Raw Milk 1

[00:00:00]

EW: One frequently hears the remark: "Look at me; I am hale and hearty at threescore and ten and have always been fond of milk and taken it just as it comes, dirt, bacteria, and all." Such persons forget three very important things. The first is that the fruits of victory are not to be judged by the survivors alone. We must have a roll of the killed and wounded too. The sanitarian so often hears the argument, "Look at me; it has not hurt me," that it is beginning to tax his patience. If the health officer wants to close an infected well, the grandfather points with patriarchal pride to his hale old years and hearty health as proof that the water can do no harm. I once heard a mother of four children (all that remained of ten) say, "well, you cannot expect to raise them all." But we do expect to raise them all nowadays, especially if they can be nurtured upon fresh, clean, and safe milk. The second important thing which old folks seem to forget is that conditions have greatly changed since they were young.

EW: Then the milk was wagon-hauled to town and used the same day while fresh. Now it comes through many hands and is often about 48 hours old when it reaches the household. Finally, in the old days many a milk-borne outbreak occurred. Many an infant met an untimely death through impure milk, but the dangers were not known and therefore not realized. The affliction was attributed to sewer gas, to miasms from the soil, or to some mysterious agency, if not the will of Divine Providence. The milk has not changed so much since the good old times, but our knowledge has.

EAU: I mean, that says it all. Erin, the episode's done.

EW: That's it.

EAU: We didn't need two episodes on this.

EW: or did we? But no, like that is what is so amazing about that. I mean, there are so many things you could pick apart from that quote, but the fact that it is from 1912.

EAU: I, I can't believe that it's so old.

EW: 1912, yeah. So that was from MJ Rosenau in his book The Milk Question

EAU: Wow.

EW: and. It's like the same things that we're gonna be saying in this episode and next episode. Gosh. But it's, um, it's amazing. Yeah. And I think that like, that there are so many parts, like you will, you cannot expect to raise them all. Like how much things have changed Right. Since that time. But anyway. Yeah.

EW: Hi, I'm Erin welsh,

EAU: And I'm Erin Allmann Updyke.

EW: and this is, This Podcast Will Kill You.

EAU: Welcome to Milk.

EW: Milk, wa yeah.

EAU: Um, today we're talking about milk. We're talking today about pasteurization

EW: Yes.

EAU: raw milk.

EW: Yeah. Yeah. Um, you know, as we were sort of putting together ideas for this season, which we're trying to organize around this theme of combating mis and disinformation, raw milk kept coming up.

EAU: It really did.

EW: I feel like it's everywhere these days and it's made us wonder like, well, what, what's the deal? Like? Why, what's going on with raw, with raw milk? Why is

EAU: everyone I feel like Jerry sienfeld

EW: talking it?

Both: what's the deal with raw milk?

EW: This is hands down the best Seinfeld impersonation I have ever heard

EAU: Thank you. Me or you? Were you complimenting yourself or, okay.

EW: Both of us. Oh my gosh. But no, like seriously, what is, what's going on with raw milk? Why is, why are people talking about it? Is it good for you? Is it bad for you? Uh, we'll get into all of that, but, but because, you know, we started to do these, this research and we were like, okay, raw milk. We'll do that as an episode.

EAU: yeah. Yeah.

EW: There is so much. There

EAU: It's so much deeper than we even realized Everyone.

EW: should learn this lesson. It's the same thing we do.

EAU: We kind of learned it because this time we're splitting it into two episodes. Erin.

EW: we are. Yeah. So this episode, this week, what I'm gonna do is I'm gonna take us through sort of the history of milk. Like what milk was like before pasteurization. What, who invented pasteurization and who did? We don't know. I mean, no, I'm kidding. Um, and like, what that, what impact that had. And then tracing the roots of the modern day, sort of raw milk movement to that past sort of trying to draw the line through history. Why are people talking about raw milk today and who, what is driving this? Like what are some of the, the drivers of this renewed interest in raw milk?

EAU: wait to learn everything that you're gonna teach me this week, Erin. And then next week I will pick it up with like, where do we stand in terms of milk and the risks of milk borne [00:05:00] disease today? What does that risk landscape actually look like in raw milk versus pasteurized milk versus ultra high temperature pasteurized milk? What is the legal landscape like look like? Can you even get raw milk? How do people even get that in the US versus in other countries? Um, is it just the FDA? It's not. Um, also, are there any differences between raw milk and pasteurized milk?

EW: are there

EAU: I can't wait to tell you about it next week.

EW: good at the teasers

EAU: Thank you. Yeah, we try.

EW: There's, there's a lot to get through this week, and so we should, we should probably start with quarantine time. What are we drinking this

EAU: We're drinking, milking it.

EW: We, we did have a discussion like, should we do a milk based drink? Should we not do a milk based

EAU: Should we avoid milk?

EW: mean, ultimately the bottom line is that there are so many amazing milk dairy free substitutes out there these days, and so

EAU: milk, milk. I think I've, I'm just kidding. I

EW: I was like, I do. Um, I'm a big fan of, of oat. Um, that's probably my preferred.

EAU: I'm not a fan of oat milk, uh, or any of the other milk products, if I'm being honest. Um, but it's fine.

EW: Wow. Okay. Well,

EAU: it's no judgment. I'm just, I'm just telling you my feelings.

EW: I appreciate that. Thank you for being vulnerable

EAU: is, you're welcome. What is in milk in it, Erin?

EW: It is based off of a drink that some folks out there might know as the pink squirrel. I certainly did not know that this drink existed before googling milk based cocktail recipes.

EAU: I am sorry, I'm losing it today,

EW: I love it. I love it. And in milk, in it. AKA, you know, based on the Pink

EAU: pink squirrel.

EW: squirrel. Yep. Creme de noyo.

EAU: Mm-hmm.

EW: Yep. White creme de cacao. Heavy cream or whatever dairy-free substitute you'd like to use, and some freshly grated nutmeg.

EAU: Oh, sounds, sounds, I don't know. It sounds similar to things we've done before. Erin,

EW: Yeah, I mean, sounds like the grasshopper, which actually is, it's like mint and creme de cacao and cream.

EAU: Okay. Listen, it's gonna be delicious. You can find the full recipe for that quarantine as well as the non-alcoholic placebo burrito version. It won't just be milk on our website. This podcast will kill you.com and on all of our social media channels. Are you following us there?

EW: You, You,

EAU: you could follow us there.

EW: should follow us

EAU: Yeah.

EW: Thank you. If you are following

EAU: I mean, sorry,

EW: I, I don't even know what we're doing. Website stuff is next. I know what's back on track. We, we can do this website's full of cool stuff. There's transcripts, there's links to bookshop.org affiliate account, our good reads list. Links to music by blood, mobile, links to merch, links to Patreon, links to deals, links to a firsthand account form. Links to, uh, sources for all of our episodes. Check 'em out. There's a lot of sources for this episode. Please read on, there's so much.

