

COPING

'A newsletter from COPN'

August 7, 2009

Remember: You can live well with osteoporosis!

Thought for today: Maybe hard work won't kill a man, but on the other hand, who ever heard of anyone resting to death?

This is the first of a three part series on:

Calcium Absorption and Bone Health

By Ina Ilse

I am one of a number of volunteers at Osteoporosis Canada answering questions on the 1-800 information line about bone health. Many of the questions we deal with on the phones are related to diet, and in particular, calcium: what foods are rich in calcium and how much of it is absorbed? Can one type of food interfere with the absorption of the calcium in another food (e.g., protein from red meat)? To clarify some of these questions, and to satisfy my own desire for specific answers, I decided to look up a number of research publications. Below are some of the answers I found.

Bone is a living part of our body and, as such, needs constant nourishment.

Calcium has many functions in the body. Mainly it contributes to bone strength and integrity. Calcium is also involved in muscle contraction, nerve impulse conduction, and the regulation of many metabolic processes occurring within the cells. Because the body requires calcium for so many of its activities, large concentrations of calcium are required by the body, are stored in bone and are released into the blood and the cells as needed. How are the levels of calcium in the blood regulated?

Vitamin D plays a very important role here; it helps to absorb calcium from the bowel (intestines) and then helps to regulate the calcium levels in the blood stream. Vitamin D is not the only hormone working on behalf of bone health; parathyroid hormones, which are secreted by the parathyroid, (four small oval-shaped glands located next to the thyroid glands in the neck) are the prime regulators of extra-cellular calcium. How does it work?

The parathyroid hormones (PTH) work to maintain blood calcium levels in very narrow range. If the parathyroid finds that there is not enough calcium in the blood it will remove calcium from our bones in order to maintain the proper levels of calcium overall. (Vitamin D does not exercise this control mechanism). So, if we do not get calcium through our diet, calcium will be removed from the bone, but will not be replaced.

So, if we go back to the beginning questions, we know that most dairy foods are rich in calcium. Some of our dark green vegetables such as broccoli and spinach are also rich in calcium although the calcium in these foods is often more difficult for the body to absorb. The process of calcium absorption is complex but Vitamin D and the hormone PTH play important roles.

Watch for more information about calcium in the next issue of COPING

Funny Bone:

Coffee, chocolate, men
Some things are just
Better rich!

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.

COPN WEEKLY will come to you every second Friday. We hope you enjoy it and find the information useful. Don't forget to log on to www.osteoporosis.ca for up to date information.

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.