

Argus Orthopaedic Zone

Drugs For Osteoporosis

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Transforming patient information into patient understanding.

In my profession as an Orthopaedic Surgeon I often see the end result of osteoporosis – FRACTURES. It gets pretty depressing knowing that help is available, but lots of patients are not taking advantage of it for a variety of reasons.

Unless you live in a cave (a favorite saying of mine!) you have heard of Osteoporosis. Oh, there is a lot more awareness of Osteoporosis now. But the majority of patients are not doing anything about it. And many who are doing something are treating their Osteoporosis very ineffectively. Sigh!

In a way Osteoporosis is like breast cancer was before the huge push to make everyone aware of how big a problem breast cancer actually is. Breast cancer awareness and pink are now synonymous.

We are definitely not even close with that degree of concern for Osteoporosis. Maybe it's because Osteoporosis doesn't seem as scary as breast cancer. Everyone knows breast cancer can kill you.

Osteoporosis and its resulting fractures just cripple you. That's pretty scary I think.

What color should represent Osteoporosis? Hmm.

Statistics

If you have Osteoporosis the risk of having a fracture during your lifetime is more than 40%. Fractures occur in the spine, hip, wrist – anywhere really.

I see women all the time who swear they were just standing there and fell down when the hip fractured. Osteoporosis is an accident waiting to happen.

Basically No Cure

Bad news. Good news. First the bad news. There is no cure for osteoporosis. There is only one drug approved to build bone available in the United States. The other drugs available to treat Osteoporosis are designed to prevent further bone loss which leads to devastating fractures.

The main forms of treatment are:

- Weight bearing exercise
- Adequate intake of calcium
- Adequate daily amount of vitamin D
- A healthy diet

Bone Physiology

Bones don't seem very interesting because they are hard and just seem to be there holding you up. Bones as an organ seem pretty dull compared to the heart, brain, kidney, etc.

But as is the case for many things, the opposite is true!

Bones are dynamic and continuously changing. Bones are continuously being replaced by new bone tissue. This is called bone remodeling.

I realize there are no PhDs in bone physiology reading this and I don't pretend to be one either. But we have to go a little further so stay with me, OK? There's nothing to say you can't re-read it later too.

Remodeling

Bone remodeling occurs in two basic steps.

- Bone breakdown termed resorption

- Bone formation

Allow me to introduce you to two friends I met along time ago when I entered the profession of Orthopaedic Surgery.

- Osteoclasts
These tiny little bone cells are responsible for the breakdown or resorption of bone. These little worker bees breakdown the bone and are regulated in their work by hormones and enzymes and it gets very complicated so I'll stop there.
- Osteoblasts
Osteoblasts are tiny bone forming cells that move into the microscopic cavities that osteoclasts have made. They form a protein (collagen). After collagen is deposited by the osteoblasts, Calcium and Phosphorus come into the collagen and form new bone tissue.

Whew! That's more than enough for one class. Please come back next time for part two. Thanks for being so attentive and not asking questions I can't answer.

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