



BONE HEALTH

The bones in our body (known as the skeletal system) support us literally all our soft tissue organs are supported and protected by bone. Bone is a place where blood cells (red cells, white cells, and platelets) are produced. Fat cells are stored in bone and can be released when energy needs require it. Our bones store calcium, which is necessary for the normal functioning of many systems: notably muscle contraction and the passage of signals along nerves. The calcium that is stored in bone is what gives bone its strength; without it, bones become weak and brittle.

The cells that make new bone and repair damaged bone are called osteoblasts. The cells that break down bone and help shape the bone are called osteoclasts.

That is a simple outline of bone. Intertwined with these basic concepts are the parathyroid glands that regulate the activity of both osteoblasts and osteoclasts and thus modulate the circulating levels of calcium. Fibroblast growth factor 23 (secreted by osteoblasts and osteocytes) plays a critical role in regulating phosphate and calcium metabolism by regulating renal function and parathyroid function. Changing osteoblast or osteoclast activity alters glucose metabolism, and lipocalin 2, a hormone secreted by osteoblasts, regulates energy metabolism. Bone also affects brain development, regulates male fertility, and the growth and function of muscle. So, you see, bone is more than just a structural framework.

One of the most common bone diseases is osteoporosis. You guessed it; it means porous bone! Before bone gets to that stage it passes through a phase of low bone density called osteopenia. It is estimated that some 12.3 million Americans have osteoporosis (1). The problem with both conditions is that they are silent.....until you break a bone. Although a fracture can occur in any bone, the most common fractures occur in the spine and hip. The predicted cost of osteoporosis and fractures will exceed \$25 billion by 2025 (2). From birth to when you are in your 20s your bones are getting stronger, but after that all of us will lose bone mass faster than we can build it up. Besides age, gender plays a role; women are about four times more likely to develop osteoporosis than men. Family history may well play a role as does body type (the thinner you are, the thinner your bones are). Underlying GI problems like celiac disease and inflammatory bowel diseases can inhibit absorption of calcium from the intestines.

So, what is one to do? First, be aware that after your 20s you are losing bone strength. Weight bearing, resistance, and balance exercises help slow down bone loss. A healthy diet that contains adequate calcium and vitamin D is important. Those at risk for osteoporosis, such as postmenopausal women and men older than 50, should be taking at least 1200 mg of calcium daily (3). Many medications, given for other reasons, can accelerate bone loss. You guessed it; smoking and excessive alcohol consumption increase calcium loss. Finally, the Bone Health & Osteoporosis Foundation recommends that anyone over age 50 who has broken a bone or has risk factors for osteoporosis get a DEXA scan, a special type of x-ray that evaluates bone density. Also, any woman over age 60 or man over age 70 should have a baseline DEXA scan regardless of risk factors. Speak to your health care professional about screening for osteoporosis, what exercises and diet are appropriate for you, and whether you need medical management of osteoporosis with a bisphosphonate that inhibits bone resorption.

1. Osteoporosis Int. 2022 Oct;33(10):2049-2102.
2. Bone Health & Osteoporosis Foundation 2023
3. J. Clin Endocrinology/Metabolism 2011

For a deeper dive into bone physiology check out:
www.ncbi.nlm.nih.gov/pmc/articles/PMC6429025/

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TONSORIAL SPLENDOR

by Bow Resident Paul Pomeroy

So I went to the Barber Shop today. Well not really the Barber Shop. I'm not sure if that's the right name for it. But it's that same place that skinny kid who plays in a band goes. The kid who gets what we used to call a crew cut and then goes on TV and tells everybody how good the hair cut makes him feel and look.

And my wife Trish came with me. As a rule she never accompanies me when I go for a haircut but we were going to The Mall of New Hampshire to walk and maybe do some shopping. On our way she takes out her phone, pushes a few buttons, and when we stop at the next red light she sticks a picture of this really nice looking guy in front of my face and tells me that I should get my hair cut like him.

Now I know some guys really take their hair seriously. In fact it borders on a religion with my son. But not for me. Not since 7th grade when I had this really cool curl I used to put in the middle of my forehead. So I say "sure, why not?" knowing full well that I ain't ever gonna look like that dude when the haircut is over. I mean I took a peak in the mirror when I got out of the shower this morning. Not a pretty sight!

When we get there Trish shows the young girl the picture and the girl takes me back and proceeds to cut my hair. When she's done she tells me what shampoo to use and then shows me a jar of this special conditioner made just for my type of hair. I listened intently. I didn't have the heart to tell her that the only product touching this head will be whatever bar of handsoap is on sale at Market Basket this week.

So out we go to the waiting room. Trish takes a look. She didn't say anything. She just shrugged. That "Well we gave it a shot" kind of shrug and we left.

And went to the mall to walk with the other old people.

No one noticed my hair

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