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Osteoporosis

Osteoporosis is defined as a reduction in bone mass resulting in porous & weakened bones. Subsequently, the individual is predisposed to bone fracture and other associated complications. Approximately 10 million Americans have the disease and an additional 34 million have borderline bone loss (osteopenia). 80% affected are women. The annual estimated cost of osteoporosis is 19 billion dollars.[1]

Lifestyle factors that negatively effect bone density include the following:

1. Lack of exercise or sedentary lifestyle
2. Diet high in refined and processed foods
3. Nutritional deficiencies
4. Lack of sunlight
5. Smoking
6. Excessive alcohol intake
7. Regular caffeine intake
8. Medication use (acid lowering drugs, steroids, etc)

As one can clearly see based on the above, it is vital to educate children properly as these factors are easily correctable. Even more so, it is vital to practice what we preach as leading by example is one of the most effective ways to teach children.[2,3]

Diagnosing osteoporosis is done primarily through the use of bone density scanning. Doctors will recommend a bone scan starting at the age of 50 or after menopause, but one may be performed earlier or later in life depending on additional lifestyle and clinical factors. Because bone tissue has a slow turnover rate (you have complete turnover of your skeleton about every 7 years) bone scans can only be performed once every 2-3 years. This is not adequate enough to monitor how well the treatment is working short term. Relying only on a bone scan to measure treatment response means you have to take a medicine for up to three years just to know if it is working. However, there is a simple laboratory test that can be performed by any doctor to monitor bone break down and measure treatment efficacy on a short term basis.

In order to build new bone, your body must first break down old bone. Traditional treatment of osteoporosis typically involves the use of medications called bisphosphonates (Actonel®, Fosamax®) that inhibit bone breakdown. Inhibiting bone breakdown prevents new bone from replacing old bone. The bottom line: Using these drugs may show an increase in bone density on a bone scan, but the actual quality of the bone tissue is deteriorated. Another problem with taking bisphosphonate drugs is that they commonly cause gastrointestinal pain and dyspepsia (indigestion).[4] This side effect is commonly treated with acid reducing medications. Acid lowering drugs have been shown to increase the risk of hip fracture and they also inhibit zinc, iron, vitamin B-12, and calcium absorption.[5-7] This is obviously counterproductive to restoring healthy bone tissue.

Bone tissue is a very dynamic and complex structure. It is composed of and created by minerals, proteins, vitamins, and other nutrient factors. Bone growth is influenced by diet, exercise, environmental exposures, and genetics. Doctors have the ability to measure nutrient levels using specialty laboratories. Doctors have the ability to give proper diet and exercise instruction. Doctors have the ability to screen for environmental chemicals. Doctors have the ability to measure predisposition genes to better guide your treatment. Ability and action is unfortunately not the same thing.

The bottom line: Medicine is changing; the pill for every ill paradigm of treatment is too simplistic and does not work. Based on the statistics, it is obvious that current mainstream treatment methods have been inadequate to fully address the nation's health problems.[8,9] Osteoporosis is no exception.

References:
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