Anticancer
LIFESTYLE PROGRAM

DAIRY AND CANCER RISK

WHAT DO WE KNOW?

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As a Registered Dietitian, I am often asked if it is okay to consume dairy products - including cheese, kefir, yogurt, and milk - as part of an Anticancer diet.

Let’s clear up the confusion surrounding dairy products and cancer risk.

First, we should define “dairy products."

In this category, I am including milk and products made from animal-based milk (such as cow, goat, or sheep milk). These products include yogurt, kefir, lactose-free milks, buttermilk, ghee, butter, cheese, cream, cream cheese, and concentrated milks.

Let’s start by distinguishing between dairy products that are higher in protein, calcium, and other micronutrients, compared to dairy products that provide mostly animal fat and not much else.

Dairy products that provide mostly fat include butter, ghee, cream, half-and-half, cream cheese, and sour cream. (Although ice cream is technically dairy, because it is high in sugar and fat we consider it a sweet treat and therefore, do not include it when discussing the dairy food group.) **If you choose to consume high-fat dairy products, limiting your consumption is encouraged, as there is strong evidence linking high fat diets - specifically animal fats - to increased cancer risk.**

Dairy products higher in protein, calcium, and other micronutrients include milk, cheese, kefir, and yogurt. (While the full-fat versions of milk, cheese, kefir, and yogurt still contain a fair amount of saturated fat, they have less than products like cream cheese and sour cream.)

These foods can provide valuable sources of calcium and other beneficial nutrients that our bodies need for optimal health, including:

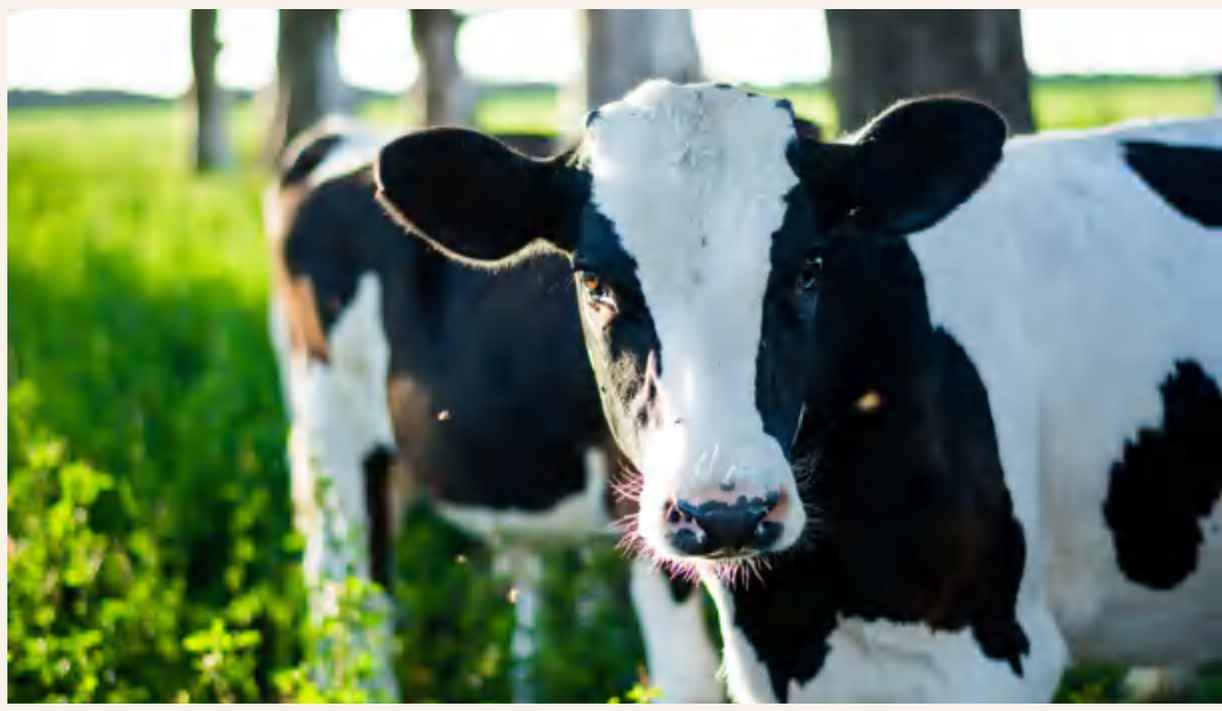
- Protein
- Calcium
- Phosphorous
- Potassium
- Vitamin D
- Vitamin B12
- Vitamin A
- Riboflavin
- Zinc
- Magnesium
- Selenium
- Choline

