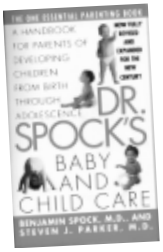
Cow's Milk

Nature's most perfect food ... for calves

"I no longer recommend dairy products after the age of two years... Of course, there was a time when cow's milk was considered very desirable. But research, along with clinical experience, has forced doctors and nutritionists to rethink this recommendation."



– Dr. Spock's Baby and Child Care, 1998 edition. P 331.

Spock cites clear advantages of calcium from non-dairy sources. The high fat content and *lack* of certain vitamins, iron, complex carbohydrates and fibre in dairy products are just a few of the reasons he lists for staying clear of them.

"The African Bantu woman provides an excellent example of good health. Her diet is free of milk and still provides 250–400 mg. of calcium from plant sources, which is half the amount consumed by Western women. Bantu women commonly have 10 babies during their life and breast feed each of them for about ten months. But even with this huge calcium drain and relatively low calcium intake, osteoporosis is relatively unknown among these women."

– John McDougall, M.D.

Trends

Canada has one of the highest rates of dairy consumption in the world (with sales of $8.5 billion in 1999), but maybe not for long. Milk consumption has slipped to 87 litres per person per year from 103 litres in 1980. Consumption of butter has fallen to 3.27 kilograms a year from a high of eight, 36 years ago.

Source: www.dairyinfo.agr.ca

Human beings are the only species (other than pet cats) to consume milk past childhood. We are also the only species to consume the milk of another species. Yet, at about the age of four, the vast majority of us begin to lose the ability to digest lactose, the carbohydrate found in milk. This results in a condition known as lactose intolerance. This condition is the body's inability to synthesize the digestive enzyme lactase, resulting in intolerance to lactose, the sugar in milk. Lactose intolerance is a reality for 75% of the world population. In Canada, while many adult Caucasians have the ability to digest lactose, a large number of First Nation People, Asians, Africans and Jewish people are lactose deficient.[1]

While it is true that some individuals with lactose intolerance can tolerate up to one cup of milk per day, these individuals are rarely able to consume the 2–4 servings per day recommended by Canada's Food Guide.

Milk fat

Whole cow's milk is a high-fat fluid, designed by nature to turn a 60–70 lb (27–30 kg) calf into a 300–600 lb (135–275 kg) cow in one year.

High-fat dairy products such as cheese, butter and cream contain saturated fat. Saturated fat is the most important dietary factor involved in raising blood cholesterol levels. The consumption of high-fat dairy products has also been found to cause atherosclerosis, heart disease and stroke. The highest death rate from heart disease in the world is found in Finland, a country with one of the highest rates of dairy product consumption.[2]

Low-fat milk and cheese products are still significantly high in total fat, saturated fat and cholesterol. For example, 2% milk has become much more popular than homo milk, yet it still derives one third of its total calories from fat. Skim milk mozzarella with approximately 15% milk-fat is considered a low-fat cheese, yet a 1-ounce sliced contains 5 grams of fat, totaling 56% calories from fat! So don't be fooled by the "skim milk" label.

The wide range of skimmed milk products available in grocery stores reflects health concerns over high-fat dairy products. But for many Canadians, low-fat dairy products are still an unacceptable alternative.

Low-fat dairy products linked to hightened allergic responses

While low-fat dairy products are in many ways a vast improvement over their high-fat counter-parts, they can still present major health problems. Low-fat dairy products are higher in protein content than high-fat dairy products. High protein has commonly been thought of as a health advantage, yet this may not be the case for many individuals. Dairy products are one of the leading causes of food allergies and food sensitivities causing allergic responses in people of all ages, especially infants and young children. The high protein content of low-fat dairy products is actually more allergenic than dairy products with a high-fat content.[3] It is estimated that 1–7% of infants are allergic to cow's milk protein. Infants who are allergic to cow's milk also have a greater likelihood to develop allergies to other foods.[4] Many studies have shown allergies to dairy products to cause irritability, restlessness, hyperactivity, muscle pain, mental depression, abdominal pain, cramps or bloating, gas, diarrhea, bad breath, headaches, lack of energy, constipation, poor appetite, malabsorption of nutrients, nasal stuffiness, runny nose sinusitis, asthma, shortness of breath, rashes, eczema, and hives. [5]

