

TPWKY – Episode 194 - Salt Part 1

EW: The so-called liquamen is made in this manner: the intestines of fish are thrown into a vessel and salted. Small fish, either the best smelt, or small mullet, or sprats, or wolffish, or whatever is deemed to be small, are all salted together and shaken frequently, and are fermented in the sun. After it has been reduced in the heat, garum is obtained from it in this way: a large, strong basket is placed into the vessel of the aforementioned fish, and the garum streams into the basket. In this way the so-called liquamen is strained through the basket when it is shaken up. The remaining refuse is allec. Next, if you wish to use the garum immediately, that is to say not ferment it in the sun, but to boil it, you do it this way. When the brine has been tested so that an egg having been thrown in floats (if it sinks, it is not sufficiently salty), and throwing the fish into the brine in a newly-made earthenware pot and adding in some oregano, you place it on a sufficient fire until it is boiled, that is until it begins to reduce a little. Some throw in boiled-down must [unfermented wine]. Next, throwing the cooled liquid into a filter, you toss it a second and a third time through the filter until it turns out clear. After having covered it, store it away."

EW: So, um. Did you like that

EAU: What is happening?

EW: home? Instructions to make, uh, this fishy, salty, fishy sauce called garum that's like, was very popular in ancient Rome. That recipe comes from, uh, I mean the re the original recipes are probably hundreds of years earlier, but that one comes from 900 ce from a Greek agricultural manual.

EAU: I have so many questions.

EW: Um, like what

EAU: What? Why?

EW: I mean, who doesn't love a little salty sauce on there?

EAU: A little sauce. So it's the sauce. So you're not going to eat the fish. It's like the sauce part that you're keeping

EW: I mean, it's, it's also like made from fishy

EAU: fishy, you're salting the fish, but it's this, it's the filter. It's the filtrate that you're

EW: Yeah. But I imagine it, it tastes fishy still. Yeah.

EAU: Yeah.

EW: Yeah.

EAU: It's like, um, fish sauce.

EW: I, I, i,

EAU: I mean,

EW: don't know what it tastes like, but I, I mean,

EAU: we try it?

EW: I would love to, I love fish sauce, so

EAU: Me too.

EW: be good. Um, yeah, this is gonna be a couple of weird episodes.

EAU: am really excited about it.

EW: Hi, I'm Erin Welsh

EAU: And I'm Erin Allmann Updyke

EW: this is, this podcast Will Kill You

EAU: It's getting weird, but we're talking about salt.

EW: Salt.

EAU: Salt

EW: This all

EAU: two whole episodes.

EW: two episodes. Honestly, though, like I, I think it ended up, it started, we, we've been through a rollercoaster of feelings about salt throughout the process, the making of, um, it started because I was like, I bought the book Salt. I found it at a thrift store and I was like, I've been wanting to read this book for a while. Um, and I was like, I basically strong-armed you into doing two episodes on salt.

EAU: accurate.

EW: And then I was like, I don't wanna do this anymore. And then you were like, no, I found a good story. Let's do this. And I was like, okay. And then I was like, oh, cool. Actually salt is really interesting.

EAU: Yeah, it really went. We went back and forth several times. Um, had some regrets, came through it.

EW: Yeah. I think we'll have no regrets at the end of it.

EAU: No, I'm already like really stoked for, for today.

EW: Uh, I am too. I am too. Um, we do have some business to get outta the way first.

EAU: Yeah. Oh, should we, like, warn people what these two episodes are gonna be about?

EW: Oh yeah. That's probably a good idea. The, yeah. The first episode. So today what I'm gonna be talking about is kind of the historical aspects of salt. Like why. When did we start using it as much as we did, and some just like, honestly, you're going to be well equipped to hit up the next trivia night if there are any questions about salt. I hope.

EAU: that. Ah, I'm really, I hope there's a whole salt based section in your next trivia day.

EW: Wouldn't that be, if there is, please let us know.

EAU: That would be so great.

EW: And then you next episode, Erin, tell him what you're gonna be talking about.

EAU: I'm gonna talk about salt and our health

EW: There you go.

