What You Don't Know About Osteoporosis

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PART 2

This time we'll look at one of the most controversial and misunderstood treatments for osteoporosis -- hormone replacement therapy. We'll also answer the question as to whether being obese can actually reduce your risk of osteoporosis.

Bioidentical Hormones for Women

Prior to the publication of the Women's Health Initiative (WHI) study, hormone replacement therapy was the first choice in preventing and reversing osteoporosis. After WHI the bisphosphonates became number one (such as Fosamax, Boniva, Actonel and for those with bone cancers, Zometa). And this is for good reason. These drugs are effective in reducing risks of fracture in well conducted studies.

But long term studies of bisphosphonates have also revealed side-effects which, though only occurring in a small minority of patients, can be serious. These include jaw bone deterioration and ulceration of the esophagus. One comprehensive long term study of over 12,000 women with osteoporosis also showed it would be necessary to treat approximately 66 women to prevent one fracture (1).

Other, though possibly less effective, medications are also available for use if the bisphosphonates are unsuccessful.

But what about hormones? Why did they fall out of favor when they consistently helped prevent fractures?

Well, it was reported they also resulted in increased risks of blood clots, strokes and breast cancer, as was reported in the WHI studies. But a large part of the problem wasn't the hormones -- it was the study itself. There were major flaws in the WHI trials. Such prestigious institutions as the University of Massachusetts Medical Center, journals such as the Annals of the New York Academy of Sciences and even the WHI researchers themselves have criticized almost every aspect of the WHI studies done (2-4).

That certainly let a lot of air out of the balloon. Even so, there still is good evidence that women who use the *synthetic* hormones *do* increase their risks of side-effects and adverse events.

The one area which was not criticized, however, was the 30% reduction in all types of fractures and the 40% reduction in hip fractures in particular with the use of HRT (hormone replacement therapy) (5).

But who wants to risk adverse effects if these can be reduced?

Did you notice I wrote *synthetic hormones* have increased risks associated with their use? *Synthetic hormones* such as Premarin, Estratest, FemHRT, Prempro and Provera are all molecules which have been altered. They are not found in nature, nor are they made in our body. It is this alteration which most researchers believe accounts for the significant differences causing increased risks and adverse effects experienced with the synthetics in many women.

As it turns out, the risks associated with synthetic hormones are *not* seen to the same significance with the *Bioidentical hormones* as shown in a number of excellent studies.

Bioidentical hormones are the exact hormones which our bodies produce. To the last atom, they are identical in every way to that which nature gives us.

Bioidentical hormones have a much different -- and safer profile. This evidence comes for example, from studies which have looked at the risks of breast cancer with *synthetic* HRT to the significantly reduced risks with bioidentical hormones (6-7).

There is also good evidence that transdermal estrogen (patch or cream applied to the skin) has no increased risk of causing breast cancer or blood clots -- especially potentially fatal blood clots which can travel to the lungs, heart or brain (8-9).

Moreover, comprehensive reviews of the safety and effectiveness of Bioidentical HRT have also concluded that, **from all the clinical evidence we have to date**, they are an excellent choice for protecting against fractures in women with osteoporosis (10-11).

Bottom Line: Bioidentical hormone replacement therapy for women is a valid and viable option for protecting against osteoporotic fractures. There will always be a need for further studies to add to our knowledge, but the track record to date is excellent. They must be used by a knowledgeable practitioner, accompanied by periodic testing and all preventive medicine care. I appease my obsessive need to keep patients safe by tracking these things rather closely. And any hormone therapy should always be used at the lowest effective dose, using estrogen and progesterone together. This combination of the bioidenticals offers the best benefit and protection against problems.

In my clinical practice -- over 15 years of experience in the use of Bioidentical hormone replacement therapy -- I regularly see that we not only halt, but we reverse osteoporosis. For women, I require annual gynecological evaluations, mammograms and pelvic ultrasound as well as periodic lab testing to ensure we are achieving optimal ranges of therapy. Bone mineral density evaluation is also periodically required as appropriate.

Most importantly, *you* want to know you are in safe hands while benefiting from all the positives of this exceptional therapy. Therapy should be individualized and tailored to the specifics of each patient's needs and risk profile.

Well, that's great for women. But what about men and testosterone replacement for bone health? Which would also be terrific for the libido in older guys.

Except for one **big** problem. Doesn't testosterone cause prostate cancer? So for all the good it does, aren't men just helping one part and hurting another? Bummer. What's a guy to do?

Testosterone, Osteoporosis and the Risk of Prostate Cancer

In a comprehensive review of the subject, we see not only an increase in bone density, but significantly fewer fractures in older men with osteoporosis who are treated with testosterone replacement therapy. Moreover, this can be done *with no evidence of any increased risk of prostate cancer* (12).

Did we hear this right? *No* increased risk?

Well, quoting these authors:

"So far, there is no compelling evidence that testosterone has a causative role in prostate cancer."

And this review echoes literally a multitude of studies which have concluded exactly the same findings over the last 20 years. *Testosterone replacement therapy does not increase a man's risk of prostate cancer.*

Bottom Line: All men over the age of 50 should be screened for the possibility of bone loss with blood tests as well as bone mineral density testing where appropriate. Testosterone replacement therapy should be considered as first line therapy for men with bone loss or osteoporosis along with regular follow-up testing for optimal levels and a physical exam. Prostate health should be followed, these studies notwithstanding.

Moreover, men with a history of prostate cancer are not necessarily excluded from receiving testosterone therapy. In my practice, I work closely with prostate oncologists to carefully select and follow these individuals while they receive testosterone replacement.

Sweet. So now, what's the story on weight, obesity and osteo?

Obesity

There are many potential causes for osteopenia and osteoporosis. This is not one of them. Despite the fact that there are a host of diseases which anyone with obesity is at increased risk for -- such as hypertension, diabetes, high cholesterol and coronary heart disease, *there are no studies which show that obesity will increase anyone's risk of developing osteoporosis.* But, of course, there is a catch.

Obesity is also associated with an increased risk of falls. And even though the bone mineral density of many obese individuals is normal, there is an increased risk of fractures of the forearm, legs and spine. You heard it right. *You can have a normal bone density and no osteoporosis and still have a significantly higher risk of breaking a bone if you are obese.* This does not seem to be true for hip fractures, however, where there seems to be no increased risk with obesity (13 - 16).

What seems to be most likely is that the protective effect of increased body size is due to *the amount of muscle we have on our bodies* -- not just how obese we are. This lean tissue as it is called seems to be the most important factor in obese people which protects against fractures (17).

Bottom Line: If you are obese, start or continue working out to build muscle. Obesity will *not* cause osteoporosis. But it *will* increase your risk of breaking a bone whether or not your bone density is normal.

Remember: Osteoporosis is a reversible disease. And so is your risk of fractures due to obesity.

In our next and final installment on osteoporosis, we'll take a closer look at why I think my bones are better than my vegetarian buddy Jason's; the mineral Strontium; Vitamin K; fish oils (for stronger bones?); and the good, the bad and the surprising side of alcohol. Stay tuned!

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