



The Walmart & Pepsi “Conspiracy”, Toxic Sunscreen Panic, Carrageenan Paywall, and 50 Grams of Meat Lie

Real supply chains, fake cartels, and the anatomy of a wellness grift.

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Whenever I go deep into research for an investigation on CulinaryLore, the work almost always splinters into two or more parallel tracks. Usually, only one track belongs on the website, such as the full history of a food company, legal milestones, and the cultural timeline. But the other track, like raw details of modern freight supply lines, distribution, and how those historical realities influence today’s grocery prices, rarely fits neatly into a web article. Before I started this newsletter, that second track usually ended up thrown into a desk drawer, so to speak.

The lead section in today's digest shares its DNA with my latest full history on the real reason **RC Cola lost the Cola Wars**. But while at CulinaryLore, I cover the seventy-year corporate history, CulinaryLore: Unadulterated gives me the space to deliver the other track to you. It's a look at direct-store delivery, wholesale freight markups, and how slick modern media manipulates those boring supply-chain mechanics into sensational conspiracy theories. It's a side of the story that is just as valuable, revealing, and relevant to your weekly grocery bill. And most of all, it will help you develop a finely honed bullshit meter.

Why “More Perfect Union” Is the Ultimate Case Study

When you want to study how media deception works, food or otherwise, there's no point in wasting time with an amateur influencer ranting into a smartphone camera. The best way is to go right to the best example of the craft.

More Perfect Union produces some of the slickest video content on the internet. They've got Emmy awards, folks, not to mention professional documentary pacing, great motion graphics, and top-rate videography. Watching one of their videos certainly feels like you're watching serious investigative journalism. And that's precisely why it demands rigorous examination.

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Anyone can spot a low-budget internet grift. It's like ignoring a spam text on your phone. But when a high-budget outfit blends legitimate consumer anxiety with selective regulatory filings and slick, manipulative framing, it becomes the automatic "truth" to most who view it. In their recent video, *We Uncovered the Scheme Keeping Grocery Prices High*, they take a genuine, boring logistics reality and turn it into an imaginary corporate crime syndicate. Here is how the trick is pulled off, and how to spot it.

From Freight Logistics To Supermarket Conspiracy

When grocery prices skyrocket, people naturally look for someone to hold accountable. Right now, we have obvious places to point a finger like the war in Iran driving up global fuel and fertilizer costs, or new rounds of international tariffs.

The problem with covering those real-world factors is that they're tied to a moving news cycle. The individual factors fluctuate. And what's more, as bad as things seem, we can assume that they are temporary. Or, at least, a content creator who knows his stuff will assume so. If an "advocacy" outfit like More Perfect Union talked about diesel cost or trade policies, that video would have a short shelf life. Once the news cycle turns, the views dry up and the algorithm stops recommending it. Even if they were to talk about these things, here's a clue: They wouldn't ever talk about anything that could be construed as passing and temporary.

Traditional newsrooms are forced to chase the daily reality of the news cycle, but video advocacy outlets want something far more lucrative in the form of evergreen content. I understand the need for evergreen content on an intimate level. But there is a vast chasm between building

durable reference material and manufacturing corporate villain stories just to solicit donor cash under the guise of grassroots activism.

By bypassing temporary economic realities and framing high prices as an all-encompassing and long-running corporate conspiracy, they build content that never expires. Instead of a video that's obsolete in six months, one claiming giant retailers are running an illegal backroom cartel to crush small-town America can rake in views and subscriber revenue for years to come. As any comic book fan can tell you, a hero is nothing without a villain.

In the [More Perfect Union video](#) titled *We Uncovered the Scheme Keeping Grocery Prices High* instead of saying that today's high prices are an unfortunate reality caused by boring economic factors that would put their viewers to sleep, the video focuses on the price gap between small grocers and giant supercenters, claiming it's an ongoing illegal conspiracy. The main player in this corporate scheme is Walmart, which strong-arms food manufacturers into deliberately inflating wholesale prices on smaller competitors to crush them out of existence.

Who doesn't like a Walmart as the villain story? But the story relies on taking one documented antitrust battle involving beverage companies and inflating it into an all-encompassing supermarket conspiracy. *This is not done with evidence*, but through a series of editorial sleights-of-hand.

Have any older Southern Friends? They're Gonna Love These Articles

→ [What Happened to Bryan Foods? How "The Flavor of the South" Disappeared](#)

→ [What Happened to Hardin's Bread? How a Deep South Staple Quietly Vanished](#)

The “Expert” Witness Who Misunderstands His Own Supply Chain

The emotional engine of the video is built around an interview with RF Buche, a fourth-generation grocer operating a handful of small-town supermarkets in rural South Dakota.

The video opens with Buche pulling out his actual wholesale invoices for 12-packs of Pepsi and comparing them to the retail prices at a nearby Walmart Supercenter. The numbers appear indefensible. Buche is paying around \$8.00 wholesale just to *buy* a 12-pack and get it into his stockroom, while the local Walmart is *selling* that identical 12-pack *at retail* for \$6.98, or even running promotions that drop it to *three for \$15*.

On camera, Buche shakes his head in genuine disbelief and frustration. How can a giant corporate retailer sell a product to the public for significantly less than an independent grocery store can buy it from the supplier? To a consumer watching from home, the conclusion seems obvious and damning: *Walmart must be getting a sweetheart backroom deal, or suppliers are deliberately overcharging the small guy to run him out of business.*

Let’s think about this supposed conspiracy for a moment. It’s a plot between Walmart and Pepsi! That’s what More Perfect Union wants you to believe. Now ask yourself, **What on earth is in it for Pepsi?**

For Walmart, running a local mom-and-pop store out of business is great news. But for a food or beverage manufacturer, helping your largest customer eradicate the competition is corporate suicide. If Walmart succeeds in wiping out independent grocers, Walmart becomes the *only* buyer left in the region. That means Walmart can dictate wholesale terms and squeeze Pepsi’s margins into oblivion.