Osteoporosis & the milk connection

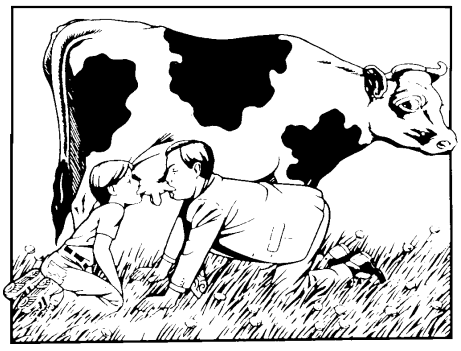
North America has one of the highest consumptions of dairy products, and also the highest incidence of osteoporosis. The latter is a disease of brittle bones that have formed through loss of calcium. We are bombarded with messages from the dairy bureau that we must consume copious quantities of dairy products to ward off this dreaded disease later in life. But that's not the whole story.

There are three main factors that affect calcium absorption, retention and calcium loss — calcium intake is only one small piece of the puzzle. Regardless of how much calcium you take in, the amount your body can actually absorb and retain matters more.

Too much protein leaches calcium from the body. North American diets are commonly protein-rich from meat and dairy consumption. The high protein content of meat and milk products can actually leave you with a negative calcium balance. (You lose more than you take in.) The digestion of animal protein creates an acidic environment in the body. This causes an increase in calcium excretion.[6] Calcium is alkaline and is used by the body to neutralize the acid. Years of this pattern may result in osteoporosis later in life.

Too much salt in the diet also affects the body's calcium balance. North Americans commonly rely on fast food, convenience foods and processed foods that all contain significant amounts of salt. High salt intakes significantly increase calcium losses.[7]

Finally, exercise is important. Your bones will stay strong the more they are used. Outdoor exercise has the added advantage of allowing you to get some vitamin D from the sun. This vitamin is essential for calcium absorption (see our factsheet, "Key Nutrients" for more information).



Milk is not a natural!
Human beings are the only species (other than pet cats) to drink the milk of another species, and the only species to drink milk beyond infancy

Isn't yogurt a health food?

Yogurt has been hailed as a 'health food' because of its live bacterial enzyme cultures.

Whatever benefit humans may derive from yogurt cultures, consumers should be aware that these live bacterial enzymes are not available from the prepackaged frozen yogurts or the soft-serve frozen type yogurts. A research study analyzing samples from leading frozen yogurt producers reports that the live count of the desirable bacterial cultures in these products is virtually nil. Many commercial frozen yogurts are high in fat, some as high in fat as ice cream. As far as the low-fat versions go, they are usually high in sugar. An average non-fat serving of frozen yogurt contains approximately seven teaspoons of sugar.

Even plain yogurt with no sugar added has the high protein content and related problems mentioned above.

Iron deficiency in infants

Frank Oski, Director of Pediatrics at John Hopkins University of Medicine and Physician-in-Chief of Johns Hopkins Children's Centre has this to say about cow's milk: "Drinking large quantities of cow's milk has long been recognized to produce iron-deficiency anemia in infants. It has been assumed that the anemia was solely the result of children not getting enough iron in their diet. Cow's milk contains less than 1 mg of iron per quart. Very little of this iron is absorbed from the intestinal tract because other constituents of the milk bind with the iron... It has been estimated that an infant of one year of age would have to drink 24 quarts of milk per day to meet his iron requirements. Many infants drink 1-2 quarts of milk per day. This tends to satisfy their hunger and they are left with very little appetite for the necessary iron-containing foods."[8]

Dairy products suspected link to ovarian cancer

Ovarian cancer is more common in Northern Europe than in Asian populations and the consumption of milk products may be the reason. Studies by Cramer et al. have found that there was a higher risk of ovarian cancer in women who consume more lactose (sugar in milk) than those who were lactose intolerant.[9]

Cow's milk & diabetes in children

Cumulative evidence to date seems to link cow's milk to diabetes in children. A milk protein may cause an immune reaction in diabetic children. It is believed that a particular milk protein causes the destruction of the body's insulin-producing cells. Breast-fed infants who are not fed cow's milk seem to have a measure of protection against diabetes. The late Benjamin Spock, M.D. and Frank Oski, M.D. of Johns Hopkins University and others suggest that cow's milk could increase the risk of diabetes and iron deficiency anemia. American Academy of Pediatrics also concluded that exposure to cow's milk protein may indeed be an important factor in the development of diabetes and have suggested that avoiding cow's milk may delay or prevent diabetes in susceptible individuals.[10]

Cow's lunch menu

Canadians who regard milk as "the perfect food" rarely think about milk as a commercial product – prone to the hazards of mass-production.