One reason diets high in animal fat can increase cancer risk is that they can be pro-inflammatory, and inflammation is a known risk factor for cancer.

Other than decreasing cancer risk, another huge benefit to reducing fat intake - specifically the saturated fat found in significant amounts in high-fat dairy products - is that it also decreases the risk of other inflammatory chronic health conditions, including heart disease and diabetes.

Additionally, **cultured dairy products (including yogurt, kefir, and buttermilk) contain probiotics, which can benefit gut health.**

So, given the nutritional benefits, should we all consume lower fat dairy products? Not so fast. First of all, many people do not tolerate dairy well. Experts estimate that **around 70% of the world's population experiences lactose intolerance.** Lactose is a sugar naturally found in dairy products. **Lactose intolerance typically results in digestive symptoms such as bloating, diarrhea, and gas after consuming dairy products.** If you struggle with digestive issues, dairy products may be part of the root cause or may exacerbate some of your digestive symptoms.



What about cancer risk?

To reduce cancer risk, it is advised to limit animal products, including dairy, and consume more whole, plant-based foods. But as with many nutrition-related topics, **research is often conflicting, and this goes for dairy and cancer as well.**

Dairy and cancer risk:

Conflicts and limitations in the research

Why is the research on dairy and cancer so inconsistent and unsettled? There are at least a couple of key reasons:

- **Most studies** that research dairy consumption and cancer risk look at participants' combined intake of milk, cheese, and yogurt and **do not account for the type of dairy product consumed**. “Dairy” is all lumped together as a category, without consideration for type or:
  - Organic versus conventional
  - Low-fat versus full-fat
  - Added sugars
  - Other unnecessary additives such as colorants, preservatives, stabilizers, and thickeners.
  - Presence of beneficial bacterial cultures

- Studies that look at diets high in calcium and cancer risk include calcium from both plant and animal sources, making it difficult to assess whether it’s the dairy providing benefit or the plant sources of calcium. Diets high in calcium - including calcium from dairy products and other calcium-rich foods seem to reduce the risk of breast cancer– but they increase the risk of prostate cancer.

If we look at dairy specifically, research does link increased dairy consumption with an increased risk for prostate cancer. This effect has been seen at even low levels of milk consumption. One study found that men who consumed 1¾ cups of low- or regular-fat milk each day were 27% more likely to develop prostate cancer when compared with men who had the equivalent of 1 to 2 teaspoons daily, **and they had a 60% greater risk when compared with men who consumed no dairy.**

There is some evidence, though limited, to suggest that milk consumption may increase the risk of breast cancer. A recent study found that a higher intake of dairy milk - but not yogurt or cheese - was associated with an increased risk for breast cancer.

In contrast, there is strong evidence to support that dairy intake can decrease the risk of colorectal cancer. There are several possible explanations** for this association. One is that dairy products are a main source of calcium in the diet, which appears to have benefits for colon cancer prevention. **But it is important to keep in mind that many whole, plant-based foods, such as almonds, soybeans, bok choy, and broccoli, *also* have calcium.**

This is but a glimpse into the tangled and complicated nature of studies on dairy and cancer risk. **So you may reasonably be wondering: then what do we *really* know?**

Researchers speculate that the increase in prostate cancer risk with increased dairy may be due to an increase in the hormone called insulin-like growth factor-1 levels (IGF-1). **An increase in IGF-1 levels is a known risk factor for prostate and breast cancer, and dairy consumption can raise levels of this hormone.**

It's also possible that calcium intake from dairy may reduce vitamin D absorption, and low vitamin D has been associated with increased prostate cancer risk. Milk naturally contains growth factors and sex hormones. However, at this time, it is unclear if these growth factors and hormones contribute to the increased cancer risk.