Push that dynamic to its logical conclusion, and Walmart squeezes PepsiCo until it eventually implodes. If the margins on their flagship brands are completely crushed, the company goes bankrupt, the brand assets, from Doritos to Mountain Dew, get auctioned off to private equity or rival conglomerates, and the flagship cola disappears from shelves entirely. Walmart ends up right back at square one, having destroyed one of its own biggest foot-traffic drivers just to win a temporary pricing standoff.

Furthermore, crushing the small grocer doesn't create new soda drinkers. If that rural shop closes and its customers are forced to drive to Walmart, Pepsi isn't selling more product! They're simply moving the exact same volume through a retailer that demands massive discounts rather than a wholesale channel where the manufacturer commands healthy margins. Why would Pepsi collude in an illegal scheme just to earn *less* money per can and hand absolute leverage to Walmart?

Because Buche has owned and operated grocery stores for decades, viewers will naturally assume he's an expert on national food distribution. But there's a big difference between store-level retail management and macro supply-chain logistics.

Running a regional grocery storefront makes someone an expert in local retail operations like employee scheduling, store merchandising, shrinkage, and customer service. It does not make them an expert in industrial freight networks. Throughout the interview, Buche displays a blatant blind spot regarding the staggering scale differences between a conglomerate like Walmart and a remote regional shop and, crucially, he acts as though the supplier is selling to both of them on identical terms. He appears entirely oblivious to the primary driver of his own invoice markups, **the third-party wholesale distributor.**

Walmart buys Pepsi in ridiculous volumes via Direct-Store Delivery (DSD), bypassing middle-man handling and letting the bottler's own merchandisers stock the sales floor. Buche, by contrast, cannot command factory-direct unit pricing. He buys his inventory through an intermediate wholesale distributor.

His \$8.00 landed cost pays for much more than just the soda. It also pays for the distributor's warehouse space, the hourly wages of the warehouse worker who hand-picked his order onto a mixed pallet, the diesel fuel for hauling that pallet down hundreds of miles of rural highways, and the wholesale middleman's own profit margin.

The video frames the grocer's personal incredulity as smoking-gun proof of a corporate crime, when in reality, it just reveals a small-scale retailer stunned by the real-world costs of his own supply chain.

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From Pepsi to Everything

If you study *More Perfect Union*'s catalog, you'll notice their primary storytelling method relies on a certain maneuver. They isolate a specific dispute in one industry, zoom in on an emotionally charged anecdote, and then immediately declare: "*And thus, this is how the entire economy works.*"

This, folks, is a remarkably effective formula! It allows them to anchor their narrative to a moment of real, documented dispute and emotional pain, giving the video a sheen of journalistic credibility and real-world

pathos, before extrapolating that narrow example into an all-encompassing system of corporate malice. Now that you've seen how ridiculous the imaginary conspiracy between Pepsi and Walmart sounds, look at what happens next.

RF Buche stops talking about Pepsi and shifts his focus to the entire store. After the video hooks the audience with Buche's frustration over his Pepsi invoice versus Walmart's retail price, the scope balloons out to everything. As Buche walks through his store, he starts pointing at shelf after shelf: General Mills cereals, canned vegetables, cleaning supplies, and paper towels. The grievance shifts from a specific beverage bottler to the entire grocery catalog. Now, Walmart is running that same scheme with every single food conglomerate.

The video never produces a single subpoena, internal memo, wholesale invoice, or whistleblower testimony suggesting that packaged-goods giants like Kraft Heinz or Procter & Gamble enforce discriminatory price penalties on behalf of Walmart. They don't have to. The emotional hook has been set. One Pepsi invoice has become a stand in for the entire corporate world.

But not just the invoice is in play. They also place real, unsealed FTC documents about Pepsi bottler rebates in the mix. With these props in place, and a small-town grocer lamenting the price of cornflakes, the video invites the viewers to tell the story to themselves: *If a soda bottler plays hardball with big-box stores, every consumer packaged goods company in the world must be doing the same thing.*

A narrow, technical dispute over beverage distribution becomes an omnipotent corporate cartel fixing the price of every product in the supermarket. And the magic is, the video never has to actually say it out loud.

The Murky “Food Lion” Contradiction

The most glaring sleight-of-hand in the piece is how it handles regional supermarket chains like Food Lion. The video slips Food Lion into the story in a strange and ambiguous way. On one hand, it frames Food Lion as a victim being squeezed and undercut by Walmart’s predatory leverage, implicitly lumping it in with the struggling rural independent. On the other hand, it acknowledges Food Lion as a big corporate player.

Food Lion is owned by Ahold Delhaize, a Dutch-Belgian multinational grocery giant that operates over 2,000 stores in the U.S. and pulls in tens of billions of dollars in revenue. Food Lion doesn’t buy three cases of cereal as part of a mixed wholesaler order like an independent rural store in Gregory, South Dakota. They negotiate huge corporate-level procurement deals.

If Walmart were actively colluding with manufacturers to enforce an illegal pricing scheme that kneecaps regional powerhouses like Food Lion, Ahold Delhaize wouldn’t be standing around waiting for a YouTube documentary to sound the alarm. They’d dispatch an army of antitrust litigators who would start suing suppliers for billions in damages.

