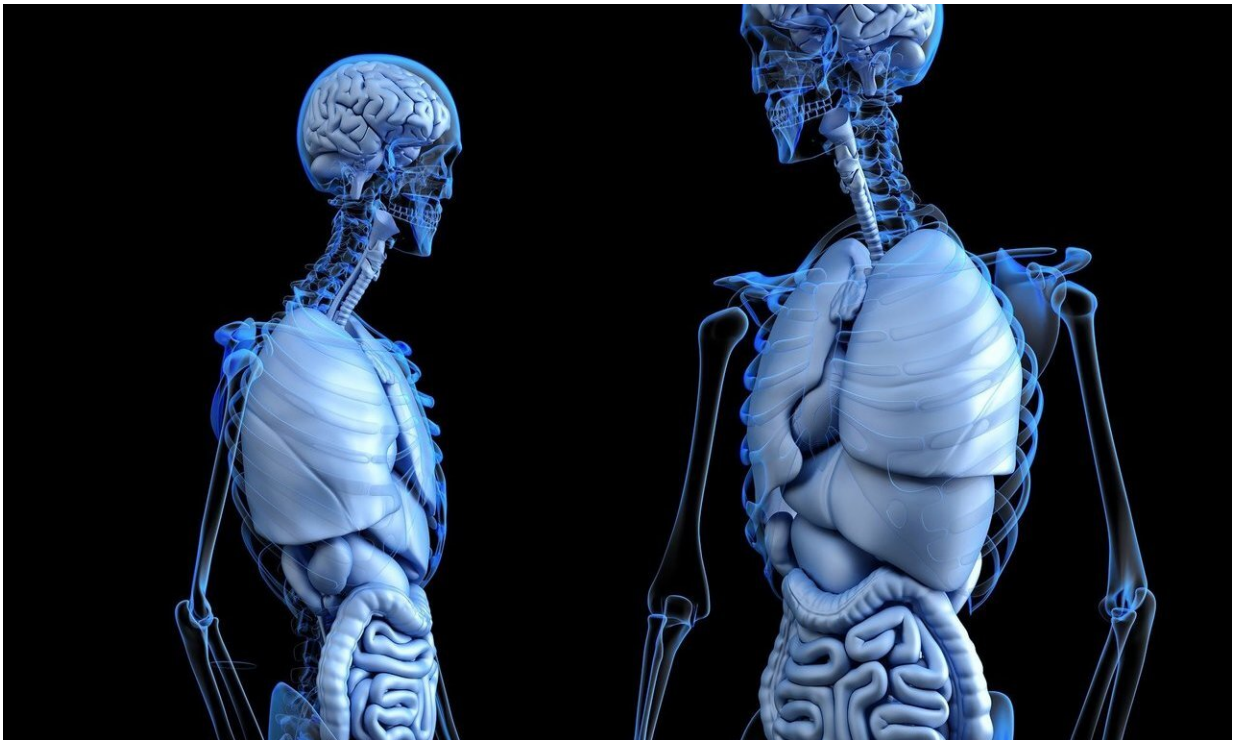


'Forgotten organs' may hold clues to new type-2 diabetes treatment

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Immune disorders associated with type 2 diabetes could be better managed thanks to new research that shows that "forgotten organs" such as the spleen hold clues about the disease's effect on the body.

The new findings, published in *Metabolomics* today (Monday 10 June)

found that important organs such as the spleen, kidneys and eyes revealed clues about the effects of raised [blood sugar levels](#) from type 2 [diabetes](#) at a metabolic level.

Lead author of the report Dr. Sandrine Claus from the University of Reading said:

"The most surprising finding from the study was that at a metabolic level, the spleen, a forgotten organ in type 2 diabetes that is involved in immune regulation, was far more affected by raised blood sugar levels than the heart, which gets a lot of attention because of the increased risk to develop cardiovascular pathologies."

The study, which was conducted in mice, is the first to systematically evaluate organ specific metabolic modulations occurring in type 2 diabetes in organs, blood and urine. The team behind the paper are now calling for further research to look at treatments for the impact of T2D on those forgotten organs such as the spleen, kidneys and eyes.

Dr. Marina Mora-Ortiz, Post-doctoral Research Associate in the Department of Twin Research at Kings College London who carried out the research while at the University of Reading said:

"Type 2 diabetes is a metabolic disease where high levels of glucose systematically affect our organism. Surprisingly, there was no systematic characterisation about which organs suffer the most as consequence of this.

"In this study we discovered that some organs such as the spleen, traditionally neglected in diabetes research but extremely relevant for the [immune system](#), were amongst the most affected ones. This highlights the need to devote more attention to an integrative study of diabetes."

More information: Marina Mora-Ortiz et al. NMR metabolomics identifies over 60 biomarkers associated with Type II Diabetes impairment in db/db mice, *Metabolomics* (2019). [DOI: 10.1007/s11306-019-1548-8](https://doi.org/10.1007/s11306-019-1548-8)

Provided by University of Reading

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