Why is Carrageenan important?

Carrageenan is a food ingredient that helps to contribute to foods and beverages that are nutritious and affordable for consumers, can travel distances safely and arrive intact and allow people all over the world to have access to and enjoy the foods they have come to love.

Food prices are rising. Carrageenan is approved for use in organic food applications. As it is more cost-efficient than alternative ingredients, food manufactures are able to make organic products more affordable, and therefore, more available.

Carrageenan, also known as Irish moss, is a widely used food ingredient derived from red seaweed. Carrageenan shows up frequently in the ingredients section of food labels, but don’t expect to see it mentioned among the nutrition facts. Why? Because carrageenan contains no calories, fat, cholesterol, or sodium. It does, however, make certain foods more nutritious by helping low-fat and low-sugar options taste as good as their full-fat and -sugar counterparts, and it’s also a soluble fiber.

Carrageenan is a natural substance found in seaweed while poligeenan is not found in nature at all

**Possible dangers and side effects of carrageenan**

There is some debate over whether the findings of animal- and cell-based studies can apply to people.

If they can, the possible side effects of consuming carrageenan include:

* inflammation
* bloating
* [irritable bowel syndrome](https://www.medicalnewstoday.com/articles/37063.php) and IBD
* glucose intolerance
* colon cancer
* [food allergies](https://www.medicalnewstoday.com/articles/14384.php)

The Food and Drug Administration still approves this ingredient. But in 2016, the National Organic Standards Board [voted to remove carrageenan](http://www.foodsafetynews.com/2016/11/board-nixes-use-of-carrageenan-in-organic-food-production/) from their approved list. This means foods made with carrageenan can no longer be labeled “USDA organic.”

Carrageenan is a naturally occurring ingredient that is extracted from red seaweed and used to improve the texture and palatability of many foods and beverages. Many commonly consumed foods and beverages contain carrageenan, such as chocolate milk, ice cream and other dairy products, salad dressings, soy and almond milk, infant formula, and some meat products.

### How does it work?

Carrageenan contains chemicals that may decrease [stomach](https://www.webmd.com/digestive-disorders/picture-of-the-stomach) and intestinal secretions. Large amounts of carrageenan seem to pull water into the intestine, and this may explain why it is tried as a laxative. Carrageenan also might decrease pain and swelling ([inflammation](https://www.webmd.com/arthritis/about-inflammation)).

## ****Why is there concern about Carrageenan?****

There are two forms of carrageenan: food-grade and degraded. Food grade carrageenan has been used for hundreds of years and has been extensively reviewed and approved for use in foods. Degraded carrageenan was found to be harmful, but is not used in foods, as it does not provide any thickening properties. Even though degraded carrageenan and food-grade carrageenan are different, the harmful effects of carrageenan in its degraded form have been mistakenly associated with food-grade carrageenan.

## ****How do we know that Carrageenan is a safe food additive?****

Food-grade carrageenan has been independently evaluated by the Joint FAO\*/WHO\*\* Expert Committee on Food Additives (JECFA), an international panel of expert toxicologists who review data and develop recommendations about food ingredients. JECFA determined that food-grade carrageenan was a safe food additive with no limits on its use in food.

## ****Why is there concern about Carrageenan?****

The driving force behind concerns regarding carrageenan’s safety is attributed to an article written by Dr. Joanne Tobacman (4). Most of the studies cited in her article report on degraded carrageenan (poligeenan). She argues that even food-grade carrageenan is not safe from having significant levels of degraded carrageenan because the acids in our stomach as well as certain bacteria might break it down into degraded carrageenan. This is not a claim supported by human or animal studies. Tobacman references studies that simulate gastric acid effects on carrageenan and the resulting presence of degraded carrageenan. However, a study in 1969 by Marcus and Watt explains that “poligeenan with an average molecular weight of about 20,000 daltons has none of the food functions of carrageenan whose average molecular weight is never lower than 100,000 daltons and is usually much higher.” Therefore, comparing “digested” carrageenan to poligeenan is a false equivalency.

More recently, “scientific assessments of carrageenan have included short term and long term generational studies involving different dosages of degraded and non-degraded forms and various animal studies … all of the studies supported the safety of [food grade] carrageenan for use in foods. Regulatory authorities saw no reason to question the safety of [food grade] carrageenan as long as the average molecular weight was 100,000 daltons or higher.” The regulations of carrageenan molecular sizes were modified to insure that the food-grade carrageenan in foods was never lower than that limit, and testing methods were introduced to enforce these limits (5).

Tobacman also references studies that show that native carrageenan can promote colonic tumors in rats; however, the carrageenan in these studies made up anywhere between 2.5% and 15% of the rats’ total diets. In contrast, foods that contain carrageenan have the ingredient at tenths (.1%) or hundredths (.01%) of a percent within the food and these foods make up only a small fraction of our overall diet.

## Should You Avoid Carrageenan?

Based on all the research, there is no need to avoid carrageenan. Again, there's a reason why it's an improved ingredient for baby foods, which have some of the strictest standards for safety and health. But, if you’re still not convinced that it’s safe to eat, do what feels comfortable and use carrageenan-free products. You won't be missing out on any vital nutrients.