EAU: Uh, thank you for checking out a website. This podcast will kill you.com if you haven't already. Uh, take a moment, uh, press pause on playing this, and you can rate and review and subscribe wherever you're listening. We would

really love and appreciate that it helps the show a lot. If you are watching us on YouTube, hello there. Um, make sure that you're subscribed to the exactly right channel down below so that you don't miss an episode.

EW: What, what was it? Smash

EAU: Smash that subscribe button. That's what my kid watches Minecraft videos and that's what they always say. They'll be like, oh wait, now so that you can subscribe. And I'm

EW: Smash that button. Okay. All right. Well, um, we can move on,

EAU: yeah, please. Erin, tell me about Milk and Pasteurization.

EW: I can't wait. Let's take a quick break and get into it.

EW: Milk has long been a part of many humans. Diets, not just cow milk, but also goat horse, camel, and so on. Humans started consuming milk probably around eight to 10,000 yEars ago, and at some point, maybe around eight or 9,000 years ago, a genetic mutation popped up in a subset of these humans that allowed them to keep digesting milk, specifically lactose in milk as adults. Lactose tolerance. Lactose intolerance. You've heard about this before, and if you want even more details on the biology and the evolutionary history of this checkout, our episode from all the way back in 2020.

EAU: Wow. Throwback.

EW: featuring one of my favorite firsthand accounts.

EAU: one of the best first hand accounts of all time. Thank you so much, Katie.

EW: Yeah, truly. But the key thing to know about lactose tolerance, the ability to digest most [00:10:00] dairy products, the ability to digest lactose, is that around one third of the global population has this mutation, and that it is not evenly distributed across the globe. Regions with the highest rates of lactose tolerance include Northern Europe, parts of North America, Australia, and certain parts of Africa. But what this means is that heading into the 19th century milk was a diet staple in certain parts of the world, where it was in high and constant demand, and it remained a staple, even when people began moving from the country to the city, which posed a challenge to milk production and access right before the industrial revolution, which is the period that we're now entering in the story. Milk didn't travel long distances, kind of like in our

firsthand account, right? You could mostly just get it from a local farm, which of course I feel like I need to say, did not mean that the milk was completely safe or free of pathogens or just did not spoil at all. It was just perfect pure milk, right? Like, no,

EAU: It just was like, that's where you got it.

EW: that's where you got it. Uh, but with the growth of cities, these problems of spoilage and freshness, intensified.

EAU: Of course.

EW: in his 1771 novel, the Expedition of Humphrey Clinker, which by the way, has a 3.4 on Good reads. And I don't know why I find that so funny, but it, it makes me, 'cause it's like from, from the late 18 hundreds, or sorry, the late eight, the late 17 hundreds.

EAU: is that like a high rating though? Or

EW: don't know. But it's just, I think the concept of rating a book from

EAU: from this?

EW: years ago and being like, Hmm, I don't know. I liked it. It was fine. Two stars.

EAU: And it's just like an account of his expedition too.

EW: Oh no. Sorry. I'll keep talking.

EAU: Oh, okay.

EW: It's a, it's a novel. And, and from, from this novel, there's a, there's a, a passage where, uh, the author to buy a small, paints a lovely picture of the journey that a pa of milk might take from cow to cup. Ready for this? All right. Quote. Carried through the streets in open pails, exposed to foul refuse, discharged from doors and windows, spittle snot, and tobacco quids from foot passengers, from mud carts, spatterings from Coach wheels, dirt and trash chucked into it by rish boys for the joy's sake, the spewing of the infant. And finally, the vermin that drops from the rags of the nasty drab that rents this precious mixture under the respectable denomination of the milk made

EAU: Oh

EW: not, not the nicest of images. no. I don't, I don't want that

EAU: Especially not for milk maids.

EW: I know. Poor thing. Yeah.

EAU: they're working hard.

EW: I mean, but people didn't really have much of a choice, right? As cities grew, the dairy industry had to come up with solutions to meet the constant demand for milk. I. And in the early decades of the Industrial Revolution, this was maybe to keep small dairy herds housed either in open areas of cities or like just outside the city, let's say like 70 cows or so. And then as the city populations grew, these small herds grew to like 2000 ahead. Yep. And then you're not gonna find more area like you have to some figure out how you're gonna house all these, it's just increasingly cramped

EAU: right. right. Like too many cows in a small space.

EW: exactly. And when these larger herds were still not sufficient to produce enough milk for a city, milk began to be transported via rail. Keep in mind, refrigeration was not yet a

EAU: I was just gonna ask, when did refrigeration become a thing?

EW: that, I don't know, I can't believe I don't have this in here, but I don't know. Yeah.

EAU: That's okay, but it wasn't a thing

EW: wasn't a thing. Yeah. And so milk spoilage was a real concern, especially for the producers who introduce some nasty ways of dealing with it. Right. Because like you're gonna send a whole shipment of milk. You want people to actually buy it instead of having to throw it all away because it's spoiled. Right. So maybe you add some formaldehyde,

EAU: Maybe you do.

EW: maybe you do. That actually did happen.

EAU: great plan. That is sarcasm,

EW: Yeah.

EAU: just in case.

EW: In case that doesn't come through. Yeah. Um, milk formaldehyde and milk adulteration period was, was really a big problem. Yeah. So anyway, to bring it all together by the mid 18 hundreds, we've got no refrigeration, milk being transported, long distances, harmful milk processing practices like embalming it with formaldehyde cows housed in crowded and filthy conditions, humans basically living the same way in cities, and a lack of knowledge about how infectious disease spreads.

EAU: Okay. Really great setup for people to get super sick.

EW: Yep. Sarcasm again, [00:15:00] I have written a recipe for disaster. Uh, uh, but it truly was a disaster. Um, and I can demonstrate that with some numbers. So most European cities around this time had infant mortality rates of 150 to 300 per 1000 live births in

EAU: Oh dear.

EW: In New York City in 1880, infant mortality reached 400 deaths per 1000 live births.

EAU: my goodness.

EW: Yeah. Compare that to today. The US it's around 5.6 per 1000 live births.

EAU: Wow.

EW: It's just

EAU: That's

EW: world's different world's,

EAU: Yeah.

EW: infant mortality, like you heard in our firsthand account, was a way of life. These high infant mortality rates were not solely attributable to milk. Of course. You know, there was a lot of things going on. If you listen to our last couple of episodes on childhood vaccines and the schedule, you'll know. Yeah. But milk did play a huge role, and it was a lot huge of a role than I realized actually. Yeah. So for example, in Toronto, in the early 19 hundreds, spoiled milk was responsible for half of the 30,000 deaths in children.

EAU: What?

EW: Yeah.

EAU: Wow.

EW: Huge. Like, I think I've also seen estimates from one third to a half of, of infant mortality.

EAU: Oh my goodness.

