

Orthopaedic Connection

Bone Health and Steroids

By Thomas J. Haverbush, M.D.
Orthopaedic Surgeon

Transforming patient information into patient understanding.

As long as we have been on the subject of Bone Health I thought there was another aspect to address. What comes to mind when you think of a cause for osteoporosis?

- Low estrogen in post menopausal women? Yes.
- Lack of Calcium and/or Vitamin D? Yes.
- No more hands raised? What else? OK, in the back row, “Steroids”. Correct!

One of the leading causes of bone loss is the same medication which is helpful in the treatment of so many conditions.

Steroids are also known as cortisone, glucocorticoids, hydrocortisone and prednisone.

Important Point!

Corticosteroids are not the same as anabolic steroids which are man made substances related to male sex hormones.

Conditions Steroids Treat

Rheumatoid arthritis
Asthma
Psoriasis
Lupus (autoimmune diseases)
Inflammatory bowel disease
Adrenal insufficiency
Many neurological conditions
Innumerable other diseases and conditions

Bone Physiology

Who can honestly say that they knew that a healthy skeleton is being completely replaced every ten years? There is a lifelong turnover of bone cells that most patients are clueless about. They think of their skeleton like the human skeleton I have in the office which sits there unchanged year after year. Much of this amazing bone remodeling is regulated by the little cells called osteoblasts. Their function is to build new bone.

How Steroids Affect Bone

Just the facts, I'll spare you the physiology!

- They suppress the mature bone cell (osteocyte) activity.
- Steroids suppress osteoblasts making it harder to replace the bone.
- As bad luck would have it, steroids increase the activity of cells that remove bone in remodeling.

In short steroids and bones are not friends.

Patients are not aware that bone loss occurs dramatically in the first six months of their use. Rapid loss of bone in the hip and spine is occurring.

The bone loss is very much dose related. Doses as low as 2.5mg to 7.5mg increase the risk of fractures greatly.

So if you are put on oral steroids to take for some condition you should be aware of what you are headed for.

Managing Steroids and Bone Health

The first step is recognition that steroids are destructive to bone health.

Patients who require the drug must be prescribed the very lowest dose. They should discuss this with their doctor.

- Recommended daily dose of Calcium 1200 – 1500mg
- Vitamin D supplement 2000 i.u. per day in addition to dietary intake
- Weight bearing exercise
- Stop smoking
- Limit alcohol intake

Well there you have it. If you do have to take oral steroids at least you can do something to help your skeleton.

Class is over. Have a good weekend.

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

Office Website and Gratiot County Herald Archive

What if there was a whole world of musculoskeletal information at one place? There is!

www.orthopodsurgeon.com opens up for you the office website, Your Orthopaedic Connection and the Archive of all previous GCH articles I have written for you, your family and friends.

Please check it out. Do yourself a favor.

Be well.

Dr. Haverbush