



COPING

'A newsletter from COPN'

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Remember: You can live well with osteoporosis!

The Truth about Lactose Intolerance

Dairy products are important sources of nutrients, including calcium and vitamin D. Calcium plays an essential role in maintaining bone health and preventing osteoporosis. Vitamin D has two roles. It helps to maintain bone, which contributes to the prevention of osteoporosis, and it benefits muscle health, leading to fall prevention. However, most dairy products also contain lactose, which a large proportion of the world's population has trouble digesting.

Lactose is the principle carbohydrate of milk, providing about half the calories in a glass of skim milk. Lactose cannot be absorbed directly, but requires the enzyme lactase for digestion. Most babies have enough lactase to digest lactose in breast milk or formula. But for the majority of the world's population, levels of lactase decrease a great deal during childhood. Not having enough of the lactase enzyme reduces the ability to digest lactose, a condition known as lactose maldigestion. (Lactose intolerance is a clinical diagnosis made when the symptoms of lactose maldigestion become severe.) The majority of individuals of Asian, African and Native American descent, as well as about half of Hispanic peoples, experience lactose maldigestion. For people with lactose maldigestion, lactose is broken down by the bacteria in the large intestine. This process of fermentation can cause bloating, gas and abdominal discomfort.

Avoiding milk and other dairy foods due to lactose intolerance can have serious effects on nutrient intake, including lowering intakes of calcium and vitamin D, which leads to an increased risk of osteoporosis. Here are some tips to help you lessen the symptoms of lactose intolerance:

- Consume milk and other dairy products throughout the day rather than having more than one serving at one time.
- Consume milk and milk products with meals.

- Consume milk and milk products every day. This may reduce the symptoms, because the bacteria in the gut get used to the lactose and less gas may be produced.
- Try lactose-free or reduced milk and other dairy products; a glass of lactose-free milk provides the very same nutrients as regular milk.
- Enjoy cheeses such as Swiss, Edam, Gouda and Cheddar, which contain very little lactose.
- Choose yogurt. The bacteria in some yogurts may help break down the lactose it contains.
- Try Kefir (a fermented milk drink). It may be better tolerated.
- Use lactase drops/tablets (available at a pharmacy).

If one does not wish to eat or cannot tolerate any dairy products, there are other sources of calcium, such as:

- sardines and canned salmon (with the bones)
- leafy green vegetables (broccoli, kale, bok choy, okra, turnip greens, collard greens)
- dried figs
- baked beans, canned
- soybeans and other types of beans, cooked
- calcium-fortified orange juice, soy beverage and rice beverage
- \other fortified foods such as instant oatmeal and cookies - be sure to read the labels for calcium content
- tofu, firm or extra firm, processed with calcium sulfate

How Much Calcium Do We Need?

Age	Daily Calcium Requirement
4 to 8	800 mg
9 to 18	1300 mg
19 to 50	1000 mg
50+	1200 mg
pregnant or lactating women 18+	1000 mg

If these amounts cannot be achieved through diet, it may be necessary to consider a calcium supplement.

Vitamin D

And don't forget vitamin D! Most Canadians have inadequate levels of vitamin D and vitamin D increases calcium absorption. Osteoporosis Canada recommends routine vitamin D supplementation for all Canadian adults. Those 19-50, including pregnant or lactating women, require 400-1,000 IU daily. Those over 50 or at high risk (with osteoporosis, recurrent fractures, or conditions affecting vitamin D absorption) should receive 800-2,000 IU.

Vitamin D is found in very few foods. Besides fortified milk and margarine, other food sources are:

- fortified orange juice, soy and rice beverages
- egg yolks
- chicken livers
- fatty fish (salmon, sardines, herring, mackerel and swordfish) and fish oils (halibut and cod liver oils) all contain small amounts.

Since it is very difficult to get enough vitamin D from food alone, supplements **are** advised.

Finally, it is important to ask: Is it really lactose intolerance? Many individuals mistakenly self-diagnose their gastro-intestinal symptoms as lactose intolerance. Bloating, flatulence and abdominal discomfort may result from consuming any undigested carbohydrate. For example, with a breakfast of oatmeal and milk, intestinal gas production and GI symptoms may be due to the significant fibre content of the oatmeal rather than to lactose. Lactose intolerance must be differentiated from milk allergy, which is a reaction to the protein found in milk. An allergy to cow's milk is rare and needs to be diagnosed by an allergist.

With thanks to Wendy Joanne Dahl, PhD, RD. Wendy obtained her doctorate from the University of Saskatchewan, College of Pharmacy and Nutrition, and is currently Assistant Professor in the Food Science and Human Nutrition Department at the University of Florida.

Funny bone – “Kilometers are shorter than miles. Save gas, take your next trip in kilometers.”- George Carlin

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, remember to take it as directed.

ii. COPING Weekly will come to you every second Friday. We hope you enjoy it and find the information useful. Remember to log on to 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 healthcare-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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