EW: But like, what, what, what is, what is spoiled mean? Right? Like, how was milk causing so much illness and death? Well, pathogens. It's it's bottom line. Uh, but cows, milk, harbor, pathogens. And so when that milk was not safely treated to prevent the growth of pathogens, people who drank this milk could get very, very sick. The sugars, fats and protein in milk provides a substrate. It provides food for this path for these pathogens to grow. Right? You think about like a glass of water, and it's why, I mean, of course, water is a huge trans, a huge, uh, root of transmission for many different pathogens. But milk, the pathogens can grow, grow, grow, grow, grow, grow, grow, where it's

EAU: Milk is like a beautiful growing medium like it

EW: what you would want to culture bacteria in

EAU: Yeah. So it's not just like the ones that get put there, you know, from the milking process or from the storage process or from the handling process. It's like once they're there, they will just exponentially continue to grow because they love all the nutrients and milk as much as our bodies do.

EW: Exactly. Yeah. Yeah. And among the most vulnerable to these pathogens, of course. Infants,

EAU: Babies,

EW: Why were infants drinking so much milk?

EAU: uh, I'm guessing we didn't have formula.

EW: Well, we did have some early formulas, but it comes back again to the industrial revolution. So women increasingly had to work in factories to help provide for their families, which meant that they would be gone for long, long stretches of time. They couldn't bring their babies with them, and they couldn't breastfeed their infants. And so as a result, breastfeeding declined around 50 to 70% during this

EAU: Oh, wow. Okay.

EW: huge decline. And babies were instead fed, or like cow's milk alone or cow's milk supplemented with early formula, or they were supplemented with cow's milk. But. This cow's milk had not undergone any treatment for disease prevention.

EAU: right, right.

EW: So there was a 1905 epidemiological study of infant mortality between breastfed and cow's milk fed infant, and they found dramatic differences in babies that were zero to three months old. Infant mortality was 1.9% in breastfed babies and 92% in cows milk fed babies.

EAU: I mean, that makes sense too, just in terms of like nutritional differences in cow's milk versus human breast milk in a baby that young.

EW: Mm-hmm. Mm-hmm. At 1-year-old, uh, just to, you know, carry this further, 6.2% of breastfed babies died compared to 36% of cow's milk only. Huge. I mean, these are huge differences. Babies fed cow's milk were 15 times more likely to die than breastfed babies alone.

EAU: Wow.

EW: Again, you know, this was pre-modern day formula. Like this is a very

EW: different time.

EAU: Well, they didn't have other options. They didn't know as much about the nutritional differences, but it was like, this is all we've got. It's one or the

EAU: other.

EW: Yeah. And of course, this was used to shame

EW: working

EAU: Oh, of course.

EW: women who had no other option to then than to feed their baby cows milk like it was. It's always used to shame. Yep. Anyway, but these differences in infant mortality were not due solely to nutrition. Mostly they were due to pathogens. number of different outbreaks were tied to milk, [00:20:00] typhoid, fever, diptheria, scarlet fever, septic, sore throat, and of course tuberculosis.

EAU: also. Diptheria. What?

EW: I know. I know. But yes, toper awful. Yeah. So tuberculosis, uh, was a huge killer during this period, and it was greatly, greatly feared in the late 1880s in the northeastern US tuberculosis infected 20% of all cattle.

EAU: Whoa.

EW: Yeah. And I'm assuming they didn't mention this specifically. I'm assuming this is bovine tuberculosis, which can still cause infections in humans.

EAU: absolutely.

EW: And I know that you'll talk more about that probably next

EAU: A little bit.

EW: okay. Okay. Um, but anyway, from the same time period, late 1880s, 15% of all cans of milk were contaminated with the tuberculosis bacteria.

EAU: no, thank you.

EW: Okay. But believe it or not, like those are some, those are some decent numbers. Like those are okay. Not bad, right. Yeah. Well, yeah, I know, I know. Because in 1893, around 50% of the milk that was supplied to the city and county hospitals of San Francisco contained active tuberculosis bacteria,

EAU: Why? Why, Why?

EW: because it was, it was rampant in the, in the

EAU: Oh my goodness gracious.

EW: Yeah. Yep.

EAU: Yeah.

EW: In 1900, I'm gonna keep going. 10% of all cases of tuberculosis in humans were attributable to infection from bovine tuberculosis.

EAU: What.

EW: And I mean, in 1900 tuberculosis, everyone had tuberculosis. Like it was

EAU: the thing to do.

EW: it's a huge number of cases.

EAU: Yeah.

EW: Spoiled milk in general. This, just to give you some, you know, to harken back to what we were talking about as milk being a food for bacteria, also spoiled milk was found to have 500 million bacteria per cubic centimeter. It's

EAU: Oh, I'm, I, I, don't know if I'll ever drink milk again.

EW: I, I mean, you can always oat milk Aaron,

EAU: I guess.

EW: but like, how, how was this happening? Let me paint you a

EAU: please.

EW: Okay. So you remember how I said that herds were kept in cities and really crowded and filthy conditions. So these herds often went hand in hand with distilleries, like whiskey distilleries, alcohol distilleries, right. The leftover mash from making whiskey would be fed to the

EAU: Okay.

EW: So it was just like a, okay, here's like a, you

EAU: A little cycle

EW: little cycle. Mm-hmm. Mm-hmm. The resulting milk from cows that were fed this, um, you know, the old grain was called sw or slop. Yeah. Swill milk.

EAU: SW milk

EW: And so a lot of distilleries actually housed cows on site, like Johnson's Grain, distillers of Manhattan, which had up to 2000 cows in

EAU: in Manhattan.

EW: Isn't that wild to think about?

EAU: can't imagine it.

EW: I know, I know. The life of these cows and the milk that they produced is best illustrated by this quote from a 1980 paper by Frederick Sten. You ready for this?

EAU: I'm ready.

EW: quote, the cattle stood in a huge building in rows of seven to 10, head to head installs three feet wide. The cow consumed 32 gallons of slop and three pounds of hay in such surroundings. The cow was rarely washed. Its excrement, clung to its tail and hindquarters. It was reported that the people of Berlin consumed 300 pounds of cow dung in their milk daily ulcers. I know. I know.

EW: Ulcers developed in the mouth of the cows. Their tails often fell off. of the glands, lungs, and intestines followed. stall became a cesspool. One Brooklyn distillery indicated that out of 1,811 cows 230 died in 10 weeks.

EAU: No.

EW: Mm-hmm.

EAU: Oh, no.

EW: Milk obtained was pale blue. Often turbid and melos speculating. Dairymen concealed their wickedness, not so much as by diluting the milk with water as by adulterating, the swill milk with plaster of Paris charcoal, starch, sugar, flour, and egg, making bad matters

EAU: oh, dear. I feel like I remember you talking about this in another episode.

EW: Yeah. Um, the Poison Squad episode. Yeah. Yeah. And we talked about it in something else too.

EAU: Arsenic maybe. Because you talked a lot about just like the contamination of things in that episode. I don't know.

EW: I don't know. It was something else, but Yeah. Yeah,

EAU: and this, just to remind myself, this is like mid to [00:25:00] late 18 hundreds,

EW: This is, I would say late 18

EAU: late 18 hundreds. Okay. Gross. So glad I don't live then.