Surveillance and Punishment Myth

To make corporate negotiations sound as sinister as possible, the video focuses on internal documents released in regulatory filings, highlighting a memo where Pepsi executives labeled Food Lion **the “worst offender” for selling soda cheaper than Walmart**. From this, the video weaves a dramatic tale of corporate surveillance and secret “punishment.” What actually happened is mundane and boringly commercial.

What the video called “surveillance” wasn’t Pepsi bugging cash registers or dispatching undercover agents to Food Lion. In the retail grocery world, tracking competitor pricing is just looking through the public weekly circular in the Sunday paper. When Food Lion ran big holiday promotions on 12-packs that undercut Walmart, Walmart complained that its contractual “price gap” was being violated. Pepsi looked at Food Lion’s publicly advertised sale flyers and noted they were beating Walmart’s prices.

The video makes “punishing” Food Lion sound like illegal corporate sabotage perpetrated against a helpless store. In reality, it was some routine head-butting by corporate giants playing commercial hardball.

When Walmart complained about its contractual volume guarantees being “violated”, Pepsi responded by doing what suppliers do during tense contract renewals. They turned the contractual screws on Food Lion to protect their highest-volume enterprise account.

The most important part to understand is that Food Lion wasn’t some trapped boxer forced to take it on the chin. Supermarket operators with 2,000 storefronts have immense reciprocal leverage. If a beverage supplier squeezes too hard or demands terms a retailer dislikes, the chain can, and routinely does, tell that supplier to buzz off.

Retail shelf space is prime commercial real estate. If you’ve ever gone to the supermarket and noticed that they’re really pushing Coca-Cola all over the place and ignoring Pepsi, you’ve seen this in action, or vice versa. Food Lion can slash Pepsi’s footprint overnight, reallocate those promotional end caps to Coca-Cola, Dr Pepper, or private-label store brands, and lock Pepsi out of lucrative holiday sales until the brand comes back to the table with better terms. Framing this two-way corporate turf war as a one-sided “punishment” turns an everyday commercial standoff into melodrama.

Throughout the video, the core premise is one particular ludicrous proposition. Let's call it *the Walmart or bust fallacy*. The narrative constantly hammers home the idea that Pepsi is so terrified of losing Walmart that no other customer on earth matters. It frames the relationship as if Walmart commands absolute fealty, while Pepsi treats every other major grocery chain like Cinderella, dumping chores on them and telling them to survive on whatever scraps are left over. It is a ludicrous depiction of enterprise sales.

Does Pepsi bend over backward to keep Walmart happy? Of course; Walmart is the largest (brick and mortar) retailer in the world. But the idea that a brand like PepsiCo can afford to burn its bridges with regional grocery empires is fantasy. Food Lion's parent company, as I stated above, operates over 2,000 stores in the U.S. alone; Kroger operates nearly 2,800; Publix runs more than 1,300. These are just the tip of the iceberg.

No publicly traded consumer packaged goods company can explain to Wall Street why they just lost distribution to thousands of supermarkets along the entire East Coast because they were too busy catering exclusively to Walmart. If Food Lion or any other major chain decides to banish Pepsi to the bottom shelf and hand their primary promotions over to Coca-Cola, Pepsi bleeds real market share and millions of dollars in revenue overnight.

Walmart has a lot of leverage, but they do not own the entire board. Big-box retail and traditional grocery chains operate in a state of mutual, cutthroat interdependence, not a feudal monarchy where only one king gets fed.

Extending the Myth to Rural Wholesalers

The fatal flaw in the video's narrative is taking that direct manufacturer battle with Food Lion and pretending it applies to independent rural grocers.

Pepsi could lean on Food Lion because Food Lion has a direct manufacturer procurement contract served by Direct-Store Delivery (DSD). Pepsi sets Food Lion's direct terms and funds their ad calendar (co-op allowances). But Pepsi has **no such relationship** with an independent grocer buying through Associated Wholesale Grocers or SpartanNash. Pepsi sells soda to the wholesaler's distribution center. Then, the wholesaler sets the markup and delivers it to the independent. Pepsi has neither the data feed nor the contractual leverage to "surveil" or "punish" an independent store owner in South Dakota for discounting soda. Its contract is with the distributor. It has no direct interest in the small town grocer.

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The Seduction of Simple Villains

By blurring the lines between wholesale distributors and corporate chains, leaning on the naive incredulity of a retail operator, and leaping from one beverage company to the entire grocery store, the video swaps boring supply-chain mechanics for an all-powerful cartel, leaving millions of viewers convinced that every receipt in America is dictated from a single smoke-filled room.

The video's core deception relies on flattening the entire retail world into a binary comic-book feud with Walmart on one side, and everyone else on the other. In the real world, scale is a spectrum that depends much on logistics, and pretending every price tag is set by a single backroom cabal only keeps shoppers in the dark about how modern grocery retail actually functions.

The Shell Behind the Polish

Which brings us right back to where we started, the slick production quality. When you finish watching an investigation like this, it's easy to assume that an equivalent amount of rigorous intellectual labor went into the reporting. The aesthetic cues are designed to communicate deep journalistic authority. Strip away the polish, however, and you realize that *the package is all there is*.

Beneath the Emmy-caliber cinematography lies an astonishing lack of real research. The creators don't understand how Direct-Store Delivery actually operates. They don't understand wholesale distribution hubs, mixed-pallet hand-picking, or rural freight economics. They don't understand the basic legal anatomy of the Robinson-Patman Act, nor do they grasp the cutthroat, two-way leverage that dictates retail procurement.

