

# Medical foot examination

## Quality of type 2 diabetes care



**Field of action 2:**

**Improving the early detection and treatment of diabetes**



**Adults**

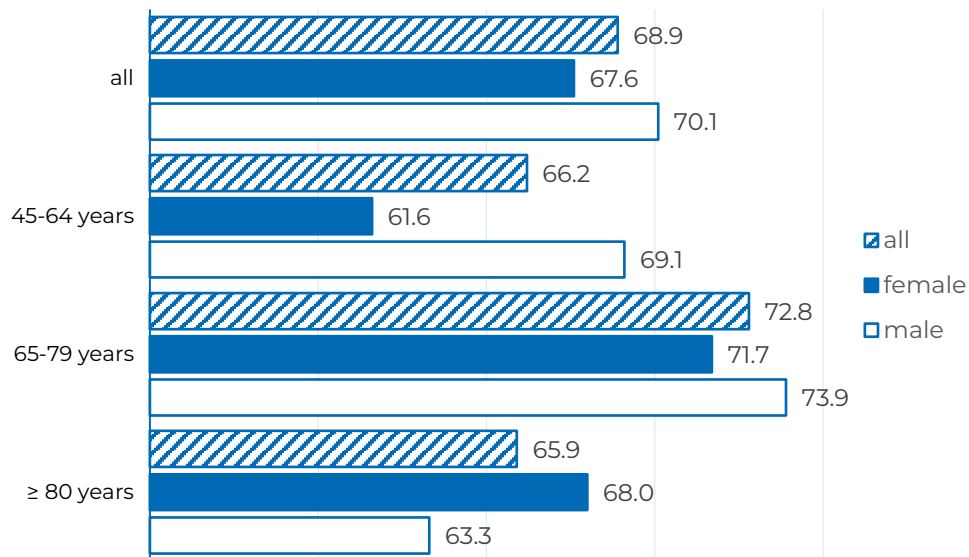
## Background

Diabetic foot syndrome, which is caused by damage to the vessels and nerves of the feet, is one of the serious diabetes-related secondary diseases. If treatment is delayed, it can even lead to amputations. Regular medical check-ups allow the detection and the treatment of potential pathological changes in the feet at an early stage. According to the National Health Care Guideline for type 2 diabetes, people with diabetes should have their feet examined by a medical professional at least once a year [1].

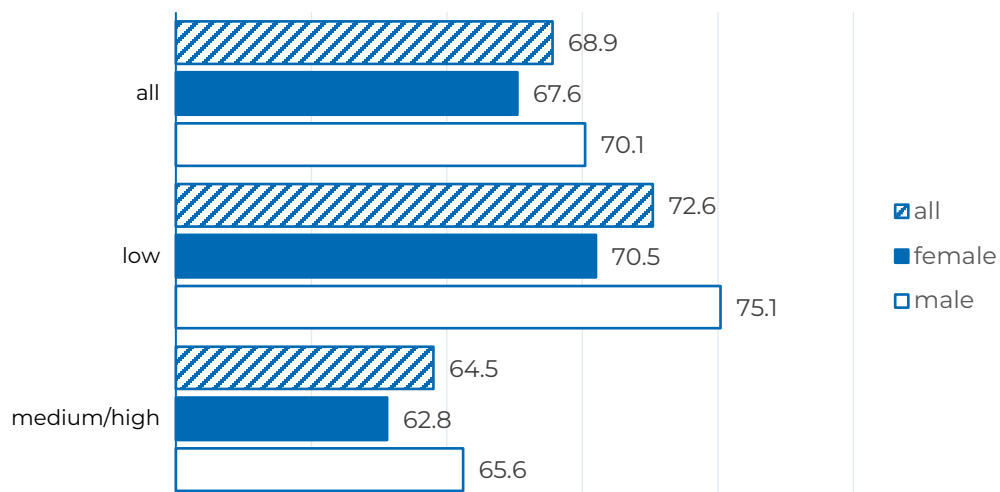
## Key messages

- ▶ In 2021, nearly 70% of people with type 2 diabetes aged 45 years and older report a foot examination by a doctor within the last 12 months.
- ▶ Among people with type 2 diabetes, the proportion with a medical foot examination is higher in the lower educational group than in the middle or high educational group.

**Figure 1:** Proportion of people with type 2 diabetes (aged 45 years and over) in % who report a medical foot examination in the past 12 months by age and sex in 2021.



**Figure 2:** Proportion of people with type 2 diabetes (aged 45 years and over) in % who report a medical foot examination in the past 12 months by education group and sex in 2021.



## Results

In 2021, 68.9% of people (women: 67.6%; men: 70.1%) aged 45 years and older with type 2 diabetes in Germany had their foot status examined by healthcare professionals in the past 12 months. There are no statistically significant differences in foot examination between age groups or regions (east/west). The proportion of people with type 2 diabetes reporting a medical foot examination in the last 12 months is higher in the lower educational group (72.6%) than in the middle or high educational group (64.5%), especially in men (75.1% vs. 65.6%).

