



**Dr. Techy says,
The real problem is
calcium resorption!**

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OSTEOPOROSIS IN PAIN PATIENTS

A HORMONE ISSUE

THE PROBLEM

If one has been in pain practice very long, one soon sees a patient who suddenly develops a degenerative bone problem away from the main pain site. For example, the patient has neck pain but suddenly develops a knee or hip problem. Also, teeth may decide to severely erode. There's a good chance these "new" problems are hormone-induced osteoporosis. Although we usually refer to osteopenia (bone thinning) or osteoporosis (bone erosion), the real physiologic problem is calcium resorption. If calcium resorption is excessive, calcium leaves bone and teeth causing them to erode and deteriorate.

CORTISOL— BIG TIME CULPRIT

It has long-been known that excess cortisol causes calcium resorption. This is why patients who are in hypercortisol states (Cushing's) suffer osteopenia, osteoporosis, dental erosion, and renal stones. Severe pain causes a hypercortisol state. Consequently if severe pain is not controlled, over-time, calcium resorption sets in. Fundamentally, severe pain patients may suffer all the complications of Cushing's Syndrome.

<u>CLINICAL FEATURES OF CHRONIC ELEVATED CORTISOL LEVELS</u>	
<u>FEATURES</u>	<u>PROPORTION % PATIENTS</u>
Obesity Or Weight Gain	95%
Facial Plethora	90%
Decreased Libido	90%
Rounded Face	90%
Thin Skin	85%
Menstrual Irregularity	80%
Hypertension	75%
Hirsutism	75%
Depression	70%
Easy Bruising	65%
Glucose Intolerance	60%
Weakness	60%
Osteopenia/Fracture	
Dental Erosion	50%
Nephrolithiasis	50%

Adopted from Newell-Price J, Bertango X, Grossman AS, Nieman L. Cushing Syndrome. Lancet 2006;362:1605-1617.

LOW TESTOSTERONE—ANOTHER CULPRIT

Testosterone is necessary to promote osteoblast activity. Although severe, chronic pain can lower serum testosterone, low testosterone is most often seen with daily opioid administration. What some people call “opioid osteoporosis” should really be called “low T osteoporosis.”

LONG-ACTING VERSUS SHORT-ACTING OPIOIDS

Some new studies show that long-acting and intrathecal opioids suppress testosterone and other hormones more significantly than short-acting opioids. To make matters worse, opioids have a direct suppressive effect on osteoblast activity. Bottom line is that suppression of testosterone and osteoblast activity is a good reason to avoid long-acting and intrathecal opioids if at all possible.

A REAL HORROR SHOW—VERTEBRAL COLLAPSE

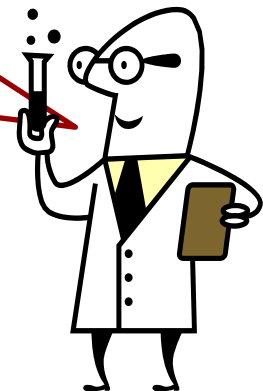
The author has, unfortunately, seen some severe, chronic pain patients who suddenly and unexpectedly develop severe osteoporosis and vertebral collapse. Retrospective analysis showed that over time these patients had elevated serum cortisol and depressed testosterone levels. Let this be very clear. The combination of high serum cortisol and low serum testosterone is devastating to bones and teeth.

STRONG RECOMMENDATION

Severe chronic pain patients, particularly those taking long-acting and intrathecal opioids need periodic screening for cortisol and testosterone. Pain relief must be sufficient to lower cortisol and testosterone may have to be replaced.

Dr. Hormone says,

*Keep cortisol down and
testosterone up to prevent
osteoporosis and dental decay.*



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**Information
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"BAD to the BONE", man!

