

This Ingredient in Ice Cream Keeps It from Melting but Harms Your Gut (and Overall) Health

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STORY AT-A-GLANCE

- › Ice cream that resists melting in summer heat is often packed with emulsifiers like polysorbate 80, which weaken your gut lining and trigger chronic inflammation throughout your body
- › Aside from ice cream, emulsifiers are also found in over 12,000 processed foods, including organic brands. Most of these chemicals were never tested for long-term safety on gut health
- › Maltodextrin, an emulsifier found in many frozen desserts, destroys mucus-producing gut cells, leaving your intestines vulnerable to bacteria and inflammation, even without harmful microbes present
- › Research shows emulsifiers interfere with metabolic signaling, raising your risk of insulin resistance, weight gain, and inflammation
- › Children are especially at risk, since their microbiomes are still developing. Summer treats like ice cream and slushies silently prime them for lifelong health problems

Summer's here, and suddenly ice cream is everywhere — picnics, barbecues, and beach. It's marketed as the ultimate feel-good treat, but what if that creamy cone is doing real harm to your gut? According to a report, ice cream that's made so it won't melt too fast in the sun contains additives that are wreaking havoc on your health.

What makes this even more alarming is how widespread these additives are. Aside from ice cream, they're also found in thousands of food products lining your grocery shelves. Most consumers have no idea that these seemingly harmless ingredients were never actually tested for how they affect your microbiome.

Emulsifiers in Ice Cream (and Other Ultraprocessed Foods) Wreck Your Gut

An investigative report published by The Defender exposed a quiet but dangerous trend – Ice cream, one of the most widely consumed summer treats, is increasingly loaded with synthetic emulsifiers designed to keep it from melting too fast. While it seems like a clever solution, especially during hot summer days, research shows that these additives aren't harmless. They've been linked to serious health consequences, especially for your gut.¹

- **The report highlights the dangers of polysorbate 80 and other emulsifiers –** Emulsifiers, which are made from various sources like plants and bacteria, are used to control the consistency of food products. In the video above, a manufacturer of food chemicals demonstrates how polysorbate 80 allows a scoop of ice cream to retain its shape, even under bright studio lights.²
- **However, this convenience comes at a hefty price –** Carboxymethyl cellulose, maltodextrin, and carrageenan are other examples of emulsifiers and stabilizers used in food products. According to the investigation, more and more research papers are now providing evidence about the dangers of these chemicals.

“Studies have found that emulsifiers can alter the mix of bacteria in the gut, known as the microbiome or microbiota; damage the lining of the gastrointestinal tract; and trigger inflammation, potentially contributing to problems elsewhere in the body,” the report notes.

- **Emulsifiers actively create dysfunction by interacting with the cells lining your intestines** – In simpler terms, think of your gut lining as a well-guarded castle wall. Emulsifiers are like acid poured on the wall, thinning it out so invaders, or bad bacteria, are able to break through. Once that happens, your body goes into emergency mode, launching an inflammatory response that affects digestion, immune balance, and even your brain.
- **Emulsifiers also mess up mucus production in your gut** – One study found that maltodextrin consumption leads to a measurable loss of goblet cells – specialized cells that produce mucus in the gut lining. Fewer goblet cells mean less mucus, and less mucus means your intestinal wall is no longer shielded from the bacteria and food particles that pass through your digestive tract every day.³
- **These chemicals are contributing to digestive issues and metabolic disorders today** – The rates of inflammatory bowel diseases, metabolic disorders, and cancer are skyrocketing, and the assault that emulsifiers bring to your gut microbiome could be one of the main reasons why.

Benoit Chassaing, a research director at the French National Institute of Health and Medical Research and a co-author of several related studies, said, “There is a lot of data showing that those compounds are really detrimental for the microbiota and that we should stop using them.”

- **Children are especially vulnerable** – Emulsifier-heavy foods like ice cream and processed snacks are marketed directly to kids, especially in the summer months when consumption skyrockets. Since children's microbiomes are still developing, this kind of disruption early in life could lead to long-term health consequences.

These Chemical Additives Are Everywhere

Avoiding emulsifiers is tricky, as they are used in almost all [ultraprocessed food](#) products today, not just to improve their consistency but also to prolong their shelf life. Even products that are marketed as “healthy” or “natural” contain these chemicals.

