

# CALCIUM CALCULATOR™

## Handling Common Calcium Concerns

These pages address the common questions asked about calcium intake and calcium-rich foods:

- Lactose intolerance
- Fat or calories in milk products
- Cholesterol
- Calcium supplements
- Calcium absorption
- Milk alternatives
- What to do if I don't like milk
- Vitamin D
- Milk and mucus

As participants prepare a plan to eat calcium-rich foods, concerns about these foods may arise. Handling these concerns is an important part of problem-solving. Feel free to photocopy and distribute individual pages as needed.

Each page presents the **Concern** as it might be asked by participants. This is followed by a concise **Response** and some practical **Ideas For Action**. Further explanation follows in the “**Did You Know...**” section.

The following exchange between participant and instructor illustrates how you might use the information on the Common Concerns pages.

Participant: “I'm lactose intolerant and can't drink milk.”

Instructor: “Contrary to what most people think, many of those who are lactose intolerant can have some milk and milk products. Some of the ways to decrease discomfort are to consume small amounts of milk products at meals and to combine milk with other foods.

“Here are some possible solutions for people who are lactose intolerant. Perhaps you can think of other ideas.”

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## Handling Common Calcium Concerns

### Ideas For Action

- Drink milk in small quantities ( $\frac{1}{4}$  –  $\frac{1}{2}$  cup or 60 – 125 mL).
- Eat hard cheese. It contains very little lactose.
- Eat yogurt. The bacteria in yogurt help to digest the lactose.

Participant: "I like the idea of eating yogurt."

In this case, the participant's plan on the Calcium Calculator™ might look like this:

*At lunch, I usually eat biscotti for dessert.*

Calcium-rich foods I will add:

*Vanilla yogurt with fresh fruit for dessert  
sometimes instead of biscotti.*

## Concern: I'm lactose intolerant and can't drink milk.

### Response

Contrary to what most people think, many of those who are lactose intolerant can have some milk and milk products. Some of the ways to decrease discomfort are to consume small amounts of milk products at meals and to combine milk with other foods.

### Ideas for Action

1. Drink milk in small amounts (up to ½ cup or 125 mL at a time) spread throughout the day.<sup>1,2</sup>
2. Eat hard aged cheeses such as Swiss, gouda, Parmesan and cheddar cheese. They contain very little lactose.<sup>2</sup>
3. Eat yogurt. The bacteria in yogurt help to digest the lactose.<sup>1,3</sup>
4. Drink milk with meals or other solid foods.<sup>1,2</sup>
5. Drink sweetened (e.g. chocolate or flavoured) or 2% or whole milk.<sup>1,2</sup>
6. Drink pre-treated milk (e.g. Lactaid® milk) or use lactase drops, capsules or tablets.<sup>1,2</sup> Several brands are available from most drug stores.

**Note:** Studies show that drinking one cup of milk treated with lactase drops has the same effect as drinking one cup of regular milk when both are consumed with a meal.<sup>1,2</sup>

### Did You Know...

People who are lactose intolerant do not produce enough lactase, the enzyme required to digest the milk sugar, lactose. Undigested lactose remaining in the small intestine is acted upon by the natural intestinal bacteria. This may result in bloating, diarrhea, gas and abdominal cramping.

Lactose intolerant people should experiment to determine their level of tolerance to milk and milk products. Most lactose intolerant people can digest small amounts of lactose. Start by consuming small portions of milk and milk products and gradually increase the amounts until you reach your personal tolerance level.

## Concern: I'm lactose intolerant and can't drink milk.

The main idea is to allow only a small amount of lactose to empty from the stomach into the small intestine at a time. This can be done in several ways:

- Eat a small amount of lactose-containing food at a time. (*Idea For Action #1*)
- Eat foods with little lactose. (*Ideas For Action #2 and #6*)
- Try yogurt. (*Idea For Action #3*)

Many lactose intolerant people can eat yogurt without experiencing symptoms. Yogurt is as effective in reducing symptoms as milk pre-treated with lactase. Although yogurt contains as much lactose as milk, the bacteria in yogurt digest the lactose both during fermentation and after eating the yogurt. Fermentation decreases yogurt lactose content by approximately 25-50%<sup>3</sup>.

