

What You Don't Know About Osteoporosis



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PART 3

In this, our final segment on Osteoporosis, let's take a closer look at some of the myths and legends of the effects of eating meat, minerals and proteins and quaffing a pint or two. You can find the two previous segments [here](#).

Vegetarians, Carnivores and Osteoporosis

While bone mineral density may be a tad or more low in vegetarians, the notable and well documented results are in: vegetarians do not have an increased risk of fractures. Their risk for busting a hip is no better, no worse than those of us who eat meats, even though the vegetarian's diet is typically lower in calcium and some vitamins. We already know about calcium and its lack of relationship to osteoporosis except at extremely low levels. But the fact remains that a diet lower in protein from animal sources or one entirely devoid of all animal products still provides every bit of protection -- or the lack thereof -- that we see in other folks (1, 2).

Menopausal Chinese women maintain bone mineral density with soy intake - though significant loss of bone can occur in very elderly Chinese. Similarly, Caucasian women maintain or increase bone density by their consumption of soy protein. In fact, two glasses of soy milk a day prevents bone loss in the spine of menopausal women with osteoporosis (3).

But interestingly, if Progesterone is added to those drinking soy, bone loss will occur (at least in this study of 89 women).

Apparently, too much of a good thing. Progesterone by itself increased bone density. Soy milk by itself did the same. But apparently you can't mix them together without cancelling all benefit.

And if you think that's not fair, read this.

For a while we thought the more vegetable protein we ate, the stronger our bones would be. Or, to paraphrase, the more animal protein you ate, the more likely you were to break a bone (4). This was the theory that vegetable protein (an alkaline diet), was superior to animal protein (an acid or ash diet).

Then along came a study in May, 2009, which by the way was a rather rigorous one, that concluded high protein intake was just fine for bones, regardless of where the protein came from. High vegetable intake was not more helpful than high protein intake from eating meats (5).

So much for the supposed evils of being a carnivore.

Then to add insult to vegetarian injury, there was a theory that the more alkaline your diet is -- a diet high in vegetables - the less likely you were to have bad things happen to your bones. The theory stated that eating meats, dairy and grains -- sometimes called an "acid" or "ash" diet, high in phosphates -- resulted in malevolent things happening to bones. Things like osteoporosis and fractures. But just this September that theory (demoted to a "hypothesis") was all shot to heck in a major review of the evidence to date (6).

Two longstanding theories about the beauty of vegetarianism gone, just like that, in five months. Not fair.

However, it should be noted that most vegetarians also eat substantial amounts of grains -- the least acid of the foods studied. Perhaps because of this along with adequate vegetable protein we do not see osteoporosis in vegetarians any more so than in non-vegetarians.

What is true is there are many variables affecting diet and bone health -- and these are just a few of the stories.

Bottom Line: *Eat your protein. What kind of protein? It really doesn't matter. I'm happy if you do soy in moderation and love your vegetables. But for bones, just eat your protein. Vegetables are a good thing by every measure from cardiovascular risk to cancer so my preferences lean there. But that's my bias, not the research on osteoporosis.*

Strontium

Strontium, one of the most abundant elements on the planet, is almost entirely concentrated in our bones and connective tissue. In bone, it acts to increase density and strength. Strontium in various forms - lactate, carbonate, chloride, gluconate, citrate and in the largest studies to date, as strontium ranelate - has consistently shown not only improvements in bone density but significant reductions in the risk of fractures (7 - 9).

It should not be taken at the same time as calcium as calcium competes for absorption with it in the intestine. Most studies suggest taking strontium at bedtime to avoid this potential problem.

Bottom Line: *Strontium may be a more effective and less expensive treatment than the Bisphosphonates such as fosomax, actonel, etc. it may also be superior to just about any other treatment for osteoporosis we have. It not only can help reverse osteoporosis but helps prevent recurrence of fractures in those who already have suffered a fracture due to osteoporosis (10)*

Because of these factors, I consider strontium to be a first line therapy for bone loss.