- **Some products contain more than one type of emulsifier** – According to the report, “Some emulsifiers have multiple names, making them harder to recognize. Some names apply to more than one emulsifier. And some chemical names that appear on product labels don’t appear in the FDA’s ‘Substances Added to Food’ inventory.”
- **Thousands of products use emulsifiers in their formula** – In fact, an online database posted by the Environmental Working Group (EWG) noted that, as of June 3, Polysorbate 80 was included in the labels of 2,310 products.⁴ Maltodextrin was found in 12,755,⁵ while xanthan gum is used in 17,146 products.⁶

As for carrageenan, it was listed on 8,100 labels.⁷ I’ve previously written about this additive’s health dangers – read about it here [“Carrageenan’s Gut Health and Insulin Risks.”](#)

- **Don’t be easily fooled by the words “organic” and/or “healthy”** – The report notes how certain brands that market their products as organic and healthy actually contain emulsifiers:

“At a Safeway supermarket, Healthy Choice Grilled Chicken Pesto With Vegetables listed modified potato starch, modified corn starch, carrageenan, xanthan gum and guar gum.

The label on Newman’s Own Caesar salad dressing said the product contained no artificial preservatives or flavors, no colors from an artificial source and was gluten-free. The ingredient label listed ‘as a thickener,’ xanthan gum.”⁸

- **Making the effort to eliminate these emulsifiers from your diet will have profound benefits** – Lewis Rands, a genetic scientist who has suffered from severe inflammatory disease that causes him to suffer from bloating, cramps, stomach pain, and bleeding, made the challenging move to avoid foods with emulsifiers (at the advice of his dietitian).

The results were amazing; Rands noted a dramatic change in his health. “It’s a huge difference. To me, it’s made more of a difference than any drug,” he said.

The Harmful Effects of Emulsifiers Go Beyond Your Gut

The evidence against emulsifiers is mounting, and the report highlights a few studies that support the harmful effects of these chemicals on your gut health. For example, a 2024 study found that consuming a diet low in carrageenan, polysorbate 80, and carboxymethyl cellulose is an effective way to treat mild or moderate Crohn’s disease.⁹ However, these chemicals are pernicious, and their effects go beyond harming your gut microbiome.

- **Emulsifiers have been linked to cardiovascular disease** — A study published in The BMJ found that consuming several types of emulsifiers led to a higher risk of cardiovascular disease. According to the study authors:¹⁰

“Higher intakes of total celluloses (specifically E460 and E466) and total monoglycerides and diglycerides of fatty acids (specifically E472c) as well as trisodium phosphate (E339) were positively associated with risk of coronary heart disease, and those of total monoglycerides and diglycerides of fatty acids (specifically E472b) were positively associated with risk of cerebrovascular disease.”

- **These additives have also been associated with a higher risk of cancer** — In one study, published in the PLOS Medicine journal, carrageenan and mono- and diglycerides of fatty acids were associated with an increased risk of breast, prostate, and overall cancer.¹¹

“These results provide novel epidemiological insights into the role of food additive emulsifiers on cancer risk,” the researchers concluded.

“If confirmed by further epidemiological and experimental research, they could lead to a modification in the regulation of emulsifier use by the food industry, through food policies requiring a modification of the ADI of some emulsifiers, or even restricting the use of others, for better citizen protection.”

- **Emulsifiers are also fueling metabolic dysfunction** — An analysis published in The Lancet Diabetes & Endocrinology found that emulsifiers contribute to weight gain, impaired glucose regulation, and chronic low-grade inflammation in healthy individuals. They do this by altering the intestinal barrier and reshaping the microbiome in ways that skew metabolic signaling.

This is important because metabolic syndrome is a key risk factor for Type 2 diabetes and other chronic diseases. For more information on how food additives raise your diabetes risk, read [“Food Additive Combinations Raise Your Risk for Type 2 Diabetes.”](#)

This Summer Favorite Also Exposes You to Another Damaging Chemical

All these health concerns associated with ice cream might make you reconsider switching to other frozen treats, like slushies. But even though they appear harmless, slushies actually contain an additive that makes you and your children sick — glycerol.

- **What is glycerol and why is it added to slushies?** Also called E422 or glycerin, glycerol is an additive that helps keep slush drinks from freezing solid without loading them with sugar. This ingredient is approved as a food additive across the U.S. and Europe.
- **Glycerol is harmful in certain concentrations** — The problem with glycerol is that, at certain concentrations, it throws off normal metabolic balance, dragging blood sugar to critically low levels, disturbing potassium levels and triggering a metabolic emergency — this effect is particularly common in small children.