*** Researchers attribute certain components of dairy, including conjugated linoleic acid and butyric acid, to potential protective benefits for colon cancer. Other possible mechanisms include the protein lactoferrin in dairy products, lactic acid bacteria in fermented dairy products such as yogurt and kefir, and vitamin D in fortified dairy products. As ever, more research is needed!*

Dairy and cancer risk: What we know

Studies have supported that the Mediterranean diet - a diet pattern characterized by a high intake of vegetables and fruits, legumes, nuts, whole grains, and fish, low consumption of meat products, and a ***moderate intake of dairy products (mainly consisting of yogurt and cheese)***, **has been associated with reduced cancer risk, specifically breast cancer risk.**

The traditional Mediterranean diet has been found to reduce the risk of many chronic diseases. Dairy products included in this diet – **such as Greek yogurt and traditional cheeses like Parmigiano-Reggiano** – have usually been fermented (or cultured). Fermentation was a way to preserve dairy before modern-day food storage technologies were available (think refrigerators and grocery stores). **Fermenting dairy extends shelf life and retains nutrients.** Before it was common to refrigerate and pasteurize dairy, milk spoiled quickly, which is part of the reason a glass of milk was not typically consumed as part of the traditional Mediterranean Diet.

The quality of dairy products consumed also matters. If you enjoy dairy products, we recommend selecting organic whenever possible. Increased levels of omega-3 fatty acids have been found in organic dairy products. Also, organic foods have been shown to have lower levels of toxins, including pesticides, heavy metals such as cadmium, and synthetic chemicals. Consumption of organic foods can also reduce exposure to antibiotic-resistant bacteria. The use of animal drugs, including hormones and antibiotics used to promote growth, is prohibited in organic dairy production.

You may be wondering if it's best to choose fat-free, low-fat, or full-fat versions of dairy products. Unfortunately, there is no straightforward answer to this question! It depends on a variety of factors, such as:

1. How much dairy are you consuming? If you consume a significant amount of dairy daily, it would be best to explore lower-fat options to reduce the amount of saturated fat you consume.

On the other hand, if you consume dairy in low- to moderate amounts (such as an ounce of feta cheese on a salad filled with colorful plant-based foods and/or plain greek yogurt in the morning with some nuts or seeds and berries), choosing versions with higher fat can help with satiation and with the absorption of fat-soluble vitamins (such as vitamin D) and other nutrients.

2. How satisfied do you feel when you choose fat-free or low-fat dairy options? For instance, if you opt for the fat-free version, does it leave you feeling unsatisfied, so you eat more food later on to compensate? Fat plays a significant role in helping us feel full and satisfied.

Keep in mind that what feels satisfying may change day-to-day or week-to-week. For instance, if your diet has been lacking in fat lately, a plain whole-milk yogurt with some fruit might be really satisfying. On the other hand, on a day when you've already consumed enough fat, a low-fat plain yogurt might fill the bill.

3. Check for added sugars in fat-free and low-fat dairy options. Be aware that low-fat versions of dairy products often have unnecessary additives, including added sugars, to compensate for the taste difference. It's important to read Nutrition Facts labels and ingredient lists. Whether you're choosing full-fat or low-fat versions of dairy products, it is recommended to choose plain versions without any added sugars. **Ideally, you should not see any sugar in the ingredient list.**

In summary

- **Those who are interested in prostate cancer prevention should consider avoiding dairy products.**

- **Regarding other cancers, the data is too contradictory to draw any conclusions at this time. Some studies do seem to support that milk specifically – though not yogurt or cheese – may increase cancer risk.**

- **Based on the best available research to date, it is generally recommended to limit dairy products as part of an anticancer diet and to choose a predominantly plant-based diet.**

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