- Delay stomach emptying. (*Ideas For Action #4 and #5*)

Sugar and fat delay stomach emptying and intestinal transit time, consequently allowing more contact time between lactase and lactose.<sup>3</sup> Delayed stomach emptying also allows absorption of small amounts of lactose at a time.

### Sources

- (1) Dietitians of Canada, Practice-Based Evidence in Nutrition, Lactose Intolerance Knowledge Pathway. <http://www.dieteticsatwork.com/pen>
- (2) Journal of the American Dietetic Association, Vol. 98, No. 6, 671-676 (1998).
- (3) World J Gastroenterol, Vol. 12, No. 2, 187-191 (2006).

## Concern: Are milk products high in fat or calories?

### Response

Many people mistakenly believe they have to cut out milk products in order to eat less fat or fewer calories. In fact, it is surprising how few calories and little fat milk products contribute to the diet. Skim milk has virtually no fat but contains all the nutrients found in other milks.

### Ideas For Action

1. Select lower fat milk products more often. These include 2%, 1% or skim milks, 2%, 1% or fat-free yogurts, and cheeses made from partly skimmed milk (with 15-20% Milk Fat (M.F.)).
2. Substitute milk for cream in recipes.
3. Substitute light sour cream (5% or fat-free) or plain yogurt for regular sour cream.
4. Find out how much fat you are getting in your diet. Order Check on Fat — FoodTrack™ from BC Dairy Association ([www.bcdairy.ca/store](http://www.bcdairy.ca/store)).

### Did You Know...

Milk and milk products contribute only 17.6% of calories and 24% of the fat consumed by children aged 4 to 18, and 12.3% of the calories and 17.9% of the fat consumed by adults age 19 or older.<sup>1</sup> Children aged 2 to 8 need 2 Food Guide Servings of Milk & Alternatives.<sup>2</sup> Canada's Food Guide recommends not restricting nutritious foods because of their fat content, as young children need energy and nutrients for growth and development.<sup>2</sup>

Check out how many calories and how much fat and calcium a Food Guide Serving of Milk & Alternatives contributes.

	Daily amounts recommended for adult women	250 mL skim milk	250 mL 1% milk	250 mL 2% milk	250 mL 1% chocolate milk	175 mL 1.5% yogurt	50 g part skim mozzarella
Calories (kcal)	1752 - 1907*	88	108	129	166	110	127
Fat (g)	70**	Trace	2.5	5	2.6	2.7	8.2
Calcium (mg)	1000***	320	307	302	304	320	323

(Based on Dietary Reference Intakes For Energy, Carbohydrate, Fibre, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. National Academy of Sciences, 2002/2005 and Canadian Nutrient File, 2007b.)

\* Estimated Energy Requirements for adult sedentary women 30 years old, 5'3", at the lower and upper end of the normal Body Mass Index range.

\*\* Maximum recommended grams of fat each day for adult women 30 years old, 5'3".

\*\*\* Amount recommended for adult women aged 19-50.

## Concern: Are milk products high in fat or calories?

Canada's Food Guide recommends drinking 2 cups (500 mL) of milk every day for adequate vitamin D.<sup>2</sup> It is easy to get 2 cups of milk without adding much fat or many calories to your diet. Two cups (500 mL) of 2% milk provide 60% of your calcium need and only 7% of the calories and fat in an 1800-calorie diet.

### Sources

- (1) Statistics Canada. Canadian Community Health Survey, 2004.
- (2) Health Canada. Eating Well with Canada's Food Guide, 2007.

## Concern: I'm watching my cholesterol levels. Can I still have milk products?

### Response

It is still important to have 2-3 Food Guide Servings of Milk & Alternatives a day, as recommended in [Eating Well with Canada's Food Guide](#). Decreasing the amount of total fat, especially saturated and trans fat, is more effective at decreasing blood cholesterol levels than decreasing the amount of cholesterol ingested from foods. Choose lower fat milk such as skim, 1% and 2% milk.

