



Osteoporosis Canada

Ostéoporose Canada



COPING

A newsletter from COPN

June 4, 2010

Remember: You can live well with osteoporosis!

If you have received this newsletter from the Canadian Osteoporosis Patient Network (COPN)
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Thought for today:

Now that I'm 'older' (but refuse to grow up), here's what I've discovered:

- ~ I started out with nothing, and I still have most of it.
- ~ My wild oats have turned into prunes and All Bran.
- ~ I finally got my head together; now my body is falling apart.
- ~ Funny, I don't remember being absent minded....
- ~ All reports are in; life is now officially unfair.
- ~ If all is not lost, where is it?

HOW MUCH VITAMIN D IS TOO MUCH?

A recent study published in the Journal of the American Medical Association (JAMA) showed that a single large dose of vitamin D, given once a year to a group of elderly patients, actually increased their risk of falls and fractures.

This study recruited 2258 women, average age of 76 years, who were at increased risk of falling, and randomly assigned them to receive either a single dose of 500,000 International Units (IU) of vitamin D (ten 50,000 IU tablets taken in a single day) once a year or a placebo once a year for 3 to 5 years.

The Scientific Advisory Council of Osteoporosis Canada has reviewed the study and makes the following observations and recommendations:

The study was well designed and there are no obvious serious flaws or biases seen.

There is one other large dose, once-yearly, study of vitamin D (300,000 IU of vitamin D₂, given by injection) that also has shown an increased risk of fracture. But studies using smaller, more frequent doses of vitamin D (averaging 700-800 IU/day with adequate calcium intake) have consistently tended to show decreased falls and decreased fracture risk.

There is no good explanation for the apparent danger of larger doses of vitamin D supplementation. The editorial accompanying the paper does suggest two possible mechanisms whereby a single dose providing a year's supply might not be effective in protecting against falls and fractures:

- Our body normally converts vitamin D to a very potent active form of vitamin D that provides the bone and muscle benefits that would be expected to protect against falls and fractures. However, a huge dose of vitamin D might cause the body to over-produce the enzyme that allows the body to degrade this active form of vitamin D (and this was not measured in these studies).
- Half the patients in the large annual dose study had vitamin D levels below the normal range before the very first dose of vitamin D was given and it is possible the patients receiving vitamin D improved their muscle strength, felt better, and became more active than the placebo group. Activity levels and general health were not measured in this study, but when people are more active, they may also be at higher risk of falling.

VITAMIN D IS VERY IMPORTANT TO OUR BONE HEALTH

When taken in the appropriate amount, vitamin D decreases our risk of falling and breaking bones. It is very common to find inadequate vitamin D levels in Canadians. For that reason, Osteoporosis Canada recommends that all Canadians, particularly those of us over age 50, take a daily vitamin D supplement (at least 800 International Units a day for most adults). These vitamin D supplements are available without prescription at pharmacies across Canada.

Vitamin D is also available (by prescription only) as a larger once-a-week dosage. The results of some studies outside Canada have shown that vitamin D given

in even larger doses (100,000 IU) spaced out as far as every 4 months can still be effective in decreasing the risk of fractures.

Please note that anyone considering a dose of vitamin D greater than 2000 IU in a single day should consult with their physician before doing so.

In summary, the Scientific Advisory Council concludes that this recent study does not provide any evidence to change Osteoporosis Canada's standard recommendation of a modest daily intake of vitamin D (800-2000 IU/day for most adults), or an equivalent dose of a once-weekly vitamin D by prescription from your doctor. However, a single large, yearly dose of vitamin D is not advisable.

COPN wishes to thank the following members of Osteoporosis Canada's Scientific Advisory Council for their insight in the significance of the findings in the recent JAMA article: David Hanley, William D Leslie, Sophie Jamal, Jonathan Adachi, Alexandra Papaioannou, Suzanne Morin

Funny bone:

About the only thing that comes to us without effort is old age.

Notices/references

i. Remember: It is important for you to eat a healthy diet, get some appropriate exercise, take your calcium and vitamin D and if your doctor has prescribed a medication don't forget to take it as directed.

ii. **COPING** will come to you every second Friday. We hope you enjoy it and find the information useful. Don't forget to visit www.osteoporosis.ca for up-to-date information.

iii. The material contained in this newsletter is provided for general information only. It should not be relied on to suggest a course of treatment for a particular individual or as a substitute for consultation with qualified health professionals who are familiar with your individual medical needs. Should you have any health care related questions or concerns, you should contact your physician. You should never disregard medical advice or delay in seeking it because of something you have read in this or any newsletter.

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