They don't want to explain how a complex supply chain functions. Nobody would watch. They want to build an emotional narrative, and when the real-world business facts don't fit the script, they paper over the gaps with moody lighting, and the personal troubles of a rural store owner. Virtually all the creative effort, budget, and talent go into the wrapping paper, leaving nothing of substance inside the box.

Once you see this, you cannot unsee it and you'll start to see it everywhere. Whether its a large 501c "nonprofit" or an independent

influencer, it's a plain-old side-show con. Dazzle the audience with stagecraft so nobody notices the trick is hiding in plain sight.

Why Soda Actually Costs Less at Walmart

Now that the bullshit has been shoveled neatly into a corner, a practical question remains: **Why is a 12-pack of soda so much cheaper at a big-box retailer than at a local, independent grocer?**

If it isn't a corporate scheme, what accounts for that \$2.50 price gap? As I've already begun explaining, it's the reality of two completely different supply chains running on two different sets of wheels.

Direct-Store Delivery (DSD) vs. The Wholesale Middleman

Soft drinks don't usually move through standard grocery distribution channels. For massive global brands like PepsiCo and Coca-Cola, products travel via **Direct-Store Delivery (DSD)**:

- **The Factory-to-Dock:** The dependent local or regional bottling franchise loads its own trucks, employs its own commercial drivers, and delivers product straight to an individual store dock.
- **Vendor-Managed Labor:** In high-volume corporate accounts like Walmart, Target, or large regional supermarket chains, the store's staff doesn't even touch the soda. The bottler's own route merchandisers physically wheel the hand trucks onto the sales floor, rotate the stock, assemble the stacks of 12-packs, and face the shelves.

- **Full Pallet Delivery:** Megaretailers move massive volume straight from the supplier to the store on pre-stacked, shrink-wrapped wooden pallets. Nobody sits in a warehouse breaking open boxes or sorting individual cases. A forklift rolls the entire pallet off the delivery truck and right onto the sales floor.

Because the big-box retailer eliminates storage overhead, internal warehouse handling, and in-store labor, the beverage manufacturer passes along massive volume discounts.

Now look at the small independent grocer operating a handful of rural storefronts:

- **No Direct Pipeline:** A remote store selling a dozen cases a week can't command a dedicated, daily factory route truck from a regional bottler, nor can they purchase in the train-car quantities that unlock top-tier manufacturer terms.
- **The Third-Party Wholesaler:** Independent grocers rely on secondary wholesale distributors like Associated Wholesale Grocers (AWG) or SpartanNash. The distributor buys bulk inventory, parks it in a massive regional warehouse, and waits for the store's weekly manifest.
- **Hand-Picking & Freight Penalty:** An independent grocer's order is picked case-by-case: two cases of soda, three boxes of cereal, and four cases of canned soup hand-stacked onto a mixed wooden pallet. That mixed pallet is shrink-wrapped, loaded onto a multi-stop semi-truck, and hauled hundreds of miles down two-lane highways to a remote dock.

The independent grocer's \$8.00 wholesale invoice is a reflection of this, not an arbitrary penalty. It's paying for the warehouse square footage,

the picker's wages, the pallet-wrapping equipment, the diesel burned across three counties, and the wholesale distributor's profit margin.

The Robinson-Patman Act

None of this means megaretailers are benevolent. There is real, documented regulatory tension surrounding wholesale pricing, centered on the New Deal-era **Robinson-Patman Act of 1936**.

Written during the Great Depression to protect independent shops from early grocery chains like A&P, the statute prohibits suppliers from offering discriminatory wholesale prices or promotional perks to favored retailers unless those same terms are made available to competitors on "proportionally equal" terms.

The modern antitrust friction being investigated by regulators doesn't involve secret meetings to hike prices on rural towns. It centers on a few things.

➡ **Off-Invoice Allowances:** Whether beverage giants provide massive chains with disproportionate promotional rebates, co-op marketing dollars, or slotting allowances that exceed the actual cost savings of servicing those high-volume accounts.

Under the law, a supplier can legally give a big-box store a discount if delivering to them genuinely saves the supplier money, say, shaving 50 cents off a case because a forklift drops off whole pallets instead of a driver hand-stacking boxes. The legal trouble starts when the discount goes far beyond those actual savings.

For example, if servicing a megaretailer only saves Pepsi 50 cents a case, but Pepsi hands that retailer a \$2.00 "promotional rebate" or pays millions in to get prime front-of-store placement, that extra \$1.50 isn't a

cost-savings discount anymore. It's an artificial "pay to play" subsidy that smaller competitors can never access.

➡ **Promotional Calendar Clashes:** Vicious corporate skirmishes over who gets to run discounted holiday loss-leaders (like 3 for \$12 fourth of July sales) without violating contractual price-gap agreements.

This is a cutthroat commercial brawl between multibillion-dollar corporate balance sheets. But there is a canyon-sized difference between investigating whether beverage suppliers offer disproportionate promotional allowances to national chains, and claiming that an all-powerful cartel is secretly dictating register prices to starve out small towns.

When Bottlers Consolidated and Drops Got Too Small

To understand why independent grocers feel so abandoned by beverage companies today, you have to look at how route delivery transformed over the last forty years. The disappearance of direct route delivery wasn't an intentional snub directed at rural towns. It was the inevitable collision between corporate consolidation and commercial freight math.

For decades, soft drink distribution operated through thousands of localized, independent franchise bottlers. In that **Universal Route Era**, regional bottlers stopped at virtually every commercial door. Whether an account was a busy downtown grocer or a single-pump gravel filling station buying six cases of soda a week, a driver in a nimble side-bay truck pulled up, wheeled in crates, and hand-stocked the cooler.