EW: Most city milk came from distillery cows like that is if you lived in the city, what, what I just described, that's, that's where your milk is coming from. This was not sustainable. They were basically killing off their customers. Right. Something had to be done to improve milk safety. Fortunately, the solution already existed.

EAU: Uh, did it

EW: It did Louis Pasture, you know, we've talked about him a million times before on this podcast. His role in developing germ theory, his rabies vaccine, his work on tuberculosis. Needless to say, we all know this dude's name,

EAU: We do. I hope

EW: we know it, yeah. But we haven't, at least as far as I can remember, ever talked about the process that bears his name,

EAU: I don't think so. I don't think we have. Maybe in lactose intolerance, but if that minimally,

EW: I, yeah. I really don't remember. Yeah. Okay. So, broadly speaking, what is pasteurization? It's a process, right? It involves heating up a product such as milk to a certain temperature for a certain amount of time to destroy pathogenic microorganisms. There are many different, like, you know, uh, subtypes of pasteurization, and I know you'll talk a little bit more about

EAU: A little bit. Yeah.

EW: yeah. Yeah. Uh, it does not kill all of the microbes. It's not sterilization. Which is why pasteurized milk can still eventually spoil, but it does kill off a great number of them, making the milk safer and last longer while also preserving nutritional qualities and taste. That's

EAU: That's pretty simple, Aaron.

EW: Pretty simple. Pasteurization, though it works on the knowledge that pathogenic microbes cause foods such as milk to spoil. In the mid 18 hundreds, this knowledge wasn't really widely known or accepted, so people had observed microbial life since at least Van Lavin Hook and his microscope, but the jury was still out on what role these microbes played. Most scientists thought that the microbes seen in spoiled milk or fermented wine were a byproduct of spoilage or fermentation, not the cause of it.

EAU: Okay.

EW: But Louis pasture wasn't so sure, did not intend for that to rhyme. But it did in, in 1854 pasture, began studying fermentation specifically in beer and wine to try to understand what the microbes that he observed were doing. And he demonstrated that grape juice would not ferment into wine if you prevented environmental yeast from depositing on grapes.

EAU: Okay.

EW: Yeah. And he also demonstrated that broth would only turn cloudy and thus teeming with microbial life, as you could see under the scope if you exposed it to air. Right. So he showed that these two products, these two, the, the result of this was microbes, right? Like they, they caused it. They caused fermentation. They caused spoilage.

EAU: Those didn't happen without those present.

EW: Yep. And they also weren't the, the product of that.

EAU: Right, exactly.

EW: Right. So he, and this was also I think, integral in the, in germ theory itself. Right. Basically connecting exposure to pathogens and disease. And so with this knowledge, he connected the dots between microbes and food products, like wine and eventual spoilage. And this was a huge deal for the wine industry and the beer industry for sure. Uh, because he saw that, you know, if there was a way to kill off those petrifying microbes, you could preserve the wine. So science had known for decades. This part I did not know, and the general public for likely much, much longer, that heat treating food would help to keep it from spoiling. Like people knew to heat

EW: up

EAU: people did that. They heated their milk or heated their water, or heated their whatever.

EW: Mm-hmm. And even like heat canning for vinegar and stuff had been around. Yeah. Uh, there was a text from 1702 that recommended boiled milk for infants.

EAU: Oh

EW: yeah.

EW: And, and also it was just like, it was daily. It was known much, much longer, like in daily life for, you know, in common knowledge for centuries. But Louis Pasture was the first to really formalize the practice and explain why it worked. Like what, what was the heating actually doing to these microbes?

EAU: Right.

EW: So he did it first with wine in 1868 in a public demonstration. He loved public demonstrations where he shipped a cargo of pasteurized wine around the world without a single bottle spoiling, which was like unheard of. And he later applied it to beer. Um, and, but it doesn't seem like he ever tried it with milk.

EAU: That's so interesting.

EW: just didn't do it.

EAU: we, I mean so many things like that we eat and drink today are pasteurized,

EAU: but like the thing that I think most people think of is milk and milk

EW: uhhuh.

EAU: So That's so

EW: no, it wasn't PE [00:30:00] who did, who applied it to milk, or at least it seems, yeah, yeah. Uh, that instead fell to a number of doctors, researchers, and passionate civilians around the world. And it started kind of slowly, right? Just a few people trying it out. But it grew more and more popular over the 1870s. And so that in 1882, the first commercial pasteurization process was developed in Germany

EAU: Mm, for milk.

EW: Mm-hmm. And from there, the practice spread to Sweden and Denmark with pediatricians recommending home treating your milk, as well as commercial producers incorporating it into their processing.

EAU: Okay.

EW: But perhaps the most outspoken and well-known advocates for pasteurized milk were Lana and Nathan Strauss. So, Nathan, do, does this name sound familiar to you?

EAU: are they related to the Levi Strauss of the jeans or of the Strauss? Uh, dairy, I'm guessing neither

EW: they're, they're the Macy's Strauss's.

EAU: Uh, I don't know. Macy's like the

EW: like the department

EAU: they're also strauss's. I didn't know that.

EW: Okay. I have some fun trivia for you. All right. Ready? Well, maybe not fun. I have some trivia for you. So Nathan, along with his brother is Adore,

were the co-owners of Macy's department store, Isador and his wife died in 1912 on the Titanic Sinking Uhhuh. You know the movie, the Old Couple Lying in bed.

EAU: Uhhuh.

EW: That's them.

EAU: Oh, that's so

EW: Isn't that really sad? That was always like the most, I mean, that I sob at that movie. Uh, but anyway,

EW: so that's my trivia back to Nathan and Lana Strauss, the other Strauss couple. Uh, I think there was a third brother, but I'm not gonna talk about him. In the 1890s, the Strauss became very vocal supporters of pasteurization. I. Because they had lost two of their children to milk born tuberculosis. And they learned about pasteurization. They learned about it, um, extensively from a, a very prominent American pediatrician named Abraham Jacoby and who was also a huge proponent of pasteurized milk. And so they were like, we, we need to tell everyone about this. We need to do something about this. And so they were like, let's, let's spread the word. They would visit different cities and they set up milk stations in New York City where pasteurized milk was distributed, and they only charged those who could afford to pay at the low price of a penny a pint, and everyone else would just get it for free. They also established a pasteurization unit in 1897 on Randall's Island at the city's free hospital for children, where the mortality rate was 44%.

EAU: Oh.

EW: Yeah. After pasteurized milk was introduced, it dropped within a year to 20%.

EAU: Oh my goodness, Erin.

EW: Yeah. And it continued to decline. In subsequent years.

EAU: Wow.

EW: By 1900, they had distributed half a million bottles of pasteurized milk, and by 1906 they had opened 17 philanthropic milk stations in the city.

EAU: Philanthropic milk station.

EW: know I'm not phrase I have ever said before, but it's great. Yeah. And they were intent on launching similar programs and passing pasteurization policy across the nation. But with this, with this goal, they were at least initially in the minority.

