

Many type 2 diabetes patients lack potentially lifesaving knowledge about their disease, researchers find

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The body's inability to produce enough insulin or use it effectively often results in type 2 diabetes (T2D), a chronic disease affecting hundreds of

millions of people around the globe. Disease management is crucial to avoid negative long-term outcomes, such as limb amputation or heart disease. To counteract adverse consequences, it is crucial that patients have good knowledge about the day-to-day management of the disease.

A team of researchers in Portugal has now assessed how many patients—both insulin-treated and not insulin-treated—have this crucial knowledge about T2D. They published their findings in *Frontiers in Public Health*.

"Our main motivation was to contribute to the reduction of the existing disparity in the knowledge that [diabetic patients](#) have regarding their disease," said first author Prof. Pedro Lopes Ferreira, director of the Center for Health Studies and Research of the University of Coimbra.

"With this study we evidenced the need to improve the disease knowledge of type 2 diabetic patients."

Knowledge levels vary widely

To assess diabetes knowledge, the researchers used a knowledge test developed for people with type 1 or type 2 diabetes. Among other questions, the test includes sections about nutrition, signs and symptoms, and medication control. A total of 1,200 people with diabetes participated in the study, of whom almost 40% were insulin-treated. The rest of the sample adhered to specific diets with some of them additionally taking non-insulin oral antidiabetics, while others relied on diet alone.

The results showed that many participants (71.3%) could answer food-related questions correctly, and that more than four out of five respondents demonstrated good knowledge of the positive impact of physical activity. More than 75% of respondents also knew about the best method for testing blood sugar levels.

In other areas, however, the researchers found that knowledge was severely lacking. For example, when asked which food item should not be used to treat low blood sugar levels, only 12.8% of participants answered correctly. The lowest percentage (4.4%) of [correct answers](#) was on a question concerning the symptoms of ketoacidosis, a potentially life-threatening, late-stage T2D complication.

"One of the main reasons for this disparity in knowledge is probably the behavior of health professionals and the areas that are prioritized when informing patients," Lopes Ferreira explained.

Equipping patients with knowledge

The researchers found that the [use of medication](#) was one factor that impacted T2D knowledge. The percentage of correct answers was 51.8% for non-insulin treated patients, and 58.7% for patients using insulin. Looking at socioeconomic and demographic factors, being younger than 65 years, having a [higher education](#), not living alone, and following a specific diet had a positive impact on disease knowledge.

The researchers said that their results highlight the need to improve T2D knowledge about certain aspects of the disease, for example blood sugar monitoring, which can help to avoid spikes in blood sugar levels that are associated with acute and chronic complications. Knowledge gaps within individual sections of the test are also something that needs to be addressed urgently, the team pointed out.

They also stated that studies with even more participants could help to better understand the role of the socioeconomic and clinical determinants of the disease.

"We focused on patients' own knowledge of their disease, rather than disease management being based solely on biological indicators. We

hope that the results obtained will allow professionals to change the way they inform patients," Lopes Ferreira concluded.

More information: Knowledge about type 2 diabetes: its impact for future management, *Frontiers in Public Health* (2024). [DOI: 10.3389/fpubh.2024.1328001](https://doi.org/10.3389/fpubh.2024.1328001)

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