Starting in the 1980s and accelerating through the 1990s, that localized ecosystem was dismantled. Parent conglomerates like PepsiCo and Coca-Cola systematically bought back and merged independent regional

franchises into centralized corporate mega-bottlers (such as Coca-Cola Enterprises and PepsiAmericas). Local bottling plants were shuttered, territories were merged across multi-state regions, and operations were reorganized around high-throughput distribution hubs.

At the exact same time, big-box supercenters and warehouse clubs exploded across the map. Servicing a single Walmart dock meant dropping off ten full pallets of soda in forty-five minutes.

With routes redrawn across hundreds of miles to feed those giant accounts, the newly formed mega-bottlers were forced to grapple with the reality of the “**stop cost**”, the fixed fuel, vehicle wear, and driver wages required to idle a commercial rig at a loading bay.

Pulling a truck into a remote country store to unload ten cases of soda while the driver spent fifteen minutes hand-stocking a display became an immediate money-loser. The labor and diesel required to make the stop completely wiped out the margin on the product.

Faced with those numbers, consolidated bottlers instituted strict *minimum-drop thresholds*. If a retailer could not order 50 or 100 cases per delivery, they were pruned from the direct route schedule entirely.

The mega-retailer with ten pallets gets a dedicated truck straight from the regional bottler at the best manufacturer pricing. But the low-volume independent grocer who falls below the drop minimum is cut off from the direct pipeline.

Their only alternative to keep 12-packs on the shelf is buying through third-party grocery wholesalers like Associated Wholesale Grocers or SpartanNash. When that happens, the soda leaves the factory DSD world and enters the world of secondary regional warehouses, hand-picked mixed pallets, and distributor markups.

The "Sunscreen is Poison" Panic

I'll tell ya, there is nothing more irritating than the constant scientific whack-a-mole we all have to play. You may have encountered the latest decree being shouted by wellness influencers: *chemical sunscreens contain endocrine disruptors like oxybenzone and octinoxate that will hijack your hormones, so you need to throw them in the trash immediately.*

And, predictably, the warnings tend to come with no practical alternative. No mention of mineral sunblocks, no UPF clothing...nothing. Just pure, unadulterated (pun intended) dread designed to leave you standing paralyzed in fear, waiting for the influencer to hand you the next warning.

It feeds directly into the exhaustion that makes so many people throw their hands up and abandon evidence-based advice altogether: *"One day milk is good, the next day it causes inflammation. One day eggs will kill you, the next day they're a superfood. And now sunscreen is poison? Science just changes its mind every other week."*

I've heard versions of this statement thousand of times, it seems. Except *science doesn't actually change it's mind every other week!*

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Science Isn't Shifting on Its Axis

Actual scientific consensus does not turn on a dime every six months. The fundamental mechanics of human biology and UV protection haven't suddenly been rewritten.

Whenever you hear a confident, viral statement that completely contradicts 99% of established, decades-long public health consensus, like “*wearing sunscreen does more harm than good*”, it's almost never because the scientific community made a shocking new discovery.

It happens because scientifically illiterate, engagement-hungry influencers got their hands on something they don't understand, failed to recognize or ignored toxicological context, and manufactured an existential crisis to harvest clicks.

How a 2019 FDA Update Got Twisted

Here is how this current sunscreen hysteria began. It traces back to two pilot studies published by the FDA in 2019 and 2020.

The agency updated its testing guidelines to see whether common organic UV filters, specifically avobenzone, oxybenzone, octocrylene, and ecamsule, entered the bloodstream when applied at the maximum labeled usage. Now, it's important to understand some nuance here. If you get a new, ultrasensitive machine, you're gonna use it. So, thanks to new, hyper-sensitive laboratory equipment, researchers found that these active ingredients were absorbed through the skin into blood plasma at concentrations exceeding an arbitrary safety threshold of 0.5 ng/mL.

The online wellness ecosystem immediately took that finding and ran with it, screaming from the rooftops: *The FDA found toxic sunscreen in your blood!*

What they conveniently ignored was the agency's explicit, unequivocal clarification in that very same report: **systemic absorption does not equal harm.**

The FDA did not declare these ingredients unsafe. Crossing that 0.5 ng/mL threshold simply meant the agency was asking manufacturers to perform updated, modern safety and toxicology studies to establish definitive safety margins for daily, long-term human use. In fact, the FDA explicitly urged consumers: *Do not stop using sunscreen while this data is gathered.*

Think of it this way. Getting a snazzy new machine capable of detecting trace nanograms doesn't reach back in time and suddenly invent a health crisis. People have been slathering on these exact sunscreen formulations for decades, which means our bodies have been absorbing these compounds for decades. We don't yet know the definitive long-term clinical outcome of that low-level absorption, which is precisely why the FDA requested more data.

But, the only thing that actually changed between yesterday and today is our ability to measure it. It's no different than environmental toxicology in our food supply. We know with certainty that you will ingest microscopic background amounts of lead, arsenic, and heavy metals *no matter what you eat or where it is grown.* Acknowledging that those trace contaminants exist doesn't mean you stop eating food! It just means you monitor and regulate the thresholds.

The Rodent Gavage Sleight-of-Hand

You may have noticed that those FDA measurements didn't mention anything about hormones. So where did the claims about "hormone signaling" and "endocrine disruption" come from?

They come almost entirely from *in vitro* (petri dish) assays and extreme animal feeding studies. In these experiments, researchers force-fed immense, concentrated doses of isolated oxybenzone directly into the bellies of immature rodents.

