

Stem cells responsible for fat in bone marrow and consequent disease

Our bones are not stagnant, rock-like things. They change. Marrow—the tissue inside bones—is full of various kinds of cells. And marrow is also full of fat. The amounts of these cells and fats can decrease or increase over time. And the production of these marrow cells and fat depend on a specific type of progenitor cell called a mesenchymal stem cell.

“These stem cells give rise to both bone and fat,” said Maya Styner, MD, an assistant professor of medicine in the UNC School of Medicine. “For a long time in the bone world, it’s been thought that these stem cells produce bone but then, as we age, they start to produce fat, instead.”

This idea caused bone researchers to think that bone fat production might play a role in increased risk of bone fracture in elderly people.

More than that, if there’s more fat, couldn’t this mean there’s less of the other stuff in marrow?

“This is one reason why marrow fat is so important to bone researchers,” Styner said. “Bone marrow is a source of blood, immune cells, and malignancies.”

Read the full, original story: [Fat of the Bone](#)