EAU: Huh?

EW: Early 19 hundreds. So while other countries much more readily adopted, pasteurization, beginning in the 1880s, including pastor's home country of France, the US was much more reluctant, as was the uk, which only required pasteurization starting in 1922, I think. And even then, it was really slow to catch on. People were just like, no, I'm not gonna do this to my milk. In 1908, Chicago became the first US city to require pasteurization unless a farm 1908. Yeah. But there was a, there was an asterisk there, which was, unless the farm could prove that it was tuberculosis free, and then that farm could sell what they called certified milk. And after Chicago, other cities followed. So, you know, New York passed an ordinance requiring full pasteurization in 1910. And then Philadelphia, Milwaukee, Boston, San Francisco introduced laws in like 19 14, 19 15. These pasteurization laws began in the cities and gradually made their way into more rural areas. But the passage of many laws prompted by various cattle epidemics or outbreaks in humans tied to raw milk. So it was just sort of like a kind, it was, it was a strange thing because it was a lot of people dragging their feet. There were a few very prominent, outspoken supporters of pasteurization, but, and there, and a few very prominent. Detractors, but for the most part, people were like, I don't really know how to think about it. Is the tech, the technology is so new and this has a lot of parallels with other food [00:35:00] technologies that have been introduced. Um, like food irradiation, GMOs, which is we should do an episode on. Um, but like this sort of thing, the slow, like, oh, I don't know, it's a little early to say, this person says this. There's a fascinating article that I read for this, um, about New York Times coverage of these three different technologies, pasteurization, food irradiation, and GMOs, and sort of the, the rhetoric used like over time as these technologies become more accepted. Fascinating stuff. Anyway. History echoes.

EAU: It's almost like we can learn from it,

EW: What about that? Wow. Anyway, okay. So, um, in, just to give you a sense of like timing for pasteurization in the us. So by 1926, 100% of the milk in cities with over half a million people was pasteurized, but only 45% of milk was pasteurized in American cities with fewer than 25,000 people. So it was

like still a very urban rural divide. Um, did you know that my grandma grew up on a dairy farm in northern michigan

EAU: don't know if I did know that Erin

EW: and I was talking to my mom and I was like, mom would, would she have, would Amma have drank raw milk or like pasteurized milk? Did they, my mom was like, I don't know, it was a huge, she visit, my mom visited there like much, much later, but I don't know when they would've introduced

EAU: if ever. Yeah.

EW: Yeah. Yeah. I know. I know. Anyway. Um, but pasteurization, when it was introduced, even if it was like a little bit staggered, it was clear what a huge impact that it made. And it's hard today to, to quantify that. But we do have a few different figures that we can look at. Um, because there were other things going on at the time, right. That contributed to the decline in infant mortality. Vaccines,

EAU: general

EW: knowledge she had sanitation especially. Yeah. Uh, but in New York City, for example, the Commissioner of Health attributed the drop in infant mortality from 12 per 1000 births in 1893 to 3.8 in 1916 to the compulsory pasteurization of milk.

EAU: Wow. They said that just from

EW: They said that's from milk.

EAU: Wow.

EW: Undoubtedly other medical and public health improvements played a role, but there's no denying that pasteurization was saving the lives of some of the most vulnerable members of society. And despite this pasteurization continued to be a contentious issue, especially in the US and continues to be.

EAU: Why?

EW: Why? Okay. That's a great question. So

EAU: I have so many thoughts and questions about this. Erin, please tell

EW: I, I know. Okay. So historically, at the time, so let's say, let's frame this into 1910s to 1930s or so. There were four basic arguments against pasteurization in the early 20th century. The first three were more dairy industry based. Number one, expense pasteurization required additional equipment, which might be prohibitively expensive for small farms, putting them out of business and letting the big farms take over.

EW: And they claimed that this cost would also trickle down to the consumer who may be priced out of buying milk. All

EAU: That's so interesting in the context of today. But anyways, continue.

EW: Mm-hmm. Mm-hmm. Mm-hmm. Mm-hmm. There was also a, if they want to drink raw milk, let 'em, like, let's just let 'em have it kind of a sentiment. Like who, what are you requiring these

EAU: Who are you to tell me what I can and can't drink?

EW: Yep. Then number two, necessity. Many people claimed that pasteurization didn't ultimately solve the issue of a dirty farm, that all it was doing was allowing the farmer to sell dirty milk under a false promise. And they argued that enforcing pasteurization would just make farms even more disease ridden. And that since it was such a new science, you couldn't even be sure that pasteurization was doing what it was supposed to be doing.

EW: I mean, new science is a stretch because it was, you know, 1868 was when it was like really used, but Sure, yeah. Uh, number three, taste Pasteurization was said to ruin the taste of milk, to take the life out of milk, quote unquote, and farmers worried that people would stop buying milk because of this changed taste. This alleged changed taste. Okay. The fourth argument against pasteurization is kind of an extension of this, and it came from the medical community actually. Nutrients. So some doctors believed that pasteurization destroyed the nutrients in milk and would ultimately harm the infants consuming it. And I think it's important to place this in context, right? So the pasteurization debate was happening as researchers were finally beginning to piece together the components of nutrition like proteins, [00:40:00] fats, amino acids, vitamins, and so on. And so there was extra sensitivity there. People were like,

EAU: Like, whoa, whoa, whoa. Now we know there's a lot in this milk. It's not just milk, it's a bunch of stuff in there. And what happens if you heat it up? Do you mess up all the stuff?

EW: Yes. Yeah. Like, uh, scurvy was one special fear, especially, it was like, people are gonna get scurvy with pasteurized milk.

EAU: the way, milk is a terrible source of vitamin C,

EW: Exactly.

EAU: but they didn't know that at the time.

EW: They didn't know that at the time. Or maybe they did because they knew about scurvy and they knew about vitamin C. So,

EAU: I mean there is vitamin C in milk, but it is a very small amount and it is quickly oxidized just from exposure to air. And so it is not stable. Sorry, I could go on 'cause I went too deep of a dive on like the

EW: I love it.

EAU: of milk. Pasteurized

EW: keep going. Yeah.

EAU: Yeah. Vi. Don't get your vitamin C from milk, raw or pasteurized.

EW: mean, you won't be able to like you

EAU: You will get scurvy

EW: you will get scurvy.

EAU: no matter if your milk is pasteurized or not.

EW: Uh, but yeah, that was a big sticking point for them. And you know, also on top of this, some doctors just doubted the milk disease connection entirely, which was really frustrating to proponents of pasteurization who pointed out number one, disease outbreaks are linked to specific milk. Like that came from that batch of milk, right? Two outbreaks are explosive, which point towards a

common exposure. Number three, populations that drink more milk tend to have more milk related disease. And number four, within households, milk drinkers have more milk related disease. The evidence was there, right? Like they were like, what? It's, It's, here. It's here you go on a platter with pasteurized milk. Um, but, but the other arguments could also be refuted, right? Producing certified raw milk was, which was like, okay, your, your farm is tuberculosis free, blah, blah, blah, was actually more expensive than pasteurization, given the frequent inspections that had to happen. It also didn't really prevent tuberculosis because you could, you, if you go through, you know, if you're inspecting only every three months, you're, you could be selling tuberculosis. Well, anyway, yeah. Uh, taste, uh, I can't speak to that, but when weighing potentially deadly diseases on one hand and taste on the other, I think it's reasonable to sacrifice a little bit of taste for safe food. Just my feeling.

