

## **Orthopaedic Connection**

### **"Gee, Vitamin D Does All That."**

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#### ***Transforming patient information into patient understanding.***

Most of my time is occupied by the diagnosis and treatment of Orthopaedic problems in all age groups. While surgery is a major part of what I do, a thorough knowledge of the medical aspects of Orthopaedic problems is required for success.

In this course on Vitamin D I want to pass some of that knowledge on to you. It is very important that you know about these things pertaining to Vitamin D. Hope you agree.

#### **Basics of Vitamin D**

It is the only vitamin the body makes itself in any important amount. Vitamin D is synthesized in the skin following exposure to sunlight. Vitamin D3 is a form synthesized in the skin and it also comes from animal sources. Vitamin D2 comes from plant sources. These forms are changed in the liver to a "storage form" circulating in the blood. Finally, hold on, the active form of Vitamin D is synthesized in the kidneys. For any biochemists reading, the active hormone is called 1,25-OH-Vit D. Whew!

#### **What Does it Do?**

Vitamin D is important in absorption of Calcium from the gut. It increases absorption of Calcium through the lining cells of the ileum.

The active form of Vitamin D, along with parathyroid hormone and calcitonin regulates the amount of Calcium in the blood and tissues.

It is an extremely complex system involving the small intestine, bone, kidney and parathyroid gland.

Vitamin D is critical for Calcium being deposited in new bone (growth or fracture healing).

#### **Rickets**

Believe it or not it is still around. Lack of Vitamin D in children causes the Calcium in body fluids to decrease. This causes Calcium to come out of the bones and it weakens them greatly causing deformity and fractures.

## **Osteomalacia**

Simply stated, it is like Rickets, but in adults. It is different from the similar sounding term, osteopenia. Osteopenia is lower bone mass.

### **Low Vitamin D. Silent Epidemic. Scary, but real facts, readers.**

Good News, Bad News of Vitamin D Deficiency. From the Medical Literature.

#### **First the BAD NEWS.**

- 60% of patients in Nursing Homes are Vitamin D deficient
- Patients who had gastric bypass surgery are at high risk for Vitamin D deficiency
- 70% of patients with fibromyalgia have abnormal Vitamin D levels
- Most seemingly healthy black Americans do not have adequate Vitamin D levels
- 70% of patients whose fracture does not heal have Vitamin D deficiency
- 55% of patients in assisted living facilities are Vitamin D deficient
- 32% of otherwise healthy medical students in Boston are Vitamin D deficient
- 75% of elderly patients in a Colorado community taking 400iu of Vitamin D daily still were deficient in Vitamin D
- 75% of post menopausal women who have hip fractures are Vitamin D deficient

Scary? It is for sure.

Next week, the good news and the conclusion of the mini course on Vitamin D and its role in your life.

Orthopaedic and musculoskeletal questions? No problem. [www.orthopodsurgeon.com](http://www.orthopodsurgeon.com) and Your Orthopaedic Connection has all the answers. Check us out.

Our goal is simple - To help people live more pain free, functional lives.

Good health. Good life. All the best to you.

Be well.

Dr. Haverbush