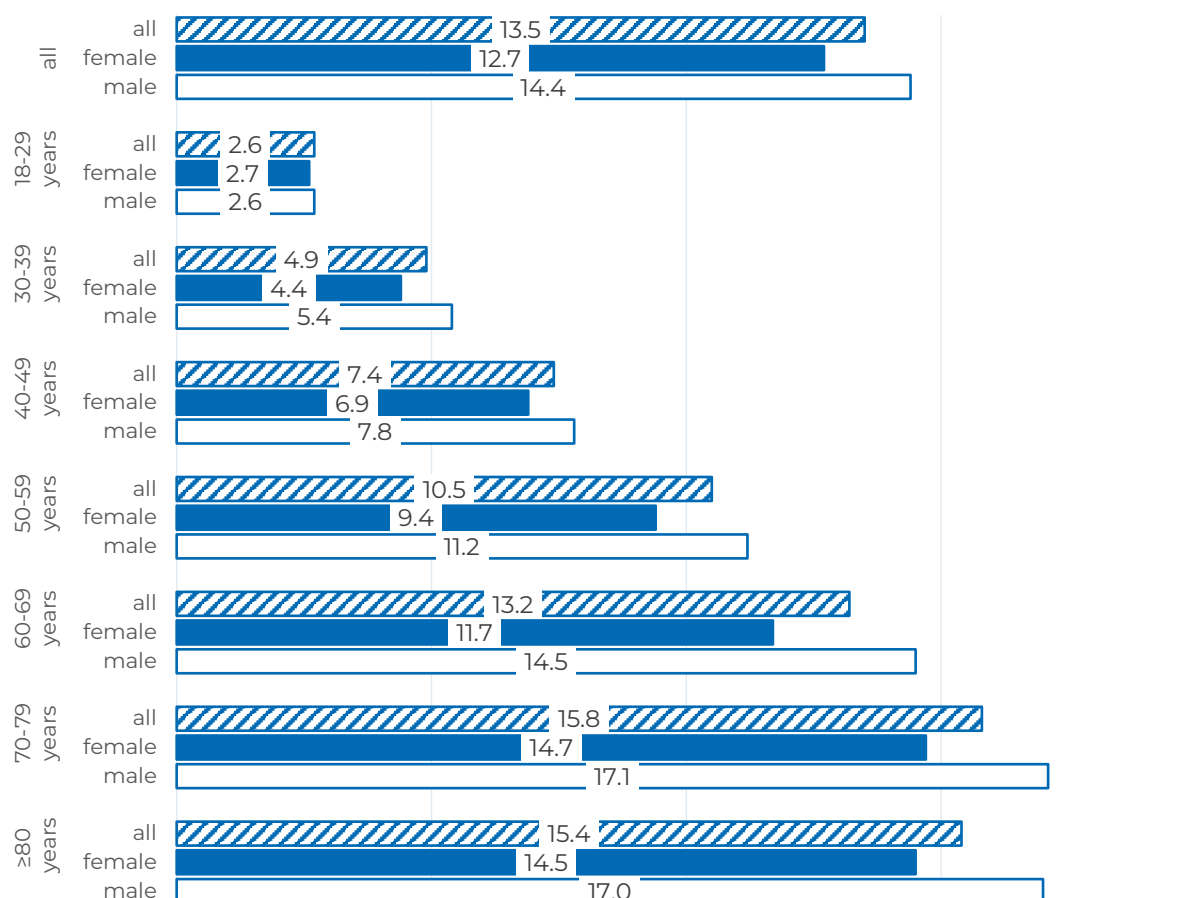


Figure 2: Prevalence of documented diabetic polyneuropathy among adults with diabetes covered by statutory health insurance in % by age and sex in 2013.



Results

In 2013, 13.5% of adults with diabetes had documented diabetic polyneuropathy (women: 12.7%; men: 14.4%). This figure increases with age and peaks at 15.8% in the 70- to 79-year age group (women: 14.7%; men 17.1%).

Conclusion

Differences in documentation and diagnosis standards make comparisons between different studies and data sources difficult. According to Disease Management Programs (DMP) data for type 2 diabetes in North Rhine-Westphalia, the proportion of people with diabetic neuropathy is markedly higher [1] than in the analysis of DaTraV data presented here. Differences are particularly evident in the higher age groups, where the analysis of DaTraV data may have underestimated the proportion. Most other studies also indicate a larger proportion of people with polyneuropathy [2-4]. To increase comparability, simplified and practicable recommendations and diagnosis standards are urgently needed. In 2011, it became mandatory for doctors to document diabetic foot syndrome when prescribing podiatric treatments [5]. This may have contributed to a rise in the documentation of polyneuropathy.

Methodology and data sources

Definition

The indicator diabetic polyneuropathy is defined as the proportion of persons with diabetes (indicator “prevalence of documented diabetes”) with documented diabetic polyneuropathy (G63.2).

Reference population

Adults are included in the analysis if they have statutory health insurance and documented diabetes (in accordance with the definition of the indicator “prevalence of documented diabetes”), have been insured for at least 360 days in the respective year, reside in Germany and have their health benefits fully reimbursed by the statutory health insurance.

Data source

Claims data from approximately all of the 70 million people with statutory health insurance collected in accordance with the Data Transparency Ordinance (DaTraV data). Around 55 million are at least 18 years old, of which around 6.6 million have documented diabetes.

Calculation

- **Observed values:** The quotient of the number of people with documented diabetes and documented diabetic polyneuropathy in relation to the population with statutory health insurance and documented diabetes.
- **Age standardisation:** Direct age standardisation used 18- to 24-year-olds as one age group, five-year age groups for the ages 25 to 29 until 80 to 84, and then a separate group for the ages 85 and over. The DaTraV population with documented diabetes in 2013 was used as the reference population.

Data quality

DaTraV data are claims data on all people covered by SHI. DaTraV data include documented outpatient and inpatient diagnoses as well as information on prescribed medications. The quality of claims data from SHI depends on conduct of documentation. DaTraV data do not cover people insured by private health insurance and do not provide information on inpatient or outpatient care.

Data download

Robert Koch Institute. (2024). Results of the National Diabetes Surveillance 2015 – 2024 [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.14935276> (in German)

References

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External links

- ▶ Federal Institute for Drugs and Medical Devices (BfArM). Information on the SHI health data by the health data lab. [cited 19.02.2025]. Available from: <https://www.healthdatalab.de/data>.
- ▶ Reitzle L, Schmidt C, Du Y, Icks A, Hagen B, Ziese T, et al. [Estimating prevalent microvascular complications of diabetes mellitus in Germany. Analysis of statutory health insurance data in 2012 and 2013]. Bundesgesundheitsbl. 2020;63(10):1219-30. <https://doi.org/10.1007/s00103-020-03211-x>.

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