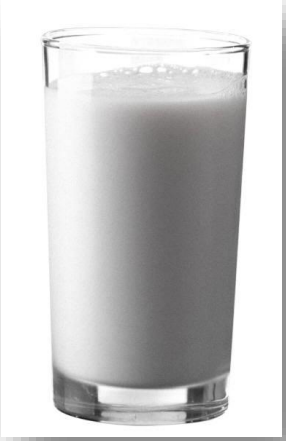
Dairy – You Decide



Dairy always sparks a lot of controversy. Some say that pasteurized, low-fat dairy is healthy and should be consumed two to three times daily[1], while others claim that raw, full-fat dairy is a health food[2]. Many others insist on no dairy at all[3]. Around 60% of the entire world is somewhat lactose intolerant. Below is an overview of some factors to consider when deciding whether or not dairy is right for you.

Type	Pro	Con
Non-organic	• may be treated with antibiotics to kill potentially harmful bacteria • high in calcium, magnesium, protein, and other nutrients essential for bone health • high in protein and therefore very satiating	• may contain harmful contaminants from antibiotics, growth hormones, and pesticides • cow feed may be genetically modified • high levels of retinol may weaken bones • may encourage prostate and ovarian cancer
Organic	• free of synthetic hormones, antibiotics, chemical fertilizers, pesticides, and GMOs • cows must eat grass and have four months of pasture access[4] • studies show higher vitamin E, omega-3, antioxidant, and beta-carotene levels	• still contains naturally-occurring growth hormones • some types undergo UHT treatment (heating to 280° F) to kill bacteria, some of which may be beneficial[5] • UHT treatment causes a different flavor due to lactose caramelization
Processed*	• pasteurization and irradiation kill pathogens and bacteria that may be harmful[6] • homogenization prevents cream from rising to the top by forcing milk fat through mesh to break down the globules • fortified with vitamins A and D which may help the absorption of calcium	• pasteurization and irradiation kill potentially beneficial bacteria • homogenization ruptures fat molecules, causing the milk to turn rancid • high levels of retinol can weaken bones[7]

[1] MyPyramid.gov – Inside The Pyramid – How much food from the milk group is needed daily? February 3, 2011. Available at: http://www.mypyramid.gov/pyramid/milk_amount.aspx#.
[2] FAQ – Dairy. The Weston A. Price Foundation.
[3] The *New* Four Food Groups. Physicians Committee for Responsible Medicine. Available at: http://www.pcrm.org/health/veginfo/vsk/4foodgroups.pdf.
[4] 4 Release No. 0059.10. United States Department of Agriculture. February 10, 2010.
[5] The Dangers of Raw Milk: Unpasteurized Milk Can Pose a Serious Health Risk US Food and Drug Administration. May 5, 2011.
[6] Why Does Organic Milk Last So Much Longer Than Regular Milk? Scientific American. June 6, 2008.
[7] Calcium and Milk – What's Best for Your Bones and Health? The Nutrition Source. Harvard School of Public Health. Available at: http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/calcium-full-story/index.html.

Raw	• without any methods to kill bacteria, may retain beneficial bacteria • tastes fresher • contains enzymes such as lipase, which may aid in digestion • contains original vitamins and minerals	• may contain pathogens and bacteria • must be consumed within 1 week of bottling • prohibited in many states
Grain & Soy Fed	• less time and space is needed for grazing, allowing higher quantities to be produced quickly	• high in inflammatory omega-6 fatty acids • grain and soy creates digestive problems in cows • lower in vitamin D3
Grass Fed	• contains five times as much CLA, shown to protect the heart and aid weight loss • high in anti-inflammatory omega-3 fatty acids[8] • cows are grazing animals, and grass is their natural diet • higher in vitamin D3	• requires more space and time for pasture-grazing
Low-Fat & Skim**	• lower in calories and fat, especially saturated fat, which contributes to high cholesterol[1]	• some claim low-fat dairy products can deplete the body of vitamins A and D
Full-Fat	• fat may aid in digestion of fat-soluble vitamins	• high in saturated fat, which may contribute to high cholesterol • high in calories, may promote weight gain

** Processed milk may be pasteurized, irradiated, or homogenized before sale. Legally, milk in the U.S. must be pasteurized. Raw milk is not pasteurized, irradiated, or homogenized.*
***Low-fat and skim milk are produced by separating the less-dense milk fat from the watery parts through the process of centrifugation.*

[8] Dhiman, T. R., G. R. Anand, *et al.* Conjugated Linoleic Acid Content of Milk from Cows Fed Different Diets. 1999. J Dairy Sci 82(10): 2146-56. Available at: http://www.journalofdairyscience.org/article/S0022-0302%2899%2975458-5/abstract.

Natural Diet
Many consider cow's milk to be one of the most ideal foods nature provides, particularly when prepared in traditional ways, such as culturing. Others question the idea of drinking the milk of another species. Humans, like other mammals, produce milk for a specific purpose – to feed their own offspring until they are ready for solid food. Milk from a cow is designed to make a newborn calf grow rapidly in only a few weeks, causing many to believe that it's not ideal food for humans.

Animal Treatment
Some small farmers treat their cows humanely and allow a more natural relationship between mother cow and calf. However, large industrial milk factories often subject their cows to filthy living conditions. Animal mistreatment at factory farms is well documented. Some also question the ethics of impregnating a cow for milk production and taking away her calf shortly after birth (often for slaughter to sell veal) in order to maximize economic profits.

Sustainability
Animal agriculture is a major contributor to global warming and pollution. In addition, vast amounts of natural resources are used for dairy production. Globally, agriculture accounts for 60% of nitrous oxide and 50% of methane emissions[9]. The dairy sector contributes 4% to the total greenhouse gases worldwide[10]. Some argue that we could feed many more people at lower costs if resources were used to grow crops for human consumption, rather than for meat and dairy production. Others believe that in some cases the benefits outweigh the drawbacks, which could be mitigated if the grazing land and animal waste is carefully managed. By seeking out and purchasing from small, local farms, you can help support the farms that are producing dairy responsibly.

[9] Mitigating the Greenhouse Gas Balance of Ruminant Production Systems Through Carbon Sequestration in Grasslands. Food and Agriculture Organization. Vol 11-2010; p 121.
[12] Greenhouse Gas Emissions from the Dairy Sector: A Life Cycle Assessment. Food and Agriculture Organization of the United Nations. 2010.