EAU: broadly, very, very broadly speaking.

EW: excited for this because I feel like there is so much noise.

EAU: Yes.

EW: Okay.

EAU: Uh, but you're right. We have some business. First

EW: Uh, quarantining

EAU: quarantine.

EW: I love how it's turned from like a fun thing that we do to business.

EAU: it is business.

EW: business portion of it. Uh, we're drinking grains of salt

EAU: Grains of salt,

EW: because there's a lot of. The history of salt that you should take with a grain of salt. And there's definitely aspects of the current salt debate that you should take some grains of salt with,

EAU: Yeah, there you go. Or maybe not a.

EW: or not. Uh, and the grains of salt is based on a, a cocktail that, you know has been established for a while that has salt in the name, it's called the salty dog,

EAU: The Salty dog. Have we done this before? It's fine.

EW: it's fine.

EAU: We're calling it something new.

EW: Yeah. I feel like after a hundred something episodes we are allowed to repeat if we, if we try our hardest not to

EAU: we can do whatever we want.

EW: It's, it's grapefruit juice and either vodka or gin, whatever your pick and a salted rim. It's pretty simple.

EAU: Pretty simple. Pretty delish. We'll post the full recipe on our website. This podcast will kill you. Nope, we don't do that anymore.

EW: We're gonna try though, Erin,

EAU: We're gonna

EW: on my to-do list.

EAU: website. This podcast will kill you.com and all of our social medias where you will definitely see it there.

EW: Yes. Yeah. Also on our website, you can find all sorts of things from transcripts to links to our bookshop.org affiliate page, our Goodreads lists. Um, you can find links to merch, you can find, oh man.

EAU: Blood Mobile. Who does

EW: Blood Mobile, who does music, a link to a firsthand account form, uh, a contact us form, stuff like that.

EAU: Everything.

EW: Yeah. Uh, any, anything else or can we just get started?

EAU: Tell me about Salt Aaron.

EW: Uh, I can't wait to, okay. Let's take a quick break and then I'll get right to it.

EW: Erin, I love salt.

EAU: I know. I know you do.

EW: you've seen me eat french fries, like I'm, I am salting and already very salty food. It's, it's not good. Or is it,

EAU: Or is it.

EW: find out more next week. No, I think it's, I think it's not good. I think it's bad, but despite knowing this, despite knowing that it's probably not great that I'm salting things and eating a lot of salt, I want more of it. I feel like I need salt, I crave salt. And it might occasionally be the case that I do actually need to replenish some salt. Like maybe I'm do a long run in the, in the heat or I'm working outside all day, uh, and I'm sweating out lots of salt. But in general, nowadays we eat a whole lot more salt than we need to like make up for. We're able to make up the salt that we lose pretty easily. Yeah. Um, but what does enough salt mean? Like, what does it mean in a biological sense? I mean, and I'm not gonna answer that question, but the answer does vary from person to person, I think, in general. And there are guidelines that also help to determine what enough is. And these guidelines have, of course, undergone some shifts in the past few decades. In his book, salt A World History author, mark Kurlansky writes that the average human contains about 250 grams of salt.

EAU: I love that statistic.

EW: Which is enough to fill, just to visualize this, a couple, uh, a few standard sized salt shakers. Yeah.

EAU: Like the little ones you have on your diner table.

EW: salty. Yeah. Whenever we lose salt, which we're constantly doing through bodily fun functions like sweating or peeing, we need to consume more to replenish what we've lost. If we don't, in extreme cases, we do run the risk of our bodies shutting down. Basically, salt is essential for life. And when I say salt, I am referring to the dietary salt that we think of mostly sodium chloride, the stuff that we consume, not salt as in like the broad chemical term for when an acid combines with a base. I,

EAU: I have like the same disclaimer. Next episode too.

EW: I'm like just I know someone's gonna be like, um, excuse me. Salt is actually quite a broad term. Um, yeah, I know, but I'm talking about salt, like

EAU: sodium bra.

EW: sodium. Yeah, exactly. Yeah. Um, I also don't know how you would approach a history of like salt in the broad chemical sense. Um.