### Ideas For Action

1. If you are concerned about heart disease, consult your physician to determine if you are at risk. If you are at risk, consider all contributing lifestyle factors: smoking, exercise, alcohol, dietary fat and body weight.
2. Follow the recommendations provided in [Eating Well with Canada's Food Guide](#). ([www.healthcanada.ca/foodguide](http://www.healthcanada.ca/foodguide))
3. Choose skim, 1% or 2% milk. Choose fat-free, 1% or 2% yogurt. These are low in fat, saturated fat and trans fat.
4. Choose vegetables and fruit, grain products and lean meat and alternatives prepared with little or no added fat, sugar or salt.
5. Have lower fat meat alternatives such as beans, lentils and tofu often.
6. Use lower fat cooking methods. Instead of pan-frying or deep-frying, try baking, steaming, stir-frying, broiling, grilling or roasting (on a rack, so fat can drip away).
7. Limit commercially fried foods and foods containing partially hydrogenated vegetable oil or shortening, such as stick margarines, non-dairy coffee creamers, pies, biscuits, muffins, cookies, pastries, and many snack foods. They may be high in saturated fat and trans fat.
8. Find out how much fat you are getting in your diet. Order Check on Fat — FoodTrack™ from BC Dairy Association ([www.bcdairy.ca/store](http://www.bcdairy.ca/store)).
9. To help understand how milk products contribute to total dietary fat, check the Common Concerns page, "Are milk products high in fat or calories?" from BC Dairy Association.

## Concern: I'm watching my cholesterol levels. Can I still have milk products?

### Did You Know...

Consuming milk and milk products contributes to higher nutrient intakes without adverse impact on fat or dietary cholesterol.<sup>1</sup>

Making lifestyle changes (smoking cessation and weight loss), and reducing total dietary fat (especially saturated and trans fat) are more effective at lowering blood cholesterol than reducing cholesterol intake. Sources of saturated fat include higher fat milk products, fatty meats, cream, butter, lard, shortening and tropical oils such as coconut and palm oil. Trans fats are found in partially hydrogenated vegetable oils used in some margarines and in shortening. Sources of these trans fats are foods (such as fries or doughnuts) fried in partially hydrogenated vegetable oils and baked products (such as cookies or crackers) made with shortening or partially hydrogenated vegetable oils. Remember, when you make dietary changes to control fat and cholesterol, it's still important to eat a balanced diet that includes all four food groups. By following the recommendations in [Eating Well with Canada's Food Guide](#),<sup>2</sup> you will meet your nutrient needs while keeping your intake of total fat, saturated fat and trans fat low.

### Sources

- (1) Journal of the American Dietetic Association, Vol. 104, No. 6, 895-902 (2004).
- (2) Health Canada. Eating Well with Canada's Food Guide, 2007.

## Concern: When is a calcium supplement necessary?

### Response

If you have milk allergies, severe lactose intolerance, or don't use milk or milk products, you may need a calcium supplement. If you have high calcium needs and a small appetite, you may need to consider supplements in combination with calcium-rich foods.

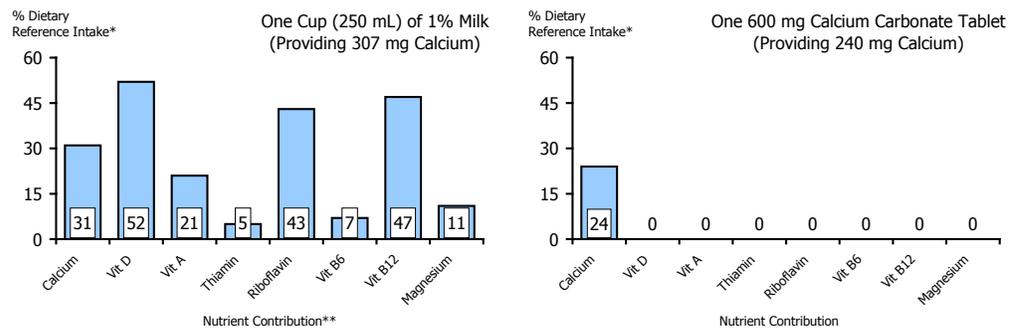
### Ideas For Action

1. Find out how much calcium you are getting from your diet. Order the Calcium Calculator™ from BC Dairy Association ([www.bcdairy.ca/store](http://www.bcdairy.ca/store)).
2. Find out which foods are calcium-rich. Try to improve your calcium intake with food before using a supplement. (The Calcium Calculator™ has a list of calcium-rich foods.)
3. If you need a supplement, you may wish to consult a pharmacist, Registered Dietitian (RD) or physician about the best supplement for you.

