

Obesity can amplify bone and muscle loss, researchers say

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Doctoral student Julia Inglis and professor Jasminka Ilich-Ernst are pictured.
Credit: Florida State Photography Services/Bill Lax

Florida State University researchers have identified a new syndrome called "osteosarcopenic obesity" that links the deterioration of bone density and muscle mass with obesity.

"It used to be the thinking that the heavier you were the better your

bones would be because the bones were supporting more weight," said Jasminka Ilich-Ernst, the Hazel Stiebeling Professor of Nutrition at Florida State. "But, that's only true to a certain extent."

The syndrome, outlined in the May issue of *Ageing Research Reviews*, explains how many obese individuals experience a triad of problems that place them at a higher risk for falling and breaking bones.

Ilich-Ernst began looking at the connections between bone, muscle and fat mass a few years ago, realizing that most scientists were examining bone issues without taking into consideration muscle mass and strength, let alone [fat tissue](#).

"Many factors impact bones," she said. "This developed as a logical way to move forward to look at everything together and not just focus on one area."

So, she went back and examined the files for 200 women who'd participated in previous studies where she'd measured their bone density, muscle mass and fat tissue for different reasons. About one-third had more than 30 percent fat tissue, plus declining bone density (osteopenia) and muscle mass (sarcopenia).

"This would be a triad problem for [older women](#)," Ilich-Ernst said. "They cannot perform as well. They cannot walk as fast. They cannot walk the stairs well or stand up and sit down multiple times without being winded or in pain."

People do tend to gain weight and lose both [muscle mass](#) and [bone density](#) with age, Ilich-Ernst acknowledged. But substantial gain in body [fat](#) can make the muscle and bone problems even worse.

"They have a higher risk of falling and breaking a bone or encountering

other disabilities," she said.

Ilich-Ernst said the problem is most prevalent with older women, but that it could impact all ages and genders.

Overall, she said she hopes the research reminds people to consider the damage that can be done to all parts of the body if they are overweight.

"Everything is connected," she said.

Provided by Florida State University

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