John Robbins, author of *May All Be Fed*, puts it so well; "The modern-day Bessie is now bred, fed, medicated, inseminated, and manipulated for a single purpose – maximum milk production at a minimum cost." These unnatural conditions make the modern dairy cow highly prone to stress and disease.

Antibiotics, mostly common penicillin, are given to cows for treatment of mastitis (an inflammation of the udders). Cows are not supposed to be milked for 48 hours after receiving penicillin. When this precaution is not followed the penicillin appears in the milk in small amounts.[11]

Recently the Food and Drug Administration in the United States has approved the use of a synthetic growth hormone, rBST (recombinant bovine stomatotropin). This genetically engineered hormone has no therapeutic value but to increase the production of milk. Already under stress from the existing high production demands, dairy cows may now suffer more frequent bouts of mastitis. Cows treated with rBST may result in the administering of more antibiotics, the residue of which may end up in our milk and meat supply.

Women & dairy

According to gynecologist, Christiane Northrum, "Stopping dairy food often improves menstrual cramps, endometriosis pain, allergies, sinusitis and even recurrent vaginitis." Other problems associated with dairy food may include: benign breast conditions, chronic vaginal discharge, acne, fibroids, and chronic intestinal upset. "I can't help but think that there might be some correlation between overstimulation of the cow's mammary glands and subsequent overstimulation of our own, resulting in benign breast conditions."[12]

Alternatives to dairy products

Foods rich in calcium include firm tofu made with calcium, deep green vegetables such as kale, broccoli and bok choy, almonds, tahini, figs and black beans.

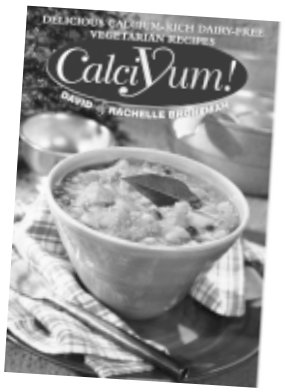
There are many Canadians who can not or do not consume the recommended 2-4 servings of dairy foods per day. Canada's Food Guide would be more effective if it included dairy alternatives.

Health benefits of soy milk

Soymilk is loaded with phytochemicals: particularly isoflavones, genistein and daidzein, which studies are now finding reduce the risk of cancer.[13] Soy milk on grocery store shelves today is also fortified with calcium, B_{12} and other nutrients that make it as nutritious as its cow's milk counterpart, but without the hazards of excessive protein, hormones or antibiotics.

Soy protein consumption has been shown to reduce the levels of cholesterol and lessen the incidences of atherosclerosis.[14] Soy has been effective in diabetes management by controlling blood sugar levels.[15] There is evidence to suggest that soy isoflavones assist in the prevention of osteoporosis by reducing calcium loss from bones.[16] The isoflavones contained in soy mimic estrogen and can reduce the effects of menopause symptoms.[17]

Reviewed by Bonnie Kumer RD, a registered dietitian specializing in vegetarian nutrition.



Calcium-rich vegetarian recipes

There are numerous excellent plant-based sources of calcium that are readily available, delicious and nutritious. Two books that can help you get started are: **CalciYum!** by David and Rachelle Bronfman (Bromedia Inc., 1998) and **The Uncheese Cookbook** by Joanne Stepaniak (The Book Publishing Company, 1994). Both titles are available from the Toronto Vegetarian Association and at major bookstores.

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Toronto Vegetarian Association
www.veg.ca
E-mail: tva@veg.ca
(416) 544-9800
Fax: (416) 544-9094
Charitable # 11926 7532RR

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