

Is Dairy Good for your Bones?

Contrary to years of marketing and promotions from the dairy industry, there are a host of serious problems associated with the consumption of milk, cheese, yogurt and other dairy foods. Dr. Sofia Pineda Ochoa discusses bone health issues related to dairy intake, as well as some of the environmental and ethical implications involved in dairy production.

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Video Transcript:

Got bone problems? If you “got milk”, there’s a chance you’re increasing your risk.

I’m Dr. Sofia Pineda Ochoa with Meat Your Future. Today, I’ll be talking about dairy. Last October 2014, a study came out in the British Medical Journal and was reported by many news networks because the results were so impressive. Here’s a clip from Fox News Channel: “Some brand new research to tell you about that goes against almost everything you’ve ever heard about the benefits of drinking milk. A new study shows that in-taking a higher intake of milk may actually cause an increased rate in fractures, and even death in both men and women.”

The study included more than 100,000 people and found that women who drink three or more glasses of milk per day had a 60% increased risk of a developing hip fractures and a 93% increased risk of mortality and that for each glass of milk

per day the risk of “all-cause mortality” increased by 15%.

Another study, this one from Harvard in 2014, found that “Greater milk consumption during teenage years was not associated with a lower risk of hip fracture in older adults.” As a matter of fact, they found that “each additional glass of milk per day during teenage years was associated with a significant 9% higher risk of hip fracture in men[.]”

Another Harvard professor did a study of fracture incidence and calcium and dairy intake in 10 countries, and found that a higher consumption of calcium was associated with a higher risk of bone fractures. United States made the top of the list on this graph. “[S]usceptible populations apparently consume more, rather than less calcium[.]” “[H]ip fractures are more frequent in populations where dairy products are commonly consumed and calcium intakes are relatively high.” “The first rule in formulating public health policy should be the assurance that the recommendations are not detrimental. It will be embarrassing enough if the current calcium hype is simply useless; it will be immeasurably worse if the recommendations are actually detrimental to health.”

Harvard’s website from their School of Public Health said this about dairy and bones: “[C]ountries such as India, Japan, and Peru where average daily calcium intake is as low as 300 milligrams per day (less than a third of the U.S. recommendation for adults, ages 19 to 50), the incidence of bone fractures is quite low.... [S]tudies suggest that high calcium intake doesn’t actually appear to lower a person’s risk for osteoporosis.... Clearly, although more research is needed, we cannot be confident that high milk or calcium intake is safe.”

Dr. T. Colin Campbell from Cornell University, one of the most prominent researchers in nutritional biochemistry, recommends that people eat plenty of “whole plant foods,... avoid animal foods, including dairy” to avoid osteoporosis.

As we know, many foods contain calcium other than milk, like leafy greens, and many legumes and vegetables. That's something that I myself didn't fully grasp some time ago. Like many, I was under the erroneous assumption that calcium came exclusively from dairy products, which I now know could not be further from the truth. Actually calcium from plant-based foods can also be easier for our bodies to absorb. "Some substances can interfere with the absorption of calcium, including proteins and phosphorus, both of which are abundant in cow's milk." So, even with their calcium content, animal foods may not be the best source for this.

And so it happens that here in the United States we have one of the highest rates of hip fractures in the world. We are also one of the highest dairy consumers. In this study, they found an almost linear association with animal protein consumption (which includes dairy) and hip fractures. Hip fractures are generally a good predictor of bone health. So, it appears our bone health in general is not doing okay here in the United States. And, although diet is not the only risk factor, it is one that is significant and should not be ignored. The National Osteoporosis Foundation estimates that here in the United States, "one in two women and (up to) one in four men over the age of 50 will break a bone due to osteoporosis".