### Did You Know...

Foods are the best source of nutrients. Supplements cannot replace everything you get in food. Nutrients present in calcium-rich foods are important components of a balanced diet.

Milk and milk products are rich in protein, calcium, riboflavin and vitamin B12 — nutrients essential to good health. It is difficult to obtain your daily requirements of calcium and vitamin D without consuming milk or milk products.<sup>1</sup>



\* Based on Dietary Reference Intake for adult women aged 30

\*\* Based on Canadian Nutrient File, 2007b

Calcium is a marker for a good diet. Studies show that people who drink more milk not only get more calcium, but also get significantly more magnesium, potassium, zinc, iron, vitamin A, riboflavin and folate.<sup>2</sup> Dairy foods and milk are not only key calcium sources, but also foods associated with a “package of nutrients”. In addition, the higher intakes of iron and folate suggest that individuals who choose milk products make better food choices in general.

### Sources

- (1) Journal of the American College of Nutrition, Vol. 22, No. 5, 340-356 (2003).
- (2) Journal of the American Dietetic Association, Vol. 104, No. 6, 895-902 (2004).



## Concern: Is there a problem with calcium absorption from some foods?

### Response

Although some foods contain calcium-binding substances such as oxalates and phytates, calcium absorption from foods is not a problem if you eat a balanced and varied diet.

### Ideas For Action

1. If greens are significant calcium sources for you, be sure to rely on calcium-rich vegetables low in oxalates, such as broccoli, kale and bok choy or other mustard greens.
2. Don't worry about the oxalates in chocolate milk. There aren't enough oxalates to interfere with the much larger quantity of calcium.
3. Order the Calcium Calculator™ brochure from BC Dairy Association or use the online version to discover a variety of calcium-rich foods ([www.bcdairy.ca/store](http://www.bcdairy.ca/store)).

### Did You Know...

The calcium content of foods is generally more important than how much calcium is absorbed from these foods.<sup>1</sup>

Calcium absorption depends on many factors. The total amount of calcium in your diet and your calcium need are probably the most important factors in determining how much calcium you absorb from a food.

Calcium from many foods such as milk, cheese, yogurt, kale and tofu is well-absorbed. It is a challenge to meet calcium recommendations using green vegetables, legumes, nuts and seeds so it is especially important to rely on sources that contain well-absorbed calcium. Some substances in specific foods bind calcium and make it unavailable for absorption. Two common calcium-binding substances are oxalates (found in many green vegetables and chocolate) and phytates (found in unleavened grain products and beans). Phytates seem to be a problem only when whole grain cereals are a major part of the diet (i.e. not just for breakfast) and calcium intake is low.

## Concern: Is there a problem with calcium absorption from some foods?

Most researchers agree that the effect of calcium-binding substances is not a problem if you eat a variety of well-absorbed calcium-rich foods and meet the current calcium recommendations.

Vegetables high in oxalates	Calcium-rich vegetables low in oxalates	Foods high in phytates
Beet greens	Bok choy	Soy beans and soy isolates
Rhubarb	Broccoli	Whole grains
Chard	Mustard greens	Seeds
Spinach	Turnip greens	Nuts
Collard greens	Kale	Beans
Beans		Unleavened bread* (e.g. roti, chapati, paratha, tortilla, matzo)
		Wheat bran

\* Leavened bread does not present the same problem since yeast fermentation breaks down phytate.

### Source

- (1) National Academy of Sciences. Dietary reference intakes for calcium & vitamin D. Committee to Review Dietary Reference Intakes for Vitamin D and Calcium. Food and Nutrition Board, Institute of Medicine, 2010.

## Concern: Can I use soy beverages as an alternative to milk?

### Response

According to Health Canada, fortified soy beverages, although not identical to cow's milk, are a nutritionally adequate alternative. They are suitable beverages for those who cannot or do not drink milk.

Unfortified soy beverages are not nutritionally similar to milk and cannot be used as an alternative to milk. Soy beverages, whether fortified or not, are not suitable for infants under two years of age. Soy-based formulas, in certain circumstances, may be used with infants if advised by your doctor.

