



FACT SHEET: The Negative Health Implications of Consuming Dairy

Allergies and Intolerances:

- As many as 1 in 13 adults have an allergy to cows' milk proteins, causing skin, respiratory, and gastrointestinal problems; and in some cases anaphylaxis. Cows' milk allergies are even more common in children.⁽¹⁾
 - Cows' milk allergy is often the first food allergy to develop in a young infant and often precedes the development of other food allergies, especially to egg and peanut.⁽¹⁾
 - Cows' milk allergy affects as many as 20% of patients with symptoms suggestive of lactose intolerance.⁽¹⁾
 - Symptoms can be immediate or delayed.⁽¹⁾
 - Delayed allergic reactions can lead to chronic conditions such as atopic dermatitis, GERD, colic, allergic eosinophilic oesophagitis, asthma, and more.⁽¹⁾
- 65% of the global population is lactose intolerant, with higher rates in non-white groups.⁽²⁾
 - Latinx: 50-70%
 - Black: 60-80%
 - Asian: 90-95%
 - Native American: 80-90%
 - Ashkenazi Jews: 60-80%⁽²¹⁾
- Lactose intolerance symptoms: abdominal pain, bloating, gas, nausea, and diarrhea. Symptoms occur within 30 minutes to 2 hours of consuming lactose-containing dairy products.
 - Lactose intolerance is often misdiagnosed as irritable bowel syndrome (IBS), small intestinal bacterial overgrowth (SIBO), Crohn's disease, ulcerative colitis, bowel polyp, diverticulosis, celiac disease, viral and bacterial infections, or parasitic diseases such as giardiasis.⁽³⁾

Cancer:

- 60-80% of our estrogen comes from dairy which can increase the risk of developing cancer, especially breast and prostate cancers.⁽⁴⁾
- Drinking cows' milk can increase the risk of prostate cancer threefold.⁽⁵⁾
- Drinking cows' milk can increase the risk of ovarian cancer threefold.⁽⁴⁾

Bones:

- Women drinking 3+ glasses per day had a 60% greater hip fracture rate than those drinking less than 1 glass a day.⁽⁶⁾
- A 2018 meta-analysis involving over 250,000 male and female subjects found no link between drinking cows' milk and a reduced risk of bone fractures.⁽⁷⁾
- Researchers suggest the milk sugar D-galactose promotes oxidative stress and inflammation, which is linked to loss of muscle and bone.⁽⁶⁾
- The casein protein in milk causes a metabolic acidosis that results in calcium being leached from our bones to neutralize the body. Over a lifetime, this can result in severe calcium loss and osteoporosis.⁽⁸⁾
- Some researchers postulate that the high amounts of phosphorus in cows' milk may actually lead to calcium resorption from the bones.⁽⁹⁾

Hormones:

- Cows' milk contains 15 naturally occurring sex hormones, including estrogen, progesterone, and testosterone.⁽¹⁰⁾
- Dairy cows today are usually fed a combination of grass and concentrates, allowing them to lactate during the latter half of pregnancy. During this period, estrogen levels are highly elevated.⁽¹¹⁾
 - Just 30-60 minutes after drinking milk, estrogen levels can increase by 26%.⁽¹¹⁾
 - Excess estrogen can increase the risk of developing breast and prostate cancers and is associated with fatigue, and weight gain.^(5,12)
- Cows' milk increases our bodies' circulating levels of insulin-like growth factor (IGF-1) which can lead to tumor promotion, acne, and type 2 diabetes.^(13,14)
- Cows' milk has high levels of cortisol,⁽¹⁵⁾ which has been linked to stored body fat and lowered muscle mass.^(16,17)
- Cows' milk is a source of environmental toxins, known as POPs, which mimic our estrogen hormones, bind to the receptors and cause hormonal imbalances in men, women, and children.⁽¹⁸⁾

Misc:

- Cows' milk is comprised of inflammatory components. Chronic inflammation has been shown to be at the root of many chronic diseases.
-
- Cows' milk can exacerbate asthma symptoms and increases mucus production.^(19,20)
- Cows' milk has both saturated and trans fats which can increase the risk of cardiovascular disease.⁽²¹⁾

References:

