

Study shows how atherosclerosis and osteoporosis are linked

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Patients with atherosclerosis—the buildup of cholesterol and fat in arteries—are at a higher risk of osteoporosis. A new study published in the *American Journal of Physiology—Endocrinology and Metabolism* shows how the development of atherosclerosis encourages the loss of bone density.

Cells called osteoclasts remove old bone while cells called osteoblasts form new bone. Bone mass is maintained by balancing the number and activity of these cells. The study found that atherosclerotic mice had fewer osteoblasts. While osteoclasts numbers decreased modestly in some bones, there were significantly more osteoclasts than osteoblasts overall, favoring bone loss. The researchers also observed that atherosclerosis-induced inflammation in the bone interfered with the maturation of new osteoblast cells, accounting for the reduction in number of osteoblasts.

The article "Skeletal inflammation and attenuation of Wnt signaling, Wnt ligand expression and [bone formation](#) in atherosclerotic ApoE-null mice" is published in the *American Journal of Physiology—Endocrinology and Metabolism*.

More information: Yu Liu et al. Skeletal inflammation and attenuation of Wnt signaling, Wnt ligand expression, and bone formation in atherosclerotic ApoE-null mice, *American Journal of Physiology - Endocrinology And Metabolism* (2016). [DOI: 10.1152/ajpendo.00501.2015](#)

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