

Researchers Associate Reduced Bone Mineral Content With Femoral Neck Fragility.

MedWire (10/6, Dean) reported that, according to a study published online in *Calcified Tissue International*, "femoral neck fragility is associated with reduced mineral content without an accompanying reduction in stiffness and hardness of the bone material."

Austrian researchers examined "cortical bone from the femoral neck of five women with osteoporotic hip fracture and five nonfractured controls," using "quantitative backscattered electron imaging (qBEI) and scanning small-angle X-ray scattering to map the average calcium content and the mineral particle thickness parameter in large areas of the superior and inferior regions of the femoral neck." The investigators found that "average calcium content, mineral content, elastic modulus, and hardness were a significant 2.2 percent, 1.8 percent, 5.6 percent, and 6.0 percent lower, respectively, in the superior region compared with the inferior region of the femoral neck."