### Ideas For Action

1. Breastfeeding is the best way to feed your baby. If you are not breastfeeding, use a commercial, iron-fortified cow's milk infant formula.
2. Offer whole milk to children between the age of one and two years. Soy beverages are not an alternative choice for infants under two years of age.
3. After age two, if you can't drink or don't use milk, fortified soy beverages can be an alternative.

### Did You Know...

Fortification of soy beverages is optional. According to the Food and Drugs Act,<sup>1</sup> processors may choose to manufacture soy beverages without any fortification. If they choose to fortify, the level of fortification must be equivalent to the level of these nutrients found in milk. There are two options for fortification:

- To fortify with 6 nutrients — processors must add vitamin A, vitamin D, vitamin B12, riboflavin, calcium and zinc.
- To fortify with 15 nutrients — processors must add vitamin A, vitamin D, vitamin B12, riboflavin, calcium, zinc, vitamin B6, vitamin C, thiamin, niacin, folacin, pantothenic acid, phosphorous, potassium and magnesium.

Be sure to read the labels carefully to check if the product you are purchasing is fortified. Although not identical in terms of micronutrients, fortified soy beverages can be used as an alternative to milk by adults and children over two years of age.

Unfortified soy beverages may be used as an alternative to meat in the diet, not milk.

## Concern: Can I use soy beverages as an alternative to milk?

There are no minimum requirements for total fat or protein in soy beverages. Dietitians of Canada, Health Canada and the Canadian Paediatric Association advise that soy beverages, whether or not they are fortified, should not be given to children under the age of two.<sup>2</sup>

Soy formula is not the same as soy beverages. Soy formula is appropriately used with infants on vegan diets or infants with galactosemia. The use of soy formula for infants with proven milk allergy is controversial, since many infants allergic to cow's milk will also be allergic to soy protein. A casein-hydrolysate formula is the first choice for infants with proven allergy. Soy formula does not prevent or manage colic, nor does it prevent allergy in healthy or high-risk infants.

### Sources

- (1) Health Canada. Food and Drugs Act and Regulations, 1981 (Amendment November 20, 1997).
- (2) Nutrition for Healthy Term Infants. Statement of the Joint Working Group: Canadian Paediatric Society, Dietitians of Canada and Health Canada, 2005.

## Concern: What can I do if I don't like milk?

### Response

If you don't like plain milk, try flavouring it in various ways or use it as an ingredient in cooking. Also, keep in mind all the other foods in the Milk & Alternatives food group that you can choose, such as cheese, yogurt, cottage cheese and fortified soy beverages.

### Ideas For Action

1. Try adding various flavourings to your milk (such as chocolate, strawberry, vanilla, almond, or malt) or buy flavoured milks. They have all the nutrition of plain milk.
2. Try steamed almond milk, caffè latte, mocha or other steamed milk beverages.
3. Try various smoothie recipes.
4. Try cooking with milk. Use milk as a base for soups, sauces and puddings.
5. Sprinkle cheese on casseroles, soups and cooked vegetables.
6. Enjoy yogurt or cottage cheese with fresh fruit or vegetables.
7. Include skim milk powder\* in your cooking and baking:
  - Add it to cooked cereal (2 – 4 Tbsp or 30 – 60 mL per serving after the water and cereal are combined).
  - Use it in hamburger patties, macaroni & cheese, and other casseroles (2 Tbsp per serving).
  - Add it to mashed potatoes and cream soups (2 Tbsp or 30 mL per serving), scrambled eggs and omelettes (½ Tbsp or 7 mL per egg), cocoa (6 Tbsp or 90 mL per cup of water), sauces, gravies and breading mixtures.

\* Skim milk powder increases the food nutrient content considerably. One-third cup of skim milk powder is approximately equal in food value to a glass of fluid milk. Be sure that vitamins A and D have been added to the milk powder you buy.