To translate those rodent findings into human terms, an adult human would have to slather standard commercial sunscreen head-to-toe, daily, for anywhere from 30 to over 250 years to achieve equivalent systemic exposure.

Applying a lotion to your skin is worlds apart from force-feeding an isolated chemical compound to a rat. Conflating the two is standard operating procedure for internet gurus who don't understand the first rule of toxicology. The dose makes the poison, and the route of administration matters.

Consider nicotine. A pack-a-day smoker inhales small, spaced-out doses that their body metabolizes throughout the day. But take that same chemical in the form of concentrated liquid nicotine used in agricultural pest control and spill it on your bare skin, and rapid transdermal absorption can trigger lethal systemic poisoning within minutes.

Conversely, take that exact same drug and engineer it into a transdermal patch, and slow, metered absorption through the skin turns a potential poison into a controlled therapeutic tool. The molecule is identical, but the delivery vehicle, concentration, and exposure pathway completely dictate whether it's a mild stimulant or a fatal toxin.

The Asymmetry of Risk Or, In Other Words, Use Sunscreen

The trade-off being peddled here is borderline malicious. Ultraviolet radiation from the sun is a **Group 1 human carcinogen**. UV-induced DNA mutagenesis is an established, high-probability causal factor in basal cell carcinoma, squamous cell carcinoma, and lethal melanoma. On the other hand, we have a theoretical, unproven hormonal perturbation extrapolated from force-fed rodents and an FDA notice that explicitly stated absorption does not equate to toxicity.

Convincing everyday people to discard a proven, life-saving UV shield over a misinterpreted regulatory is reckless media illiteracy that manufactures real-world public health harm, all to give an influencer a provocative talking point.

Actual Alternatives: Protection Without the Panic

If you simply prefer to avoid organic UV filters out of personal caution or sensitive skin, you don't have to sit defenseless in the sun. You can choose effective alternatives that keep your skin safe without relying on systemic absorption:

- **Mineral (Physical) Sunscreens:** Look for formulas using **zinc oxide** or **titanium dioxide** as the active ingredients. These are inorganic compounds classified by the FDA as Generally Recognized as Safe and Effective (GRASE). Rather than absorbing deeply into the skin, they sit on the surface like an invisible shield, reflecting and scattering UVA and UVB rays away from tissue.
- **UPF Sun Apparel:** Modern ultraviolet protection factor (UPF) clothing has completely changed outdoor sun safety. A lightweight UPF 50+ rash guard, sun hoodie, or wide-brimmed

hat blocks 98% of UV radiation with zero chemical interaction, zero reapplication, and zero mess.

- **Smart Shade & Timing:** The sun isn't an all-or-nothing hazard. Check the daily UV Index on your phone. UV radiation peaks sharply between 10 AM and 4 PM; scheduling direct exposure outside of those peak windows or using basic shade reduces your net radiation dose significantly even without sunscreen (but still use it).

The Paywalled Panic: How Wellness Newsletters Manufacture Doubt (And a Quick Note on My Own Paid Tier)

(Or, The Carrageenan Panic, Explained)

I stumbled across an article recently that perfectly captures everything wrong with the modern health-newsletter ecosystem. The piece was setting up toxicological question about a common food ingredient we've all been eating for decades, *carrageenan*.

Carrageenan is a seaweed-derived stabilizer found in everything from almond milk to ice cream. You'll notice it especially in chocolate milk, as since there are so few ingredients, the added carrageenan stands out. Not only does it help stabilize a mixture but it produces a creamier mouthfeel. The author of this piece walked readers through the basic background, built up some existential tension surrounding gut inflammation, and arrived at the million-dollar question: *Does food-grade carrageenan degrade into a dangerous, ulcer-causing compound in your stomach?* Here is the problem: This was the ONLY question of any actual import. The rest was Wikipedia level facts.

And right at that exact point, the precise moment where basic toxicological clarity was needed to either inform people or calm their fears, a paywall came down.

If you wanted to know whether the carton of oat milk in your fridge was shredding your digestive tract, you had to pony up five bucks a month. Just to get one question answered, whether or not you knew there was any other value to be expected. You would have had to go on a reading mission to find out whether this newsletter was worth paying for, and how could you tell? But if you don't want to pay five bucks a month, you're left with the vague fear that a common dairy ingredient is ruining your gut and perhaps giving you intestinal ulcers.

This is a classic online “cliffhanger grift”. You give readers a free, surface-level setup, deliberately stoke their health anxieties until they're worried sick, and hold basic scientific literacy hostage behind a paid subscription. I can almost guarantee this author gets it wrong in the paid version, because the very fact that they treated the answer as some elusive, monumental secret is proof of their incompetence. Dispensing with this question isn't hard and any qualified toxicologist can clear it up in a few sentences. If a writer thinks basic digestive physiology is so complex that it rises to the level of paid premium research, they're just advertising that they don't understand it.

Seeing that garbage reminded me why I despise that model, and it gives me a good opportunity to make a clear promise about how I handle this publication.

I've talked before about eventually introducing a paid tier for this newsletter. But I will **never** pull the “hide the essential answers behind a paywall” trick on you. Withholding critical safety context or manufacturing dread just to extract paid conversions is predatory engagement-farming. If an issue involves public health, food safety, or debunking widespread

consumer panic, the essential facts and core analysis will **always be free to everyone**. When I do roll out paid options, it won't be to ransom the truth, it will simply be to offer excess to MORE of the same, and perhaps extra deep research ready articles with a level of detail that would make your eyes glaze over, bonus historical pieces, or just more of what free subscribers already get.

But now, let's answer the question that the other newsletter refused to answer for free and examine the deceptive framing they used to sew doubt in the first place.

