Skeletons dynamically cycle between bone formation and bone resorption through coordinated efforts of osteocytes, osteoclasts, and osteoblasts—the protein sclerostin plays an important role.

**Healthy Bone Structure**

Lower levels of sclerostin are associated with increased bone formation\(^2-4\)
- Sclerostin is a negative regulator of bone formation and limits the accumulation of bone mass\(^5,6\)
- With more exercise or increased levels of estrogen, osteocytes secrete less sclerostin, and bone formation increases\(^7-10\)

**Compromised Bone Structure**

Higher levels of sclerostin are also associated with reduced bone formation\(^11\)
- With less exercise and lower levels of estrogen, more secretion of sclerostin by osteocytes indirectly results in reduced bone formation\(^7-10\)

**Osteoporotic Bone**

Higher levels of sclerostin are also associated with increased bone resorption\(^12\)
- Higher levels of sclerostin decrease the expression of osteoprotegerin (OPG) and increase the expression of RANKL, indirectly resulting in an increased amount of bone resorbed by osteoclasts\(^12\)
Sclerostin plays a key role in bone formation

- Natural genetic deficiencies of sclerostin (known as sclerosteosis) are associated with higher bone mass and stronger, more fracture-resistant bone.

- Sclerostin also indirectly affects bone resorption.

Amgen is committed to deepening our understanding about the role of sclerostin in bone formation.

Learn more about the role of sclerostin in bone formation at www.notjustafracture.com.
References


