

Orthopaedic Connection

Steroids and Bones

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Transforming patient information into patient understanding.

What is one of the leading causes of bone loss? Any guesses? Low estrogen after menopause, O.K. Lack of Calcium and Vitamin D, sure.

The answer I'm looking for may be obvious from the title of the article. Answer is the use of corticosteroids.

Corticosteroids are hugely valuable ever since they were first manufactured many years ago.

Many medical specialties use them for a wide variety of conditions. A few are asthma, many skin conditions including psoriasis, rheumatoid arthritis, lupus, inflammatory bowel diseases. The list is long.

Corticosteroids go by several names. Steroids, Glucocorticoids, cortisone, hydrocortisone, Prednisone and many other names.

- Note – don't confuse corticosteroids with the term anabolic steroids which is a name given to man made drugs related to male sex hormones.

Healthy Bones

If your bone structure is healthy, it is humming along under the skin and muscles minding its own business. You hardly give it a thought until you break one of the bones and need my help. A general rule is that the healthy skeleton is mostly replaced every 10 years. That is so amazing, but true.

Steroid Effect

When steroids come on board to treat various medical conditions the bones shudder and say oh s---. They know there is trouble ahead. Osteoblasts are the little magic cells beloved by Orthopaedic Surgeons. They build and remodel our bones. Steroids suppress the work of the osteoblasts in making new bone. If that wasn't bad enough, steroids increase the activity of osteoclasts, which are cells that take away bone in remodeling. That's enough physiology.

How Come Fractures?

Steroids begin to induce bone loss within the first three to six months. This loss particularly affects the hip and the spine. Fracture risk is increased significantly. Sometimes if the bones are weakened enough the bone gives way and breaks (fractures) without a fall or trauma.

Even a corticosteroid dose of 2.5mg causes bone loss and increases fracture risk.

What's a Patient to do?

- Take as small a dose of glucocorticoid as your doctor will agree to
- Calcium 1500mg per day
- Vitamin D 2000 i.u. per day
- Don't smoke
- Give up carbonated beverages
- Limit alcohol
- Weight bearing exercise i.e. walk 30 minutes several days a week
- Bisphosphonates help block the negative effect of steroid use

- Cross your fingers

My patients put their trust in me and what I do improves the quality of their lives.

Office Website and Gratiot County Herald Archive

Wow! Your window to the Orthopaedic and musculoskeletal world opens at www.orthopodsurgeon.com. It contains the Website Library of information, Your Orthopaedic Connection and GCH archive of all previous articles.

You will be amazed at all the helpful information it contains.

All of the information pertains to everything I treat in the office and hospital.

Be well.

Dr. Haverbush