EAU: can I also, can I, I'm sorry because I feel like this is jumping ahead to what I'm gonna talk about next week, but like you also have to take into consideration. What types of farms are you talking about? Are you still talking about Grody farms in the middle of New York City with 2000 cows standing on top of their own poop. Okay. If you pasteurize that milk Yeah. It's probably still gonna taste bad.

EW: Well, but that's the thing too, is that that is what I think the, the proponents of, uh, raw milk were saying is that they were like, oh, well, you're just making this dirty milk. No, there were still quality cleanliness

EAU: Right? Other standards that were going into place.

EW: clean milk was being pasteurized. Like that was the bottom line. You couldn't, you could not pasteurize dirty

EAU: You can't keep doing what they were doing. It was like other things have to change and hey, guess what? Even your supposed clean certified farm is still getting people sick, so you still have to pasteurize it.

EW: And there were still safety standards across the board. Whether your farm was selling certified milk or pasteurized milk, you still had to meet the same safety standards. Yep. Okay.

EAU: Okay.

EW: At the end of his book, the Milk question au, who we heard from in our firsthand account, summarized what he viewed as the answer to the milk

problem quote. "To keep milk clean, we need inspection. To render milk safe, we need pasteurization. Inspection goes to the root of the problem. Through an efficient system of inspection, the milk supply should be cleaner, better, fresher, and safer. Inspection, however, has limitations. These limitations may be guarded against by pasteurization. A milk supply, therefore, that is both supervised and pasteurized is the only satisfactory solution of the problem."

EAU: Love it.

EW: End quote. Yeah.

EAU: I mean, yeah.

EW: And yet. And yet this debate continued long after pasteurization laws were widespread across the us. I mean, those four arguments for raw milk and against pasteurization are essentially the same exact talking points of raw milk proponents today. Just a little bit, there are a few extra ones thrown in there. I know you'll talk about it. Yeah. Raw milk has never really disappeared. In fact, it's grown in supporters over the years. So like what gives, why is this such a sticky idea in the face of all of this evidence that pasteurized [00:45:00] milk is safe and healthy? Who are the people pushing raw milk? Like what, what is, what is happening there?

EAU: And why?

EW: Yeah. Well, okay. First of all, they're not a monolith, right? Like there were, and continue to be many different drivers for why people buy raw milk or attack pasteurization laws. So for instance, many pro raw milk folks argue that raw milk sales helps small farms and local economies. The price of a gallon of raw milk is typically two to three times that of a gallon of pasteurized milk.

EAU: I feel like that's an underestimate based on things I've seen.

EW: It it is. Um, and it also, it uses that, I, it's, yeah, it uses that tried and true psychological link where you think that because something costs more, it

EAU: Right. It must be better

EW: Mm-hmm. Mm-hmm. Uh, and they say that the direct farm to consumer sales helps the farm cut back on processing costs.

EAU: I mean, I believe that.

EW: I have not read through any economic analysis comparing rota pasteurized milk. I, I don't doubt that there's some basis to this, especially considering how popular of an argument it is. I have to wonder, and I guess you'll talk about it next week, what the legal and financial repercussions are if you sell a batch of raw milk that makes people sick or die.

EAU: Then you, yeah, I don't have an answer to that next week either. Erin, just so you know.

EW: And I think that like raw milk does sort of signify a, an an overall desire to have better health. So like, what does that mean in the society, right? Like micro tuning every part of your life, right. But we're not, I I'm not really gonna get into that aspect of it. What I wanna talk about for the rest of this episode is not economic claims, not sort of the general sense of dissatisfaction and, and all of that, but rather the ideological arguments that people make for raw milk, what underpins them and the dangers in this rhetoric. Before doing this episode, I thought of raw milk in the US as like this fringe idea, like a fad carried over from the hippies of the 1970s, like kind of a misguided, crunchy, granola type of alternative health interest. Like that was, that was my perception of the vibe of raw milk. I had no idea just how much raw milk is used today by the far right and white supremacists as a dog whistle.

EAU: Mm.

EW: I didn't know maybe that, maybe that means that I just am not. Online enough or I'm not, I don't know. I'm not paying enough attention. I don't know. Um, but I think it's, it's so fascinating because it kind of is shares so many parallels with anti-vaccine sentiment and it kind of reveals that the spectrum or what we think of, or what I was thinking of as a political spectrum is really a circle

EAU: Mm.

EW: and I don't know what that means. Um, but anyway, yeah. So,

EAU: Yeah.

EW: but as I started to research for this episode, I found traces of this link between raw milk and fascism going all the way back to the early 20th century eugenics and Nazis. And so how did this trend in the US go from eugenics to its crunchy granola era to now its links to the far right and white supremacy.

EAU: Yeah.

EW: That's a great question. Let's, let's see if we can connect some of these dots. So from the very beginning of the 20th century, there was considerable pushback against pasteurization, as we just talked about. And one of the key medical objections was that pasteurized milk was viewed as less nutritious than pasteurized milk. And Erin, I know that you'll talk more about this next week, uh, but yes, there are some nutritional differences between the two, but they are very minor and would be addressed with other foods, right? Yeah.

EAU: Yeah. I,

EW: But these differences were exaggerated by some vocal antipas throughout the first decades of the 1900s. While most pro pasteurizer felt that a minor, nearly undetectable loss of nutrients was an acceptable trade-off for not dying of a deadly disease, others like Halladay Sutherland we're more concerned with what that nutrient loss meant for future fertility. In a 1938 correspondence to the British Medical Journal, he wrote, quote, the shadow of depopulation and national decline is looming in the near future. Milk is a staple food, and before pasteurization is adopted as a national policy, I suggest that it would be wise to test the effects of pasteurization on the fertility vitamins. Let us experiment on animals before experimenting on the nation

EAU: Oh dear. Okay. At least he said animals, I guess

EW: Yeah, I mean, I guess, um, and people, people had done experiments and there was no detectable difference, but he misreported, um, the results of those, of course. But this, this view didn't come out of nowhere. The implication that pasteurization would accelerate depopulation was tied to the general belief held by eugenics. [00:50:00] That whole unprocessed unserved foods were fundamental to the fertility and overall health of the desirable sub subset of a population

EAU: Just the desirable subset

EW: does well, of course, right? Like yeah. The, the implications read between the lines kind of a thing. Yeah. Some anti pasteurizer loosen to their stance to allow exceptions like, oh yeah, okay. We can, we can pasteurize maybe for those who are impoverished or we can pasteurize for in cities specifically, which is of course, you know, where you're going to see the highest population of impoverished individuals. Uh, but this eugenic perspective wasn't limited to human consumers of milk, but it also extended to the bovine producers

themselves. Certain breeds were hailed as producing the best tasting milk, which is also echoed today. You can see that, and it's no wonder that this rhetoric of superiority and inferiority carried into the debate about pasteurization, like, you are what you drink, right? Like that's sort of the

EAU: Yeah. It's like my, I'm better than you because I'm drinking raw milk. Oh, gosh. Yeah. I mean, that is a hundred percent the TikTok vibes today. So,

EW: Uh, in 1941, British physician Lionel Pickton wrote quote "Much of modern food is processed, preserved, refined, sterilized, dead contrast, the incipid pasteurized fluid of today to the milk of our forefathers." End quote.

