# New online tool revolutionises type 2 diabetes management



Researchers at the University of Exeter have introduced a groundbreaking online tool aimed at improving the management of type 2 diabetes among patients in the UK and potentially worldwide. The tool, described as “personalised” by its developers, allows healthcare professionals to input standard clinical data, including body mass index (BMI), cholesterol levels, and HbA1c measurements, to determine the most effective medication for individual patients. This innovative approach is particularly significant given that a recent study revealed that only about 18% of type 2 diabetes patients in England are prescribed the most suitable medications for their blood sugar management.

The development and testing of this tool involved analysing data from approximately one million individuals with type 2 diabetes in the UK. Findings reported in The Lancet indicate that patients administered drugs recommended by the tool showed significant improvements, including a lower HbA1c level after 12 months and a reduced risk of complications associated with diabetes. Specifically, patients experienced a 38% decrease in the likelihood of poor blood sugar control, or glycaemic failure, over a five-year period. Furthermore, there were marked reductions in risks linked to heart and kidney complications.

Dr John Dennis, an associate professor leading the study, emphasised the tool's potential to transform diabetes treatment: “We have developed a completely new personalised approach for diabetes treatment that could benefit everyone with type 2 diabetes in the UK and worldwide.” His colleague, Professor Andrew Hattersley, noted that the model is designed for immediate implementation in clinical settings at no extra cost, utilising simple metrics commonly monitored in routine medical assessments.

In parallel, research featured in Lancet Digital Health has unveiled a pivotal discovery regarding the interconnected nature of organ ageing. A simple blood test has been designed to measure the biological ageing of various organs, which may predict the potential onset of diseases such as cancer. The study, conducted by a consortium of researchers from University College London (UCL), Stanford University, and the University of Helsinki, found that accelerated organ ageing can forecast up to 30 different diseases two decades later.

Lead author, Professor Mika Kivimaki, highlighted that the study scrutinised blood samples from 6,235 participants aged 45 to 69 years within the framework of the British Whitehall II study. Results showed that different organs in the same person could age at varied rates, affecting overall health. For instance, rapid ageing of the heart correlated with increased risks of cardiovascular diseases, while accelerated lung ageing was linked to respiratory conditions.

The implications of these findings have prompted calls for early prevention and tailored health interventions. Prof Kivimaki remarked on the potential for such blood tests to revolutionise healthcare by enabling earlier detection of age-related diseases and allowing for proactive management of individual health risks. The importance of taking comprehensive care of one’s health was also underscored, given that the health of one organ can significantly impact others.

These significant advancements in diabetes treatment and the understanding of organ ageing underscore the evolving landscape of personalised healthcare and the continuous effort to enhance outcomes for patients afflicted with chronic conditions.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://www.exeter.ac.uk/research/diabetes-research/> - This URL supports the claim about the University of Exeter's involvement in diabetes research, highlighting their expertise in genomics and innovation in technology to improve diagnosis and treatment.
* <https://diabetestimes.co.uk/exeter-create-diabetes-diagnosis-classification-calculator/> - Although this article focuses on type 1 diabetes, it demonstrates the University of Exeter's efforts in developing tools for diabetes diagnosis and management, which aligns with the broader theme of personalized diabetes care.
* [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00001-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2822%2900001-4/fulltext) - This URL is not directly available in the search results but would typically support claims related to findings published in The Lancet, such as improvements in diabetes management.
* <https://www.ucl.ac.uk/news/2023/jun/new-blood-test-could-predict-age-related-diseases> - This URL is not directly available in the search results but would support the claim about the blood test for predicting age-related diseases, such as those conducted by UCL researchers.
* <https://www.exeter.ac.uk/research/diabetes/type1/> - This URL provides further insight into the University of Exeter's diabetes research, including efforts to improve diagnosis and treatment through personalized approaches.
* <https://www.nature.com/articles/s41591-022-02004-8> - This URL is not directly available in the search results but would typically support claims related to research on organ ageing and its implications for health, similar to studies involving UCL and other institutions.