

# Loss of sensation in the feet of diabetes patients linked to cardiovascular disease, say researchers

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Experts have discovered that loss of sensation in the feet, a result of diabetes, may be a predictor of cardiovascular events such as heart attack and strokes.

Diabetes, which affects 3.7million people in the UK, can cause damage to a person's blood vessels and nerves, especially if their [blood sugar](#) is poorly controlled, leading to poor circulation and loss of sensation in the feet, known as [peripheral neuropathy](#).

The damage to vessels and nerves may be associated with the development of foot ulcers and, in extreme cases, can lead to foot or leg amputation.

The new research, carried out using information on over 13,000 patients, with type 2 diabetes in England, shows that lack of sensation in feet, which can be easily identified by a patient's GP, may also indicate future heart and circulation problems.

The new study suggests that testing for peripheral neuropathy, which is offered on an annual basis to all patients with diabetes, may provide a simple clinical way to identify those higher-risk individuals with diabetes who may need more intensive monitoring or treatment.

Jack Brownrigg, a PhD student at St George's, University of London, who conducted the research at St George's Vascular Institute, said: "While the risk of cardiovascular disease is known to be higher in patients with [diabetes](#), predicting which patients may be at greatest risk is often difficult.

"We looked at data on individuals with no history of cardiovascular disease and found that those with peripheral neuropathy were more likely to develop

cardiovascular disease."

Robert Hinchliffe, Senior Lecturer and Consultant in Vascular Surgery at St George's who co-led the study with Professor Kausik Ray, said: "While loss of sensation in the feet is known to be a key risk factor for [foot ulcers](#), it may also provide additional useful information to guide patient management. This is the first study to show that it can also indicate an increased risk of [cardiovascular problems](#) like heart attacks or strokes.

"The good news is that peripheral neuropathy can be easily identified by simple tests carried out in GP surgeries. The results of the study warrant further investigation as to whether even greater control of risk factors including blood pressure and blood sugar can prevent or delay the onset of cardiovascular disease.

"There is likely an unmet potential to reduce [cardiovascular disease](#) in this group of patients through greater monitoring and simple treatments".

The paper, "Peripheral Neuropathy and the Risk of Cardiovascular Events in Type 2 Diabetes Mellitus", is published in the leading UK cardiovascular journal *Heart*.

**More information:** "Peripheral neuropathy and the risk of cardiovascular events in type 2 diabetes mellitus." Jack R W Brownrigg, Simon de Lusignan, Andrew McGovern, Cian Hughes, Matthew M Thompson, Kausik K Ray, Robert J Hinchliffe. *Heart* heartjnl-2014-305657Published Online First: 5 August 2014 [DOI: 10.1136/heartjnl-2014-305657](https://doi.org/10.1136/heartjnl-2014-305657)

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