EAU: sorry. I can't, I'm getting so annoyed, Erin.

EW: I am sorry.

EAU: But especially 'cause I, I should just keep my mouth shut

EW: There's also so much more.

EAU: I know. I, I'm gonna talk, I'm gonna talk about the things that are annoying me about this rhetoric a lot next week. But it's just, it is so incredibly misguided to put the types of rhetoric that they are saying on pasteurization itself. Like, say what you want about the US food system. We are kind of broken. Pasteurization is not the broken part. Pasteurization is the part that's saving babies lives. I'm sorry, I'm getting too

EW: No, that is the bottom line

EAU: That it.

EAU: uh, they're just picking why pick past, why pasteurization? Why is that the thing they, they picked?

EW: let's, let's keep going 'cause there's, we, maybe we'll get some clarity. I don't know. I can't promise that, but we could try this way of talking about food. This call for natural unprocessed foods, subsistence farming, making food great again. It was also how Nazi officials discussed food and nutrition. They pushed for a diet consisting of food, grown on national soil foods that they had evolved eating.

EAU: Uhhuh.

EW: Fran's words, a professor of medicine and leader in the life reform movement said in 1939, diet must be in the position not only to preserve the continued existence of the nation and race, but also to make them more fertile and fit

EAU: Oh dear. Yeah. Okay. Okay. Okay.

EW: and the group that was instructed to lead the charge housewives through a return to a traditional lifestyle.

EAU: Oh my gosh, Sharon.

EW: I'm sorry.

EAU: Oh,

EW: I know, and this, this focus on healthy eating on unprocessed natural foods was not counter to their goals of genocide and ethnic cleansing. It was part of it, right? They viewed diet and nutrition through whole natural foods as essential to the ultimate goal of increasing the fertility and health of what they viewed as a desirable race.

EAU: Yeah.

EW: The call for whole natural foods, subsistence farming, and a return to traditional lifestyles. It kind of sounds familiar, doesn't it? If you've been reading the news too familiar, I mean, that, that is the rhetoric that the far right uses today.

EAU: Yeah.

EW: Uh, just a few days ago on March 9th, 2025, we're recording this.

EW: On March 12th, Trump called for a return to subsistence farming as a solution to rising egg prices. RFK Junior, the Secretary of the Department of Health and Human Services, has called repeatedly for the elimination of ultra processed foods and GMOs, and a return to whole unprocessed natural foods. He's also a big raw milk fan. In, of course, in addition to being anti-vax. Trad wives are all over TikTok, spouting the supposed benefits of raw milk. White

supremacists use milk imagery as a dog whistle for racial purity. The neo-Nazi, anti-Semitic white supremacist, who coined the term alt-right, used a milk emoji in his Twitter profile and wrote, I'm very tolerant, lactose tolerant.

EAU: Mm.

EW: Mm. Starting to come together. Right. He and other [00:55:00] neo-Nazis use their lactase persistence to claim genetic superiority

EAU: Oh my goodness. I'm sorry. It's just so dumb

EW: I'm so depressed. I know. I, I hate everything

EAU: Like that's just so incredibly ridiculous.

EW: I know. But you can't, like, you can't. There's no logic to it, so you can't Yeah, you can't argue it. Yeah.

EAU: a bunch of weirdos. I'm sorry, I shouldn't say that, but like,

EW: say that.

EAU: um. I'm better than you because I can continue to digest lactose.

EW: I drink another mammals milk

EAU: I drink. It's a weird thing to do to drink a cow's milk. It's a weird thing that we do.

EW: It is, It is,

EAU: Oh my gosh. We are the weirdos. If you can do it, it's not normal.

EW: but that's, that, that's the thing. So just to, in case people don't remember from earlier on in the episode or don't know this, that this mutation, the lactase persistence occurs at higher frequencies in people with Northern European descent. And so this is them directly calling that out

EAU: But

EW: oh, I'm genetically superior because of that. Yeah,

EAU: of the global population cannot digest lactose into adulthood.

EW: but that's that's their point. Like that is they Yeah, I know. I know,

EAU: so

EW: But this is not, this is why milk is not a random

EAU: It's

EW: right. Like they chose

EAU: chosen. Because of that, it's a way to distinguish yourself

EW: Uh huh.

EAU: as pure.

EW: a coincidence. Yeah. And this, in fact, this type of dietary racism dates back to the 19th century in the late 18 hundreds. Another period of time where perceived threats to traditional masculinity were high and fears of immigration loomed large. The medical researcher Jay Leonard Corning, wrote that Western meat and dairy products were directly responsible for the quote unquote intellectual vigor and superior moral courage of the English that allowed them to quote, extend their empire throughout the world.

EAU: my goodness.

EW: He described non westerners as quote unquote effeminate rice eaters. It sounds a lot like the soy boy insults that, the alt-right hurls that people today, right. Like it's, the parallels are so clear. It's yes.

EAU: Okay.

EW: Yeah. Both of these, both of these things incorporate attacks on diet and masculinity

EAU: And race.

EW: and race.

EW: Yeah. An agricultural history of New York from the 1930s kept with this theme, quote,

EAU: Okay.

EW: A casual look at the races of people seems to show that those using much milk are the strongest physically and mentally and the most enduring of all the people in the world of all races. The S seem to have been the heaviest drinkers of milk and the greatest users of butter and cheese. A fact that may in part account for the quick and high development of this division of human beings. End quote and gross. Yeah.