This review, published in the American Journal of Clinical Nutrition, notes that "[i]t is unclear whether dairy foods promote bone health[.]" Therefore, "[t]he objective of the review was to determine whether scientific evidence supports the recommendations that dairy foods be consumed for improved bone health in the general [United States] population." Noting that, "[d]airy foods have not been part of the diets of adults for most of human evolution[.]" they reviewed the outcome of 46 studies published since 1985. Conclusions included, "the body of scientific evidence appears inadequate to support a recommendation for daily intake of dairy foods to promote bone

health in the general [United States] population.”

It appears that dairy is not only not necessary, but that it may actually be detrimental for our bones and health. We have also discussed how dairy has a high amount of phosphorus and protein, both of which can interfere with calcium absorption.

Another mechanism for calcium loss is that animal protein in general, including meat, eggs, fish and dairy, contain higher amounts of sulfur containing amino acids. This results in a state of acidosis in our body, which our body then compensates by leaching calcium base stores from our bones to neutralize the acids. As you can imagine, over time the leaching of calcium can weaken our bones. Additionally, animal protein in general, including meat, eggs, fish and dairy, results in increased calcium loss in our urine. It makes our urine more acidic, and calcium re-absorption is decreased. So, it is excreted in our urine and can result in increased risk of kidney stones.

Now we know green vegetables and leafy vegetables and many legumes are very high in calcium, and that calcium absorption rates can be higher when we eat green veggies rather than dairy. Here, we see milk having a fractional absorption rate of 32%, versus many vegetables having the absorption rate well over 50%.

Maybe that’s why this study found an inverse relationship between lettuce consumption and hip fracture. The “[r]isk of hip fracture was...inversely associated with lettuce consumption...for one or more servings per day compared with one or fewer servings per week[.]”

And bone issues are not the only problematic things associated with dairy. There’s a slew of severe medical problems and risks associated with dairy itself, from hormone related cancers to immune related pathologies, apart from infections that are transmitted through dairy products and contamination

of hormones and pesticides and antibiotics that they often have.

Not to mention the overall environmental devastation associated with the livestock industry.

And, in order to produce milk, like any mammal, dairy cows must be continuously impregnated year-after-year. This results in an excess of calves that the dairy industry cannot use. The calves are taken from their mothers usually within hours of being born, which causes an immense suffering and distress to both the mother and her baby.

The male calves will never produce milk, so they are often sold by the dairy farm for veal, where they are typically killed after a few weeks of confinement in crates so small that their muscles don't develop to keep them "tender", and with diets low in iron to keep their muscles pink when eaten.

The female calves are either used for the next generation of milk producers, or they suffer the same the fate as their brothers, if they are considered "surplus". And, the dairy cows themselves are ultimately killed too when their milk production declines, which occurs at a fraction of their natural lifespans.

The cruelty that is necessarily involved to obtain dairy is truly horrific, and it is completely unnecessary, which makes all of this suffering that the cows endure that much worse. And it's no different, by the way, for other animals like goats or sheep, who are similarly used for their milk. Please consider these issues and abstain from consuming dairy products – for your own health, for the environment, and for the animals. Thank you very much.

This transcript is an approximation of the audio in above video. To hear the audio and see the accompanying visuals, please play the video.

Video Sources:

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Video Credits:

This video was written and narrated by Sofia Pineda Ochoa, MD, and edited by Bob Rapfogel.

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Without limiting the foregoing, this presentation also includes the following (in order of appearance in the video):

- The news report excerpt is from Fox News, "3 daily glasses of milk linked to higher mortality rate in women", published on October 29, 2014.
- The photograph of the feedlot in California's Imperial Valley created by Pete McBride of National Geographic.
- The photograph of the large, red waste lagoon attached to a commercial cattle feedlot in Texas is from available online satellite images.
- The footage of artificial insemination of cows from agricultural "instructional" video excerpts.
- The footage of calves being removed from their mothers, veal calves and dairy cow treatment, and cow slaughter are excerpts from (1) the documentary Earthlings from Nation Earth, (2) SAFE (Save Animals From Exploitation) New Zealand, dairy industry investigation, (3) Mercy for Animals, New York dairy farm investigation, and (4) Compassion Over Killing, California dairy farm investigation.