NOTE: *There have been rare reports of skin rash and reversible liver damage with strontium ranelate. This is the same syndrome seen in those who have a sensitivity to any medication. But if you are taking strontium in any form, you should discontinue it and contact your doctor immediately if any fever with skin rash or swollen glands develops.*

Vitamin K

Who would have thought this vitamin could be safely taken in high doses to not only improve the strength of bone, but significantly reduce the incidence of fractures? I certainly didn't. And even more remarkably, vitamin K seems to do this without consistently increasing bone density or reducing bone breakdown. That's right. Vitamin K does not increase bone density. Yet it significantly reduces the risk of a fracture (11).

Another finding is that Vitamin K may also reduce the development of cancers in a study of over 400 women with osteoporosis (12).

But, you may ask, doesn't vitamin K cause blood clots? Even though it helps prevent fractures, aren't we increasing our risk of a blood clot forming by taking high dose K?

Actually, NO. You do not increase clotting risk with these doses of K unless you are taking Coumadin. Which most of us are not.

High doses of K - 5 mg per day for four years -- has been studied without any increased risk of clotting or toxicity.

BUT DO NOT TAKE VITAMIN K IF YOU ARE TAKING COUMADIN. ONLY IN THIS SETTING WILL IT CAUSE A PROBLEM AS IT INTERFERES WITH THIS DRUG'S ACTIONS.

Bottom Line: Vitamin K can be safely taken at doses greater than 1 mg per day to help reduce the risk of fracture for those with osteoporosis. It is an essential part of our osteoporosis treatment and fracture prevention program.

Alcohol

I am very partial to a good Bloody Mary as well as a Cadillac Marguerita. Besides defining myself as a real lightweight when it comes to drinking, it also raises the question of alcohol as a risk factor for osteo and fractures. Am I increasing my risk, even by a little, to drink on occasion?

Well, 2 large studies have examined this closely. Results? Moderate drinking -- defined as one or two drinks per day -- does not increase one's risk of osteoporosis or fracture -- at least not in men. More than this, however, can significantly increase a man's risks.

And by the way, a drink is defined as one shot of alcohol, not a glassful, sorry to say. Or one to two beers is also OK.

But in women, more than one drink may actually be helpful. More than a few drinks, you say? Yup. Women may actually increase their bone density by drinking more than two drinks per day (13-14). Of course, by doing so, a woman would also increase her risks of breast cancer, most other cancers, liver disease, cognitive decline and hypertension. So, heavy drinking for women to help bones? Maybe not such a good idea (15).

Bottom Line: All things in moderation may make Jack and Jill a very dull couple, but they sure do have good bones. Take it easy on the libations and you can have your drink without a worry about your skeletal welfare.

Fish Oils

Last and certainly not least is the question as to whether fish oils have any impact whatsoever on bone support and prevention of fractures. And the answer is they definitely have an effect.

We're just not sure what it is.

We have a number of studies which show fish oils are great for mice and rats. They help their bones stay real strong. And in people there is some evidence it protects against osteo. But so far, nothing which is clearly convincing (16 - 17).

Now, having said that, consider this. Diets which are higher in fish oils (omega-3's) result in:

- *Decreased risk of heart disease and sudden death*
- *Decreased risks of cancers*
- *Lower risk of death from all cause*
- *Reduced inflammation with rheumatoid arthritis*
- *Reduced severity of asthma (18 - 20)*

So what's not to like? True, we don't have the exact doses down for fish oils, but the evidence is strong that they are really helpful for many inflammatory conditions.

Bottom Line: take your fish oil. It's good for you. And see your health care practitioner to guide your best usage of this. In my practice, most patients with the diseases noted above -- including osteoporosis -- are taking at least 2 grams a day of omega 3 fish oil. This, by the way, is pharmaceutical grade, screened for peroxides, mercury and other metals, really pure stuff.

CAVEAT: DO NOT TAKE FISH OILS IF YOU ARE ON ANY BLOOD THINNER. OR WITHIN 2 WEEKS OF ANY PLANNED SURGERY. OR IF YOUR DOCTOR ADVISES YOU NOT TO TAKE.

There you have it. The pearls I know today.

Bottom line is you should always check with your health care provider on issues as important as your bone health. But don't be afraid to have that discussion with what you have learned here.

With my best wishes for your health!

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