

Home urine test measures insulin production in diabetes

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A simple home urine test has been developed which can measure if patients with Type 1 and Type 2 diabetes are producing their own insulin. The urine test, from Professor Andrew Hattersley's Exeter-based team at the Peninsula Medical School, replaces multiple blood tests in hospital and can be sent by post as it is stable for up to three days at room temperature. Avoiding blood tests will be a particular advantage for children.

The urine test measures if patients are still making their own insulin even if they take insulin injections. Researchers have shown that the test can be used to differentiate [Type 1 diabetes](#) from [Type 2 diabetes](#) and rare genetic forms of diabetes. Making the correct diagnosis can result in important changes in treatment and the discontinuation of insulin in some cases.

Jillian, 35 has recently benefitted from the home urine test. She was diagnosed with diabetes aged 19 and put on insulin injections. The urine test identified that she is still making her own insulin 14 years after being diagnosed and a DNA test confirmed that she has a genetic type of diabetes. After 14 years of insulin treatment, Jillian is now off her insulin injections.

"Being told I don't have to take insulin injections any more has changed my life", she said.

The key studies, led by Dr Rachel Besser and Dr Angus Jones and were funded by Diabetes UK and the National Institute of Health Research, are published in leading diabetes journals, [Diabetes Care](#) and *Diabetic Medicine*.

Dr Rachel Besser, who has led the studies on over 300 patients, commented: "The urine test offers a practical alternative to [blood testing](#). As the [urine test](#) can be done in the patients own home we hope that it will be taken up more readily, and more patients can be correctly diagnosed and be offered the correct treatment".

Dr. Iain Frame, Director of Research at leading health charity Diabetes UK, said: "Dr. Besser's research is an excellent example of Diabetes UK's commitment to fund scientists at the beginning of their careers in diabetes research. With growing numbers of people with diabetes, it's more important than ever to ensure that medically trained graduates are encouraged to enter the field of diabetes research to help improve the lives of people with the condition. Many aspects of diabetes, from diagnosis to treatment, are invasive. Therefore, we welcome Dr. Besser's research and look forward to further developments."

Provided by The Peninsula College of Medicine and Dentistry

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