

Obesity hormone adiponectin increases the risk of osteoporosis in the elderly

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While obesity is a well-known cause of cardiovascular disease, research from the Sahlgrenska Academy at the University of Gothenburg, Sweden, has now revealed that the body's obesity hormones – adiponectin - are also linked to osteoporosis and an increased risk of fractures.

Our skeleton is more than just bones, vertebrae and joints. In fact, it is an active organ that is constantly linked to our brain, our muscles and our fatty tissue. Stem cells – the body's most important cells – are formed in the skeleton, which is also home to hormones that control the body's blood sugar and obesity by sending signals to other organs.

New research has now revealed that raised levels of obesity hormone in the blood could be connected to [osteoporosis](#).

Dan Mellström, a researcher at the Sahlgrenska Academy and consultant at Sahlgrenska University Hospital, is a leading expert in osteoporosis. As part of an international research project studying the risk factors associated with osteoporosis in elderly men, he and his colleagues have been looking into the [obesity](#) hormone adiponectin. This research has now shown that people with raised levels of this [hormone](#) also have more fragile skeletons and more [fractures](#), as well as reduced muscle strength and lower muscle mass, increasing the risk of fractures. High adiponectin also seems to be related to increased functional ageing.

"High levels of adiponectin in the elderly seem to be associated with

both reduced functioning of the musculature and a more fragile skeleton," says Mellström. "This means a higher risk of fractures and falls, and also increased mortality."

The results are based on the Mr OS study, led from the Sahlgrenska Academy, which is looking into the risk factors for osteoporosis in elderly men. The study includes around 11,000 men in Sweden, the USA and Hong Kong.

Provided by University of Gothenburg

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