

People with diabetes are at greater risk of bone fractures

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People living with diabetes are at greater risk of bone fractures, new research led by the University of Sheffield has found.

The research, conducted in collaboration with scientists from Sutter

Health, concluded that people with type 1 and type 2 [diabetes](#) have an [increased risk](#) of suffering hip and non-[vertebral fractures](#) (those not occurring in the spine or skull).

The findings, revealed during Diabetes Awareness Week (8-14 June 2020), show people with type 1 diabetes are at greater risk than people with type 2 diabetes, however insulin use and length of time someone has lived with the condition further increased the risk for people with type 2 diabetes.

Diabetes has a number of widely-known complications, however this study highlights the impact of the condition on [bone health](#)—specifically fractures.

Lead researcher Dr. Tatiane Vilaca, from the University of Sheffield's Mellanby Centre for Bone Research, said: "Diabetes can cause a number of well-known complications including kidney problems, loss of eyesight, problems with your feet and nerve damage. However, until now many people with diabetes and their doctors are unaware that they are also at greater risk of bone fractures.

"We need to raise awareness about the greater risk people with diabetes face to help them to prevent fractures. For example, preventing falls can reduce their risk of fracture.

"Fractures can be very serious, especially in older people. Hip fractures are the most severe as they cause such high disability. Around 76,000 people in the UK suffer a hip fracture every year and it is thought as many as 20 percent of people will die within a year of the fracture. Many others don't fully regain mobility, and for many people it can cause a loss of independence."

One in 15 people in the UK have diabetes—a serious condition where

your blood glucose level is too high. There are two main types, type 1—when your body can't make insulin at all, and type 2—when the insulin your body makes either can't work effectively, or you can't produce enough of it.

Professor Richard Eastell, Professor of Bone Metabolism and Director of the University of Sheffield's Mellanby Centre for Bone Research, said: "This important research highlights the urgent need for doctors to evaluate the risk of fracture for patients with diabetes and also to look at potential treatments which may help to reduce that risk.

"We hope that by raising awareness about the greater risk people with diabetes face, bone density and [bone](#) strength will become something that doctors assess routinely in patients with the condition in the same way they do currently for other well-known complications."

The research published online in *Bone* was conducted in collaboration with researchers from the University of Sheffield's School of Health and Related Research (ScHARR) and the University of California.

Steven Cummings, M.D., from Sutter Health, California, said: "Patients with diabetes and the doctors who care for them should be aware of the increased risk of [fractures](#). Patients are encouraged to ask their doctors what to do about that risk, and doctors should assess the risk and consider treatment to reduce that risk."

More information: Tatiane Vilaca et al, The risk of hip and non-vertebral fractures in type 1 and type 2 diabetes: A systematic review and meta-analysis update, *Bone* (2020). [DOI: 10.1016/j.bone.2020.115457](#)

Provided by University of Sheffield

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