1. El-Agamy, Elsayed. The challenge of cow milk protein allergy. *Small Ruminant Research*. 2007; 68:64-72. doi: 10.1016/j.smallrumres.2006.09.016
2. NIH. [Lactose Intolerance Statistics](#). NIH website. Accessed February 2020.
3. Swagerty DL Jr, Walling AD, Klein RM. Lactose intolerance. *Am Fam Physician*. 2002 May 1;65(9):1845-50. Review. Erratum in: *Am Fam Physician*. 2003 Mar 15;67(6):1195.
4. Torfadottir JE, Steingrimsdottir L, Mucci L, *et al*. Milk intake in early life and risk of advanced prostate cancer. *Am J Epidemiol*. 2012;175(2):144–153. doi:10.1093/aje/kwr289
5. Ganmaa D, Sato A. The possible role of female sex hormones in milk from pregnant cows in the development of breast, ovarian and corpus uteri cancers. *Med Hypotheses*. 2005; 65(6):1028-37.
6. Michaëlsson K, Wolk A, Langenskiöld S, *et al*. Milk intake and risk of mortality and fractures in women and men: cohort studies. *BMJ*. 2014;349:g6015. doi:10.1136/bmj.g6015
7. Trajanoska Katerina, Morris John A, Oei Ling, *et al*. Assessment of the genetic and clinical determinants of fracture risk: genome wide association and mendelian randomisation study. *BMJ*. 2018; 362 :k3225
8. Campbell, T. Colin. The China Study: The Most Comprehensive Study of Nutrition Ever Conducted And the Startling Implications for Diet, Weight Loss, And Long-term Health. United States, BenBella Books, Incorporated, 2006.
9. Mahdi AA, Brown RB, Razzaque MS. Osteoporosis in Populations with High Calcium Intake: Does Phosphate Toxicity Explain the Paradox? *Ind J Clin Biochem*. 2015; 30:365. doi.org/10.1007/s12291-015-0524-y
10. Farlow DW, Xu X, Veenstra TD. Quantitative measurement of endogenous estrogen metabolites, risk-factors for development of breast cancer, in commercial milk products by LC-MS/MS. *J Chromatogr B Analyt Technol Biomed Life Sci*. 2009 May; 877(13):1327-34. doi: 10.1016/j.jchromb.2009.01.032.
11. Maruyama K, Oshima T, Ohyama K. Exposure to exogenous estrogen through intake of commercial milk produced from pregnant cows. *Pediatr Int*. 2010 Feb;52(1):33-8. doi: 10.1111/j.1442-200X.2009.02890.x
12. Ganmaa D, Wang PY, Qin LQ, Hoshi K, Sato A. Is milk responsible for male reproductive disorders? *Med Hypotheses*. 2001; 57(4):510-4.
13. Melnik BC, John SM, Schmitz G. Over-stimulation of insulin/IGF-1 signaling by western diet may promote diseases of civilization: lessons learnt from laron syndrome. *Nutr Metab (Lond)*. 2011;8:41. doi:10.1186/1743-7075-8-41
14. Melnik B. Milk consumption: aggravating factor of acne and promoter of chronic diseases of Western societies. *J Dtsch Dermatol Ges*. 2009 Apr;7(4):364-70. Doi: 10.1111/j.1610-0387.2009.07019.x.

15. Malekinejad H, Rezabakhsh A. Hormones in Dairy Foods and Their Impact on Public Health - A Narrative Review Article. *Iran J Public Health*. 2015; 44(6):742–758.
16. Björntorp P. Do stress reactions cause abdominal obesity and comorbidities? *Obes Rev*. 2001; 2(2):73-86.
17. Schorr M, Lawson EA, Dichtel LE, Klibanski A, Miller KK. Cortisol Measures Across the Weight Spectrum. *J Clin Endocrinol Metab*. 2015;100(9):3313–3321. doi:10.1210/JC.2015-2078
18. Vogt R, Bennett D, Cassady D, Frost J, Ritz B, Hertz-Picciotto I. Cancer and non-cancer health effects from food contaminant exposures for children and adults in California: a risk assessment. *Environ Health*. 2012;11:83. doi:10.1186/1476-069X-11-83
19. Frosh A, Cruz C, Wellsted D, Stephens J. Effect of a dairy diet on nasopharyngeal mucus secretion. *Laryngoscope*. 2019 Jan;129(1):13-17. doi:10.1002/lary.27287.
20. Bartley, Jamie and Susan Read McGlashan. Does milk increase mucus production? *Medical hypotheses*. 2010; 74(4):732-4. doi:10.1016/j.mehy.2009.10.044
21. Swagerty DL, Walling AD, and Klein RM. Lactose Intolerance. *American Family Physician*. 2002; 65:1845-1850,1855-1856
22. Brouwer IA, Wanders AJ, Katan MB. Effect of animal and industrial trans fatty acids on HDL and LDL cholesterol levels in humans--a quantitative review. *PLoS One*. 2010;5(3):e9434. doi:10.1371/journal.pone.0009434. [published correction appears in *PLoS One*. 2010;5(10) doi: 10.1371/annotation/c4cf3127-89b2-4d58-abf3-ab0746342a90].