

Knee operations: large regional variations in the provision of artificial knee joints

A considerably higher number of operations are carried out on the inhabitants of more affluent regions

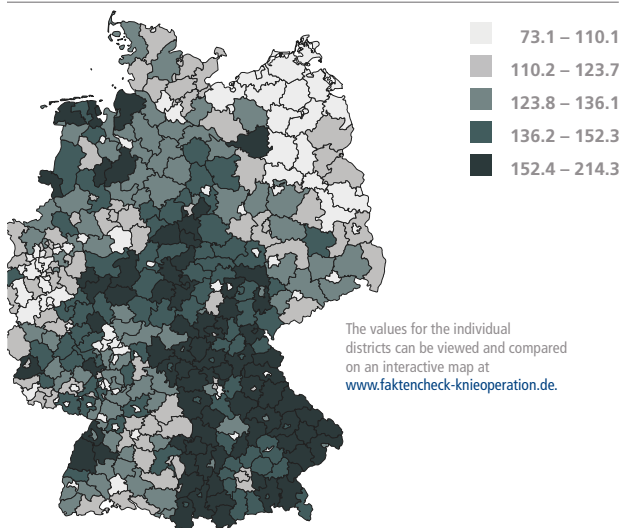
In international comparisons, Germany has one of the highest incidences of knee joint operations. After rising steadily for several years, the number of artificial knee joints fitted has been falling slightly since 2009. However, recent years have seen a rise in the number of follow-up operations. The rates of intervention vary considerably within Germany.

Within Germany, the number of new knee joints inserted reveals variations in care of up to three times.

- Each year, 130 out of every 100,000 inhabitants are fitted with an artificial knee. But whereas 214 out of every 100,000 inhabitants in the district of Neustadt an der Aisch-Bad Windsheim (Bavaria) were operated on, in Frankfurt an der Oder (Brandenburg) the number was a mere 73.
- There are noticeably high rates of operation in Bavaria, Hesse, Thuringia and parts of Lower Saxony, and very low rates in Mecklenburg-Western Pomerania, Berlin and Brandenburg.

Age-standardized rates of initial knee joint replacement operations per 100,000 inhabitants according to district; average values for the years 2005–2011

Age-standardized rates; data refers to the place of residence of the patients.



Source: Healthcare Fact Check 2013; data: Scientific Institute of the AOK health insurance fund; calculation and map: DGOOC.

The number of follow-up operations on the knee, for example as a result of renewed pain or involving an implant replacement, is increasing rapidly.

- Between 2005 and 2011, follow-up operations increased by 43 percent.
- Regional variations are greater than with initial operations: Districts differ by up to five times.
- Where there was already a high incidence of patients who have undergone knee operations, the frequency of follow-up operations is correspondingly greater.
- In the frequency of follow-up operations and their number as a proportion of all types of implant, Germany is at the top of the table when compared to other countries.

In more affluent regions, patients are more likely to receive a new knee joint.

- With a few exceptions, economically and socially strong districts have higher rates of operations, whilst rates in less affluent districts tend to be lower.
- From a socio-economic point of view, there is a distinct east-west divide.

The figures for arthroscopy reveal extremely high regional variations – up to 65 times.

- Whereas out-patient arthroscopy was carried out on only 36 out of every 100,000 inhabitants in the district of Müritz (Mecklenburg-Western Pomerania), the number of such interventions carried out in the district of Traunstein (Bavaria) was 831.
- With a few exceptions, districts in the eastern states of the former GDR almost all show very low rates of arthroscopy; in large areas of Bavaria and Baden-Württemberg, on the other hand, the rates are high.
- Arthroscopy does not seem to reduce the number of subsequent knee joint operations. On the contrary, in regions in which a large number of artificial knee joints are fitted, the frequency of arthroscopy is also high.

How high the rates of knee joint operations, follow-up operations and arthroscopy are in the individual rural and urban districts of Germany can be seen on an interactive map at:

www.faktencheck-knieoperation.de/interaktive-karte

The considerable variations lead to two possible postulates:

- In economically and socially weaker regions (northeastern of Germany) there is a shortage of health care and possibly a lower demand among patients; in affluent regions (e.g. Bavaria) there is an excess of healthcare provision und possibly a greater demand.
- In view of these differences, it is necessary to examine whether healthcare provision is adequately needs-based.



Possible improvements und recommendations for action

- Increase patient involvement in the decision-making process
- Develop objective and easy-to-follow information for patients
- Draw up medical guidelines for knee endoprosthetics
- Check for possible disincentives in the medical remuneration system
- Encourage non-operative treatment options
- Certify endoprosthetics centers
- Make use of the German endoprosthetic register
- Introduce mandatory cross-sectorial quality assurance
- Initiate debate on appropriate care in the area of knee endoprosthetics

INFORMATIONEN ABOUT THE HEALTHCARE FACT CHECK – KNEE OPERATIONS

Interactive map of Germany

The Healthcare Fact Check uses interactive maps of Germany to depict knee operation rates in each rural and urban district. This gives patients, physicians and all other stakeholders an instant overview of the frequency in their region and enables them to compare it with other regions.

Fact Check Report

On behalf of Healthcare Fact Check, a group of authors from the German Society for Orthopedics and Orthopedic Surgery (DGOOC) analyzed the state of care on the basis of data from the Scientific Institute of the AOK health insurance fund and provides the background and possible explanations for the regional variations.

Tips for patients

Healthcare Fact Check offers patients useful tips, check lists and practical information so that, together with their physician, they can make the decision that is right for them. Reader-friendly fact boxes give information about the advantages and risks of knee joint replacement and knee joint arthroscopy.

Further information can be found at

[› faktencheck-knieoperation.de](https://faktencheck-knieoperation.de)

and

[› faktencheck-gesundheit.de](https://faktencheck-gesundheit.de)

Bertelsmann Stiftung

Carl-Bertelsmann-Straße 256 | 33311 Gütersloh | Tel: +49 5241 81-81226 | Fax: +49 5241 81-68122