### Did You Know...

Milk products are rich in protein, calcium, riboflavin, vitamin B12 — nutrients essential to good health. It is difficult to obtain your daily requirement of calcium and riboflavin without consuming milk or milk products.<sup>1</sup>

Seasonal Fruit Frost		Banana Smoothie	
½ cup (125 mL)	milk	1 cup (250 mL)	milk
½ cup (125 mL)	fruit (peaches, berries, melons, etc.)	2 Tbsp (30 mL)	plain yogurt
½ cup (125 mL)	fruit juice	1	banana
2 scoops	yogurt (plain or flavoured)	1 tsp (5 mL)	honey (optional)
Put all ingredients in a blender. Blend on low speed for 30 seconds or until smooth.			

### Source

(1) Journal of the American College of Nutrition, Vol. 22, No. 5, 340-356 (2003).



## Concern: How can I get all the vitamin D I need?

### Response

Milk is an excellent source of vitamin D, as are fatty fish like salmon or tuna. To get the recommended amount of vitamin D, drink milk or eat fatty fish every day. If you are unable to meet your vitamin D needs through food, consider taking a vitamin D supplement.

### Ideas For Action

1. Children and adults up to age 70 need 600 IU of vitamin D each day.<sup>1</sup>  
To help meet these needs, drink 2 cups (500 mL) of milk each day, or eat 75 grams (2.5 oz) of salmon, tuna or sardines every day.
2. Use a vitamin D supplement when you can't get enough from your diet. Health Canada recommends that everyone over the age of 50 take a daily vitamin D supplement of 10 µg (400 IU).<sup>2</sup>
3. Try cooking with milk. Use milk as a base for soups, sauces and puddings. Cooking does not change the vitamin D content of milk.

### Did You Know...

According to the recommendations released in November 2010:<sup>1</sup>

- Infants over one year old, children, teenagers and adults up to the age of 70 need 15 µg or 600 IU of vitamin D per day. These recommendations are the same for pregnant and lactating women.
- Adults age 71 or older need 20 µg or 800 IU of Vitamin D per day.

The new upper level intake for vitamin D is 2500 IU per day for children 1-3 years old, 3000 for children 4-8 years old and 4000 for children 9-13 years old, teens and adults.<sup>1</sup>

Vitamin D helps our bodies absorb calcium from foods. As a result, vitamin D plays an important role in promoting bone growth and maintenance.<sup>1</sup> Many researchers believe that vitamin D, at adequate levels, can prevent some types of cancer such as colorectal and breast cancer.<sup>3,4</sup>

At our latitude in Canada, we cannot make vitamin D from the sun for about half of the year (October to March). As a result, a daily dietary source of vitamin D and/or supplement are important. There are only a few commonly consumed foods naturally rich in vitamin D. These include cod liver oil, salmon, mackerel, and tuna. You can also get smaller amounts of vitamin D from egg yolks, liver and margarine. According to food law<sup>5</sup>, milk in Canada is fortified with vitamin D so that 1 cup (250 mL) provides 2.5 µg or 100 IU. Yogurt, cheese, buttermilk and other milk products do not usually contain vitamin D, unless they're made with fluid milk fortified with vitamin D.

## Concern: How can I get all the vitamin D I need?

Given the increased requirements for vitamin D and the fact that very few food sources have vitamin D, we may need to rely on vitamin D supplements to make sure we meet the new recommendations. Health Canada recommends everyone over the age of 50 take a daily vitamin D supplement of 400 IU.<sup>2</sup> Exclusively breastfed infants also need a daily supplement of vitamin D. Formula-fed infants usually consume the recommended amount of vitamin D since infant formulas are fortified with vitamin D.<sup>6</sup>

If you would like to determine how much vitamin D you are getting from the foods you eat and whether you need to take vitamin D supplements, talk to your doctor or to a Registered Dietitian.