EAU: I, I don't think I had any idea, Erin, that it was a, so, like that it went so far back and that that milk and raw milk has always been so tied into this like white racial superiority situation. Like that's, I did

EW: I know, I know. I, I, I just kept falling down the rabbit hole and like, what, what do you mean? And then just like the everything, how history is not quite repeating, But Yeah. Like kind of, yeah. Yep. Yeah. So no present day white supremacists using milk as a symbol for racial purity. It's not a coincidence, but but where does the raw milk aspect fit into this? Like, why are. Right? How did raw milk go from being a crunchy granola alternative health item to an alt-right symbol? It followed the same path as the anti-vaccine movement. Again, the spectrum is a circle. The commonality between these two groups, the, like alt-right and alternative health, I guess I'm not really sure. The labels, um, is rejection of the traditional expertise and government regulation, at least on the surface for them. For these, for many of these people, raw milk and quote unquote, vaccine choice represents deregulation. It represents a rejection of government oversight. It represents a return to a traditional lifestyle. It's not really about raw milk at all. It's about redefining expertise, about instilling mistrust in scientists and their research, nor is it about deregulation and less government oversight. That's just a facade, right? Like this becomes clear when you consider that many of these people in the alt-right seem to be just fine with government regulation [01:00:00] when it comes to women's bodies and trans people's

EAU: Mm-hmm. Well,

EW: off my raw milk,

EAU: also like farms that produce raw milk also have to be like very strictly regulated and inspected, and there's all kinds of rules and regulations that go into that also. So that doesn't track

EW: track. And you know, I think that one thing that I, I want to make very clear is that I am not saying that everyone who loves raw milk or is even curious about raw milk subscribes to these alt-right or racist beliefs at all. That's not what I'm saying. Just like you said, Erin, there are many different reasons that people might be interested in raw milk, in part because our food industry is broken. But deregulation is only going to make it more broken in the sense that like the companies, the big, big companies then will have fewer guardrails to actually prevent them from hurting people.

EAU: Right. Well, and like we talked about last week, like I was on TikTok looking at raw milk info to kind of understand like what are people even talking about when it comes to raw milk today? Like for real on social media. And I don't think that the vast majority, I mean, I'm sure there are a lot of people who are sort of in the know, wink wink about the kind of where this came from or what this signifies. But I think there's a lot of people who are just like, is it gonna be better for me? Is it going to be, is it a better nutrient profile? Is it going to be a healthier choice for me? Like, and, and it's really hard to sort through this mis and disinformation because the aesthetics are beautiful. are

EW: you're right. No, it's, it is understandable to go, what? But what about this? I've been hearing a lot about this lately and not knowing. Why we have raw milk, why we have pasteurized milk. When you, most of the stuff that you're hearing on social media is about the purported benefits of raw milk, right? Like that is, it's, it's our algorithms and it's, it's all of this. Right. But yeah, my, I I, I do want to make a very clear distinction that there is a big difference between the, you know, some of these ideological drivers and some of the reasons that people might be like, I'm interested in raw milk. I wanna learn more about it. I had no idea about all of these connections and how, and how deep it went. And so my, my main point here with this, with this episode or with this part of the episode, is just to try to understand some of the drivers of this movement, especially in the past few years. And a large part of that seems to be the alt-right, or at least they're using it as this symbolic way, right? As this opportunity, many people stand to profit off of deregulation and raw milk is just one minor facet of this. Um, and it's, it's, I think it's fast. I think it's important to examine its use as a political symbol.

EAU: Right.

EW: That's it. Raw milk carries with it a lot of baggage, and that baggage is rarely acknowledged. Like, you know, the, the calls that that RFK Junior makes for natural unprocessed foods, it's hard to disagree with that. Like, what's the real harm in letting someone drink raw milk if they want to? But that is the point, right? Like that is the point of these claims. The lack of any nuance or any real substance in these demands, in these health claims, it leaves no room for argument. Because what does, what does natural mean? Right? What does unprocessed mean? What does it actually mean to have unprocessed foods? How are you gonna do that? How are you gonna make those affordable and accessible? What's the plan there? What's the concept of a plan there? Does pasteurized milk count as a processed food silence? On these fronts, right? Silence. And I'm in no way saying that ultra processed foods are great for you. And that food regulation and accessibility needs no changes whatsoever. But there's a huge difference between the processing that happens with Cheetos or jelly beans to make food taste better, like last longer, be cheaper to make, et cetera. And the processing that helps with pasteurization, which is solely to prevent disease, right? Like pasteurization prevents disease, boop.

EAU: The end.

EW: But again, these distinctions are not made because it's not about food. It's not about raw milk at all. It's not about vaccines even. It's about redefining expertise. Who makes these judgements? Historically, it has been actual experts, scientists with extensive training who use mountains of data to make decisions. These experts are being replaced with handpicked individuals who have little to no background in that subject, but are willing to carry out an agenda no matter how harmful that agenda may be to the general public. To me, the danger represented by raw milk is not restricted to e coli or listeria, But what it means for science and expertise in this country and the harm that raw [01:05:00] milk can cause is similarly far reaching, just like the anti-vaccine movement, raw milk preys on those who want to make the best choices for themselves and their families. They're being sold false promises that raw milk is a miracle food, that it is entirely safe to drink, and that as long as you know your farmer, you're good. Your milk is safe. But that's not the whole truth or even the truth at all. And people have lost their lives or suffered long-term consequences as a result of being fed these lies.

EAU: Yeah.

EW: So I think that's maybe where I'll leave it for this episode. Uh, but I am really looking forward to next week. Erin, when you get to talk about all of the

nitty gritty of, of raw milk, is there actually a harm? Are there, are there nutritional differences?

EAU: Yeah. I'm gonna really, really too deep of a deep dive on it, honestly. Um, and I'm really, really excited about it to like, kind of go nitty gritty on what's up with milk. Like what,

EW: what, is, what is up with milk? Oh my gosh. Um, next week, uh, for now, sources. Oh

EAU: please tell me where I can learn more. Like is there a book that I should read

EW: I didn't, there are, there are some books. I didn't read a book for this. Um,

EAU: that's shocking? Will you write a book for this? I feel like you could write a book out of what you just said and I would really like

EW: Huh,

EAU: it.

EW: maybe, maybe with all the time that I have. Yeah. Uh, there's a book, actually, I read a couple chapters from this by Peter Atkins called Liquid Materialities, a History of Milk Science and the Law. Um, there's so much by, uh, by, bore a hundred year, year review, microbiology, and the safety of milk handling. That's from 2017. Um, oh, one that I actually really, uh, appreciated was by Courier and Witness from 2018 titled A Brief History of Milk Hygiene and its impact on infant mortality from 1875 to 1925. And implications for today A

EAU: Wow. That's a very

EW: It's a long title. Uh, great paper though. Yeah. And there's, there are a bunch more out there, like, honestly Read away.

EAU: Okay.

EW: Yeah. Ah, uh, thank you to Blood Mobile for, for providing the music for this episode and all of our episodes. I was like, what do I talk about now?

EAU: Uh, thank you to Tom Bry, Fogel, Leonna Sci, and all of our video editing team as well for all of the mixing. We love it.

EW: We love it. Yes. Thank you. Thank you, thank you. And thank you to you listeners for listening. This was, I hope that,

EAU: it?

EW: tell me, yeah. Tell us

EAU: Are you ready for next week? Because we're not done.

EW: we're not done.

EAU: It's gonna be good.

EW: It is. It is.

EAU: Yeah,

EW: And a big thank you to our patrons as well. Your support means so much to us.

EAU: it really does. Thank

EW: Yeah. Well, until next time, wash your hands.

EAU: filthy animals.