## Conclusion

In Germany, the proportion of people with type 2 diabetes aged 45 years and over who have their foot status examined by a medical professional in the last 12 months is almost 70%. A comparison over time with a study of the Robert Koch Institute (RKI) based on results for 2010 related to the age range 45 to 79 years [2] shows an increase (+ 8.2 percentage points) with regard to the annual foot examination, especially for the age group 45 to 64 years (+15.7 percentage points) and in the middle or high educational group (+13.1 percentage points), which may indicate a continued improvement in medical foot examination among people with type 2 diabetes.

## Methodology and data sources

### Definition

The indicator medical foot examination is defined as the proportion of people with known type 2 diabetes who had their foot status examined by a medical professional in the last 12 months.

### Operationalisation

The indicator is based on self-report on the following question for people with known diabetes:

*"When was the last time you had your foot status examined by a doctor?"*

Response options (for over 12 months, the figure was given in years):

- How many months ago: |\_|\_|
- How many years ago: |\_|\_|
- never
- do not know
- not specified

### Reference population

People with known diabetes in the German-speaking resident population of Germany, aged 45 years and over.

### Data source

Nationwide RKI survey German Health Update (GEDA) 2021/2022-Diabetes [3] based on a special screening process that focused on the target group of people with known diabetes aged 18 years and over and data collection via telephone interview (landline and mobile numbers).

## Number of cases

- ▶ GEDA 2021/2022-Diabetes: n = 1,503

For the indicator medical foot examination, data among people with known type 2 diabetes aged 45 years and over are analysed:

- ▶ GEDA 2021/2022-Diabetes: n = 1,448

People with type 1 diabetes and women with exclusively gestational diabetes were excluded.

## Calculation

- ▶ **Description:** For the indicator, the figures for total, women and men are provided and are stratified by age group, residential area and education as far as the number of cases available for the figure is  $\geq 5$  and the statistical uncertainty in the estimate of the indicator is not considered too large (a coefficient of variation  $\leq 33.5\%$ ).
- ▶ **Stratification:** The geographical classification of the residence of the participating person was carried out by region (east = former East Germany, including all of Berlin; west = former West Germany, not including West Berlin). Educational status was determined using the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) index, which takes information on both school and vocational training into account and allows a categorisation into a low, medium and high education group.
- ▶ **Weighting:** A weighting factor was used to correct for deviations from the underlying reference population due to different participation rates or sampling probabilities. It adjusts the surveys sample to the population structure of the reference population in terms of sex, age and education as of 31 December 2019. The distribution structure of people diagnosed with diabetes from the nationwide RKI survey GEDA 2019/2020-European Health Interview Survey (EHIS) was used to calculate the weighting factor, since data from the population statistics provided by the Federal Statistical Office do not allow conclusions about people diagnosed with diabetes in the German-speaking resident population aged 18 years and over.

## Data quality

The RKI survey GEDA 2021/2022 provides representative results about people with known diabetes from the German-speaking resident population of Germany aged 18 years and over. As with all population-based studies, it can be assumed that the study underrepresents people with serious illnesses and those currently in institutions. In addition, the survey data is based on information provided by the respondents. Comparisons of findings to previous RKI surveys are limited due to differences in methodology.

## 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

1. Bundesärztekammer (BÄK), Kassenärztliche Bundesvereinigung (KBV), Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). Nationale VersorgungsLeitlinie Typ-2-Diabetes – Langfassung. Version 3.0. 2023 [cited 06.02.2025]. Available from: [https://register.awmf.org/assets/guidelines/nvl-001l\\_S3\\_Typ-2-Diabetes\\_2024-12.pdf](https://register.awmf.org/assets/guidelines/nvl-001l_S3_Typ-2-Diabetes_2024-12.pdf).
2. Du Y, Heidemann C, Schaffrath Rosario A, Buttery A, Paprott R, Neuhauser H, et al. Changes in diabetes care indicators: findings from German National Health Interview and Examination Surveys 1997–1999 and 2008–2011. *BMJ Open Diabetes Res Care*. 2015;3(1):e000135. doi: 10.1136/bmjdr-2015-000135.
3. Robert Koch Institute. Information on the study German Health Update (GEDA) 2021/2022-Diabetes 2022 [cited 30.01.2025]. Available from: <https://www.rki.de/geda21-diabetes>.

## External links

- ▶ Heidemann C, Du Y, Mauz E, Walther L, Peitz D, Müller A, et al. Healthcare and health situation of adults with type 2 diabetes in Germany: The study GEDA 2021/2022-Diabetes. *J Health Monit*. 2024;9(2): e 12128. <https://doi.org/10.25646/12128>.

## Imprint

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