

# THE ROLE OF MILK IN REDUCING RISK OF COLORECTAL CANCER

Colorectal cancer is the second leading cause of cancer-related deaths in men and the third in women. About 24,000 Canadians are diagnosed with colorectal cancer annually, representing 10% of all new cancer cases.<sup>1</sup> Given these statistics, cancer prevention should be top of mind in your patient care, and lifestyle changes can play a role.

The American Institute for Cancer Research (AICR) says colorectal is one of the most preventable types of cancer, and that a balanced diet paired with physical activity can prevent almost half of all colorectal cancer cases.<sup>2</sup> When it comes to nutrition, research shows dietary patterns that are high in fibre, calcium, and dairy products can help reduce the risk of developing colorectal cancer.<sup>3</sup>

## NUTRITION RECOMMENDATIONS

Dairy foods are protective against colorectal cancer. Researchers believe it's due to the calcium, vitamin D, and probiotics that are found in dairy.<sup>4</sup> Recommend that your patients aim for 2-3 servings of dairy products per day. One serving is equal to a cup of milk or yogurt, or 1.5 ounces of cheese.

Research also shows that diets rich in fibre can help prevent colorectal cancer.<sup>5</sup> Patients should aim for 25-35 grams of fibre per day from vegetables, fruits, whole grains, nuts, seeds and legumes.<sup>6</sup>

Your patients can create healthy, fibre-rich meals by following these guidelines:

Filling a quarter of the meal with protein rich foods, such as milk, yogurt, cheese, eggs, legumes, fish or poultry



Filling half the meal with vegetables and fruit. These can be fresh, frozen, canned, raw or cooked

Fill a quarter of the meal with whole grains, such as oats, barley, brown rice or whole wheat.

There's also evidence that cutting back on red meat, processed meat and alcohol can help with colorectal cancer prevention. Your patients should:

- Limit red meat, such as beef and lamb to 350-500 grams (12-18 ounces) cooked weight per week
- Avoid processed meat (bacon, hotdogs, deli meat, ham, etc.) except for special occasions
- Limit alcohol to no more than two drinks daily for men; or one drink for women

One drink is:



<sup>1</sup> <https://cancer.ca/en/cancer-information/cancer-types/colorectal/statistics>

<sup>2</sup> <https://www.aicr.org/news/6-steps-to-protect-yourself-from-colorectal-cancer/#:~:text=AICR,-Email%20Twitter%20Facebook&text=Here%20in%20the%20US%2C%20colorectal.and%20staying%20a%20healthy%20weight>

<sup>3</sup> <https://www.aicr.org/research/the-continuous-update-project/colorectal-cancer/>

<sup>4</sup> [https://www.gastrojournal.org/article/S0016-5085\(15\)00011-6/fulltext](https://www.gastrojournal.org/article/S0016-5085(15)00011-6/fulltext)

<sup>5</sup> Gianfredi V et al. (2018) Int J Food Sci Nutr. 2018;69(8):904-915. doi:10.1080/09637486.2018.1446917

<sup>6</sup> Barber T et al. (2020). Nutrients. Oct 21;12(10):3209. doi: 10.3390/nu12103209.



## RESEARCH ON DAIRY AND COLORECTAL CANCER

Studies from the AICR and the World Cancer Research Fund say there is “strong probable evidence” that dairy products decrease the risk of colorectal cancer.<sup>7</sup> In their definition, “dairy” includes total dairy, milk, and cheese.

A 2020 systematic review and meta-analysis of dairy and colorectal cancer looked at 29 studies comprising a total of 22,000 people.<sup>8</sup> Collectively, the studies showed that high consumption of total dairy products and total milk was associated with a lower risk of developing colorectal cancer. Meta-analyses conducted in 2021 and 2022 also found that fermented dairy products, such as cheese and yogurt, helped decrease colorectal cancer risk.<sup>9,10</sup>

Researchers suspect that this effect is likely linked to the calcium, vitamin D, and probiotics found in dairy foods.<sup>11</sup> Calcium seems to be the main component offering protection. In studies, total calcium intake of about 1,400 milligrams per day compared to an intake of less than 600 milligrams per day was associated with a statistically significant lower risk of colon cancer.<sup>12</sup> Other components in milk products that may have a protective effect include:

- **conjugated linoleic acid**
- **butyric acid (a short-chain fatty acid)**
- **lactic acid bacteria**
- **sphingolipids<sup>13,14</sup>**



### PRACTICAL TIPS FOR PATIENTS

Here is some advice to share with your patients to help reduce the risk of developing colorectal cancer:<sup>15</sup>

- Use the plate model to build nutritious meals.
- Enjoy 2-3 servings of dairy products each day. One serving is equal to a cup of milk or yogurt, or 1.5 ounces of cheese.
- Enjoy fibre-rich foods such as vegetables, fruit, beans, grains and nuts. Aim for 25-35 grams of fibre per day.
- Be physically active. Aim for at least 150 minutes of aerobic activity per week, in bouts of 10 minutes or more.
- Limit red and processed meat to no more than 3 portions per week. That's 350-500 grams (12-18 ounces) cooked weight.
- If you don't drink alcohol, don't start. If you do drink, limit alcohol to one drink for women and two drinks for men per day.

**Interesting fact:** Studies show inverse associations of colorectal cancer risk for people who consume 400 grams per day of total dairy and 200 grams per day of milk.<sup>16,17</sup> For perspective, one cup of milk is 240 grams.

For more information, visit [milk.org](https://milk.org).

<sup>7</sup> <https://www.aicr.org/research/the-continuous-update-project/meat-fish-dairy/>

<sup>8</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6518136/>

<sup>9</sup> <https://www.hindawi.com/journals/jo/2021/9948814/>

<sup>10</sup> <https://www.frontiersin.org/articles/10.3389/fonc.2022.812679/full>

<sup>11</sup> [https://www.gastrojournal.org/article/S0016-5085\(15\)00011-6/fulltext](https://www.gastrojournal.org/article/S0016-5085(15)00011-6/fulltext)

<sup>12</sup> <https://onlinelibrary.wiley.com/doi/10.1002/ijc.30293>

<sup>13</sup> <https://pubmed.ncbi.nlm.nih.gov/33231228/>

<sup>14</sup> <https://www.tandfonline.com/doi/full/10.1080/15384047.2017.1345396>

<sup>15</sup> <https://www.cancercareontario.ca/en/cancer-facts/updated-cancer-prevention-guidelines-incorporate-holistic-view-nutrition>

<sup>16</sup> <https://aacrjournals.org/cebpa/article/29/11/2309/72050/Dairy-Consumption-and-Risks-of-Colorectal-Cancer>

<sup>17</sup> <https://onlinelibrary.wiley.com/doi/10.1002/ijc.31198>