The False Framing: “Food-Grade” vs. “Degraded”

The entire carrageenan panic relies on a sneaky linguistic trick.

Influencers and wellness writers love to frame the debate as:

“Food-Grade Carrageenan vs. Degraded Carrageenan (Poligeenan)”

Notice how subtle and manipulative that phrasing is. By presenting them side-by-side as two variants of the same family, it plants a seed of doubt in your mind. It makes it sound like “degraded carrageenan” is simply a compromised, stale, or broken-down version of the stuff in your coffee creamer, like oxidized cooking oil or spoiled milk. The implicit suggestion is that one can casually turn into the other while sitting in your pantry or digesting in your stomach. That framing is toxicological nonsense and deliberately misleading.

Carrageenan is a food additive. Poligeenan is an industrial chemical that has nothing to do with food.

Food-grade carrageenan is a high-molecular-weight polysaccharide (typically 200,000 to 800,000 Daltons) extracted from red edible seaweed. Because of its enormous molecular size, it can't cross the intestinal barrier. In fact, decades of rodent, primate, and human

excretion studies consistently show that virtually 100% of ingested carrageenan passes straight through the digestive tract completely intact, inert, and unabsorbed. It simply exits the body the same way it entered, acting as a soluble fiber without interacting with your bloodstream. And if the Google snippet tells you differently, that's because it's literally automating the wellness echo-chamber.

Poligeenan, on the other hand, is a tiny, fractured fragment (around 10,000 to 20,000 Daltons). It has **zero** gelling, thickening, or stabilizing properties, meaning no food manufacturer has ever had a functional reason to use it. Its primary historical application in medical science is as an **experimental laboratory irritant**. Researchers deliberately use poligeenan to chemically induce severe, acute ulcerative colitis and intestinal lesions in lab rodents so they can test anti-inflammatory drugs.

Framing a dietary discussion around “Carrageenan vs. Poligeenan” is like publishing a consumer guide titled “*Table Salt vs. Industrial Chlorine Gas*,” and then asking: “*Could the salt on your fries degrade into deadly mustard gas in your belly?*”

Your Stomach Isn't a Factory Boiler

So, could the high-molecular-weight carrageenan in your soup or almond milk actually degrade into poligeenan during digestion or food processing? NO. It absolutely could not and will not do this.

To artificially force carrageenan to degrade into poligeenan, industrial chemical processors have to subject it to violent acid hydrolysis:

- A sustained pH between 0.9 and 1.3 (far more acidic than normal gastric fluid buffered by food).
- Temperatures exceeding **80°C (176°F)**.

- Continuous, boiling exposure sustained for **several consecutive hours**.

If the inside of your stomach was 176 degrees Fahrenheit, you would not be reading this. Human gastric transit is relatively rapid, and as we all know, human body temperature is around 98.6°F. As well, digestive acid cannot provide acidity required to cleave those specific glycosidic bonds, even at higher temperatures.

But what if this degradation happened during commercial food processing? Carrageenan only functions as a thickener when its high-molecular-weight structure is completely preserved. If a food processor accidentally hydrolyzed it during pasteurization (which is highly unlikely), the entire batch would fail to gel and ruin the product. In other words, the problem would be immediately apparent. Furthermore, regulatory agencies like the FDA and the European Food Safety Authority (EFSA) enforce strict molecular thresholds and testing protocols ensuring that low-molecular-weight fractions remain negligible.

Every single scary headline (and the Google snippet) claiming that carrageenan causes ulcers, lesions, or gut perforation relies on animal studies where rodents were injected with or force-fed **poligeenan**, the laboratory irritant. Carrageenan at huge doses is harmless to rodents, as it is to you.

There may come a time when I make suggestions or requests for analysis a paid feature. But for now, if you come across such a “cliffhanger” and get concerned, or you’re just worried about another potentially “toxic” food ingredient, just let me know and I’ll see if I can look into it and include it in a digest.

The 50-Gram Meat “Statistic”

Keeping in mind that famous Mark Twain quote, “*There are three kinds of lies: lies, damned lies, and statistics,*” let’s look at another scary food headline:

“The World Health Organization warns that eating just 50 grams of processed meat a day increases your risk of colorectal cancer by 18 percent.”

You see it cited in news broadcasts, parroted by wellness influencers, and written into the descriptions of popular investigative shows like Talking Point. It sounds catastrophic. Fifty grams is barely one hot dog or two slices of deli ham! To the average consumer, hearing that a single sandwich filling yields an “18 percent increased risk” sounds like you’re standing on the precipice of a one-in-five chance of developing a lethal malignancy.

It is one of the most widely repeated, thoroughly mangled statistics in modern science reporting. The statement conflates multiple institutions, mistakes a mathematical calculation for a biological tipping point, and uses the oldest statistical sleight of hand in the book, swapping absolute risk for relative risk.

The Conflation Machine: Who Actually Said What?

The first problem is that the internet treats global health bodies as a single, homogenous entity. In reality, the “50 grams / 18%” narrative is an amalgamation of three distinct groups with very different mandates:

➡ **The International Agency for Research on Cancer (IARC):** When the IARC (an agency of the WHO) classified processed meat as a Group 1 carcinogen in 2015, they were performing a **hazard identification**, not a **risk assessment**. IARC’s job is binary: *Can this substance cause cancer under any conceivable circumstance?* It is a classification of scientific certainty, not biological potency. That is why processed meat

sits in Group 1 alongside tobacco smoke, asbestos, and plutonium. It does not mean eating a slice of bacon is as dangerous as smoking three packs a day; it simply means researchers are confident an association exists. To see how absurd this becomes when mistaken for real-world danger, commercial **jet fuel** sits in Group 3 ("not classifiable") simply because there aren't enough long-term human feeding trials on aviation kerosene. By the logic of internet headlines, a hot dog is an imminent biohazard, but drinking JP-8 is unproven.