40 IU of vitamin D is equivalent to 1 microgram (µg) of vitamin D.<sup>1</sup>

Food	Amount	VitaminD(IU)
Salmon, Sockeye – red (canned with bones and liquid)	75 g (2 ½ oz)	597
Salmon, Chinook/Spring/Sockeye (baked or broiled)	75 g (2 ½ oz)	387–699
Salmon, Pink (canned with bones and liquid)	75 g (2 ½ oz)	351
Salmon, Coho (baked or broiled)	75 g (2 ½ oz)	339-392
Salmon, Wild Atlantic (baked or broiled)	75 g (2 ½ oz)	246
Salmon, Farmed Atlantic (baked or broiled)	75 g (2 ½ oz)	204
Sardines, Atlantic (canned with oil/drained with bones)	75 g (2 ½ oz)	192
Herring (baked or broiled)	75 g (2 ½ oz)	161
Sardines, Pacific (canned in tomato sauce, drained with bones)	75 g (2 ½ oz)	144
Halibut, Atlantic or Pacific (baked or broiled)	75 g (2 ½ oz)	144
Tuna, Yellowfin, Albacore, Ahi (baked or broiled)	75 g (2 ½ oz)	105
*Milk, 2%	1 cup (250 mL)	103
* Fortified soy/rice beverage	1 cup (250 mL)	88
Mackerel, Atlantic (baked or broiled)	75 g (2 ½ oz)	78
Margarine	1 Tbsp (15 mL)	76
Tuna (white, canned in water/drained, unsalted)	75 g (2 ½ oz)	60
Egg, boiled, hard-cooked	2 large	52
*Orange Juice with added calcium & vitamin D	1 cup (250 mL)	50
Tuna (light, canned in water/drained, unsalted)	75 g (2 ½ oz)	36
Liver, beef, pan-fried	75 g (2 ½ oz)	36

\* Vitamin D is added to these beverages while vitamin D is naturally occurring in the other foods listed. All vitamin D values are based on Canadian Nutrient File version 2010, accessed December 7, 2010.

## Concern: How can I get all the vitamin D I need?

### Sources

- (1) National Academy of Sciences. Dietary Reference Intakes for Calcium and Vitamin D, 2010.
- (2) Health Canada. Eating Well with Canada's Food Guide, 2007. ([www.healthcanada.ca/goodguide](http://www.healthcanada.ca/goodguide))
- (3) The urgent need to recommend an intake of vitamin D that is effective. American Journal of Clinical Nutrition, Vol.85, No. 3, 649-650, March 2007.
- (4) Vitamin D and Sunlight: Strategies for Cancer Prevention and Other Health Benefits. Clinical Journal of the American Society of Nephrology, Vol. 3, No. 5, 1548-1554, September 2008.
- (5) Health Canada. Food and Drugs Act and Regulations, 1981.
- (6) Health Canada. Vitamin D Supplementation for Breastfed Infants, 2004. ([http://www.hc-sc.gc.ca/fn-an/alt\\_formats/hpfb-dgpsa/pdf/nutrition/vita\\_d\\_supp\\_e.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/nutrition/vita_d_supp_e.pdf) )



## Concern: Does milk cause mucus?

### Response

Studies have shown that drinking milk and eating milk products does not cause mucus production.<sup>1, 2</sup> However, higher-fat milks and soy beverages may create the illusion that there is more mucus in the mouth due to their full-bodied texture.<sup>3</sup> Drinking 1% or skim milk may reduce this perception.

### Ideas For Action

1. Drink 1% or skim milk.
2. Make sure you get enough fluid every day. Adults need about 9 to 13 cups (2.2 – 3 L) of fluid per day. Water, milk, yogurt, juice and soup are a few of the choices that count for fluid.

### Did You Know...

Studies have shown that drinking cow's milk does not stimulate the production of respiratory mucus or obstruct bronchial airflow. In one study, 60 volunteers were exposed to a respiratory virus. They had to record their daily respiratory symptoms for 10 days. Nasal secretion weights and milk and dairy product intake were also recorded.<sup>1</sup> No statistically significant association was found between milk intake and symptoms of mucus production or cough.<sup>1, 2</sup> Other studies have demonstrated similar results.<sup>3, 4, 5</sup> People who complain about milk and mucus may not consume enough fluids during the course of the day. This is especially true of older people. It is recommended that we all get 9 to 13 cups (2.2 – 3 L) of fluid a day. Water, fruit juice, milk, yogurt and soup are a few choices that count for fluid.

### Sources

- (1) Appetite, Vol. 20, 53-60 (1993).
- (2) Journal of American College of Nutrition, Vol. 24, 547S-555S (2005).
- (3) Am Rev Respir Dis, Vol. 121, 352-356 (1990).
- (4) Ann Allergy Asthma Immun, Vol. 79, 62-64 (1997).
- (5) Appetite, Vol. 20, 61-70, (1993).