- **Toddlers and preschoolers became seriously sick after consuming slushies** – A study published in Archives of Disease in Childhood investigated 21 cases of young children in the U.K. and Ireland who became severely ill shortly after drinking slushies. The children, all of whom were healthy beforehand, showed adverse symptoms within 60 minutes of sipping the drink.¹²
- **Nearly all the children had dangerously low blood sugar** – In most cases, it dropped below a level that could lead to coma or even death. The children also had acid buildup in the blood, and most had low potassium, which interferes with nerves and muscles. One child even had a seizure.
- **But why were the effects more pronounced in young children?** Apparently, this is because they have less body mass. This means a 500-milliliter (or 17-ounce) serving of slushie contains way too much glycerol for them. Even a half-serving could be enough to cause harm. And when they drink it too quickly, or while hungry or after exercise, their bodies become even more vulnerable to a crash.

If you're a parent of a young child, especially under the age of 8, it's best to eliminate slush ice drinks from your child's routine. Refreshing and colorful as they seem, these frozen treats overload their young body not just with glycerol, but also high-fructose corn syrup, artificial colors, and flavors. Learn more about this topic in [“The Surprising Health Risk Posed by Slushies for Young Children.”](#)

Cut Out Emulsifiers by Switching to Healthier Food Options

Every time you eat processed foods like ice cream and slushies, you're unknowingly damaging your gut. Emulsifiers aren't just additives; they're gut disruptors that damage your intestinal lining, mess with your immune system, and send your metabolism spiraling.

These steps will help reverse or prevent the damage. Whether you're someone already struggling with digestive issues or if you just want to protect your long-term health, I recommend these strategies:

- **Swap processed foods with real food options** – Instead of commercial ice cream, consider making your own at home using full-fat coconut milk or cream, sweetened with honey. If you are a busy parent or on the go, look for clean-label brands with five ingredients or less – nothing you can't pronounce or wouldn't cook with at home.
- **Rebuild your mucus barrier with gut-supporting foods** – Add in real bone broth, steamed vegetables like okra and asparagus, and fermented foods like kimchi or sauerkraut. I also recommend carrots, onions and garlic, which are full of prebiotic fiber.
- **Ditch ultraprocessed snacks** – If you've struggled with weight gain, cravings, blood sugar crashes, or energy dips, emulsifiers are working against you behind the scenes. Ditch all fake "health" snacks and replace them with whole-food options like boiled eggs or fruit. Your metabolism works best when it isn't under constant chemical attack.
- **Track your progress** – Eliminate emulsifiers from your meals for 30 days and track the changes in your body. Journal your digestion, mood, energy, and sleep. If you have gut issues, observe if there are notable differences in your symptoms.

Frequently Asked Questions (FAQs) About Emulsifiers in Ice Cream

Q: Why do some ice creams barely melt, even on a hot day?

A: Many commercial ice creams contain synthetic emulsifiers like polysorbate 80, which are added to help the ice cream hold its shape and resist melting. These additives create a thick, stable texture – but they also disrupt your gut by damaging the intestinal lining and triggering chronic inflammation.

Q: Are emulsifiers only found in ice cream?

A: No. Emulsifiers are hidden in over 12,000 processed foods – including sauces, dressings, dairy-free products, and even “organic” or “healthy” brands. Common ones include maltodextrin, carrageenan, and xanthan gum. These chemicals are used to thicken, stabilize, and extend shelf life, even though they were never tested for long-term gut safety.

Q: How exactly do emulsifiers harm your gut?

A: Emulsifiers break down your gut’s protective mucus layer and disrupt the balance of good bacteria. This weakens your immune defense, increases inflammation, and leads to issues like irritable bowel, food sensitivities, weight gain, and metabolic disease – even without changing your calorie intake.

Q: Are children more at risk from emulsifiers and food additives?

A: Yes. Children’s microbiomes are still developing, which makes them more vulnerable to the effects of emulsifiers. Summer treats like ice cream and slushies often contain high levels of additives like glycerol, which have caused serious illness in young children, including seizures and dangerously low blood sugar.

Q: What can I do to avoid emulsifiers and protect my gut?

A: Start by reading ingredient labels and eliminating products with polysorbate 80, maltodextrin, carrageenan, and other emulsifiers. Swap in real-food options like homemade ice cream, fermented veggies, and bone broth. Stick with clean-label brands, and try going emulsifier-free for 30 days to feel the difference.

Sources and References

- ^{1, 8} [The Defender, May 20, 2025](#)
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- ³ [Front. Immunol. March 2022, 13:841188](#)
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- ⁵ [EWG, Maltodextrin](#)
- ⁶ [EWG, Xanthan Gum](#)
- ⁷ [EWG, Carrageenan](#)
- ⁹ [Journal of Crohn's and Colitis, Volume 19, Issue Supplement_1, January 2025, Page i262](#)
- ¹⁰ [BMJ 2023; 382](#)
- ¹¹ [PLoS Med, 2024, 21\(2\): e1004338](#)
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