➡ **The World Cancer Research Fund (WCRF):** The blanket lifestyle advice to “eat little, if any, processed meat” came primarily from the WCRF and the American Institute for Cancer Research (AICR), not an administrative decree from the clinical wing of the WHO.

➡ **The Epidemiological Baseline:** Subsequent comprehensive systematic reviews (such as the landmark NutriRECS evaluations cataloged across the National Institutes of Health) pointed out that the underlying evidence linking processed meat to colorectal cancer was of *low to very low certainty*, almost entirely reliant on observational cohort studies plagued by residual confounding. People who eat large quantities of cheap processed meats in survey data also frequently smoke more, exercise less, drink more alcohol, and consume drastically less dietary fiber. The amount of jet fuel they swig is undetermined.

Note to Readers: You're viewing a free, complete sample dispatch of the weekly *CulinaryLore: Unadulterated* newsletter. If you like what you see and want to receive deep-dive food science, supply-chain realities, and evidence-based myth-busting delivered straight to your inbox each week, you can subscribe for free on our [Newsletter Signup Page](#).

Fifty Grams Is an Analytical Unit, Not a Trigger

News anchors and online summaries talk about “50 grams” as though WHO scientists put volunteers in a metabolic ward and discovered a metabolic tripwire. It’s like saying 49 grams is benign, but that 50th gram triggers cellular mutation. In epidemiology, *50 grams was simply an arbitrary standardization increment.*

Because different dietary studies measured meat intake in wildly incompatible metrics, ounces, slices, portions per week, or grams per day, meta-analysts standardized the data by converting it into a common 50-gram mathematical unit to plot a linear dose-response curve. The IARC explicitly noted that the available data could not determine an official threshold or establish a “safe” daily intake level. Media outlets routinely mistake an arbitrary unit of mathematical conversion for a biological red line.

The Relative vs. Absolute Trick

Here is where the true deception occurs. The “18 percent increase” is a **relative risk**, but newsrooms deliberately present it as if it were an **absolute risk**.

Relative risk measures the proportional change between two groups, completely detached from the actual probability of the event occurring. Consider how this works in real life:

- In any given decade of middle adult life (say, between ages 40 and 50), an individual’s baseline risk of developing colorectal cancer is roughly **0.08%** (about 8 people out of 10,000).
- Apply an **18% relative increase** to that baseline:
 $0.0008 \times 1.18 = 0.000944$
- That shifts the risk from **8 in 10,000** to **9.4 in 10,000**.

The actual, absolute change in risk is **0.014%**, an absolute increase of barely **one additional person per 7,000**.

If a broadcast journalist looked directly into the camera and said: *“According to observational dietary surveys, eating one deli sandwich a day was associated with an absolute risk increase of fourteen thousandths of a single percent over a decade,”* nobody would click, nobody would tune in after the commercial break, and nobody would rush to the store to pay \$9.00 for a package of celery-powder-cured bacon. Relative risk is routinely used to turn epidemiological rounding errors into screaming headlines.

The Vanishing Runway

The deception gets even more absurd when you look at how lifetime risk numbers are used against older adults.

Public health campaigns love quoting an overall “lifetime risk” of colorectal cancer (often cited around 4% to 5%). But lifetime risk requires a lifetime of time to actually happen. A healthy 30-year-old has a 50-to-60-year runway ahead of them.

An 80-year-old, by contrast, has an average runway of maybe 8 to 10 years. Colorectal cancer is a notoriously slow-progressing disease. The sequence from an initial adenomatous polyp to an invasive carcinoma typically takes between 10 and 15 years.

Even though an older person’s cellular vulnerability in any single year is higher, their **remaining lifetime cumulative risk** of ever developing and being diagnosed with colorectal cancer before dying of something else (like cardiovascular disease, stroke, or respiratory infection) drops precipitously.

Telling an elderly person that they must sacrifice a ham sandwich to mitigate a 15-year neoplastic timeline ignores the basic physics of human mortality. If you have 5 or 8 years left to live, competing causes of mortality will almost certainly arrive long before a theoretical diet-induced cellular mutation can manifest.

If you want to see how easily population models can generate terrifying, completely fake body counts, consider a recent demonstration from the Breakthrough Institute. Those researchers replicated a series of Harvard Chan School studies that claimed proximity to nuclear plants caused cancer. When researchers ran public cancer mortality data through the same academic proximity model used by Harvard, it concluded that **Costco was responsible for over 2.2 million cancer deaths**, attributing more than 20% of all U.S. cancer fatalities to living within driving distance of bulk paper towels and \$1.50 hot dogs. In other words, rather than accounting for real-world biological mechanisms, these statistical models are simply measuring population density.

The Charlatan's Playbook

The reason this dynamic persists is because modern media doesn't need to lie to mislead you. They don't have to fabricate data when they can simply cite real numbers while omitting the denominator. By pairing an arbitrary statistical unit (50g) with a scary-sounding relative multiplier (18%) and burying the tiny absolute baseline, they let the viewer's natural anxiety fill in the blanks.

It is the exact same formula used by wellness grifters selling miracle cures: take a real, nuanced piece of laboratory data, strip out the toxicological context, magnify the fear, and pretend the solution is simple. The only difference is that when an influencer does it, we call it a scam. When a major newsroom or network does it, they call it investigative journalism.

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