EAU: I don't know. You'd learn about ions and.

EW: I guess.

EW: Sure. I mean, but to be honest, like I'm also still grappling with how you approach a history of table salt, like sodium chloride salt, because it has had, and it continues to have such a profound influence throughout so much of our species, evolutionary and written history. Salt has held symbolic and religious significance. It has shaped human settlement. It has led to revolutions. It has been used as a commodity, a currency, and as a medicine. Salt has held the key to some nation's prosperity and the downfall of others. It's some pretty powerful stuff,

EAU: Yeah, sounds like it.

EW: right? But now when you can saunter into any grocery store and pick up a jar of the stuff for pennies, you might not be awestruck by the wonder of salt. In fact, you might instead be shopping for low sodium alternatives. You're like, how can I get less of this

EAU: How can I avoid this?

EW: Right? But that would blow the minds of time travelers from almost any other point in history prior to the 20th century. Like what do you mean you don't want salt in your food? What do you mean salt is so cheap? These days we don't think twice about whether or not we'll have access to salt. If anything, our primary concern when it comes to salt is how to eat less of it for our health. That wasn't the case for most of human history. One of the things that I love about micro histories is how they always make the case for like this thing, this subject, this invention, this incident, this one point in history holds the key to everything. It explains everything. But with salt though, I'm like. Kind of convinced. I'm, I, I'm, uh, I'm buying it. I'm buying it. All animals need salt. How much they need and where they get it from depends on the species or the individual. And next week, Erin, you'll do this. The honor of talking about how

much we humans need, maybe, which as we'll see, is a very contentious issue, much more so than I realized.

EW: But for now, I wanna tell you where humans got salt and what we did with it, what we used to do with it. Salt occurs naturally in all sorts of forms, right? It's in salt, water, the ocean and seas, in salt springs, in salt deposits underground like rock salt in the crusts of dried salty lakes, we can consume or harvest salt directly from these sources. And we can also get salt from eating the things that also take in salt. Like for instance, animals, right? So early humans got a good proportion of their salt from the wild game that they killed, including both, like eating, consuming the meat of animals and their blood. Like, like drinking the blood or using the blood to make, um, other sort of dishes. Exactly. Yeah. Or we got salt from fish or other marine life, uh, for those that were living closer to the

EAU: Mm-hmm.

EW: But as humans started to settle in larger groups and develop agriculture, diet shifted to include proportionally more grains and vegetables, which are generally speaking, much lower in salt than animal products. Fortunately, domesticated livestock like sheep, pigs, and cattle, followed close behind the, the development of agriculture, making them a handy close by source of salt.

EW: One paper I read suggested that livestock domestication was actually helped along because the wild ancestors of these animals were drawn to human settlements by the salt content of human urine. They would be attracted to human settlements,

EAU: Interesting. So then it made it easier to domesticate them 'cause they're like coming over anyways

EW: over anyway. They're, maybe they're getting used to humans, you know, like, yeah, yeah. I mean, I don't, I don't know. And I dunno how you would like actually measure that in any capacity, but Yeah.

EAU: But it's a fun idea,

EW: Yeah. Um, and so, and also I think it, it's like which animals would be drawn to that? So I mentioned earlier how some animals need more salt than others, or they vary in how they get it. The general rule that I saw mentioned was that carnivores tend to get their salt from their prey because the bodies of animals contain a lot more salt than like, uh, grasses and veggies and whatnot.

And so herbivores will often supplement with naturally occurring sources of salt, like salt licks. Um, here's my big reveal. So I have this sweatshirt on.

EAU: Oh my god. Stop. Did you have like something covering it on

EW: a little, it's a little Post-it. That's ramen. It's like, yeah. Instant ramen. Post-it.

EAU: That's so good. On so many levels. wait. Tell the people where their sweatshirts from.

EW: So my sweatshirt is a place that I have taken you, Erin. It is called Big Bone Lick State Historic Site. We called it Big Bone Lick State Park

EAU: Big Bone lick baby.

EW: Bone lick. So this is in Northern Kentucky. Um, the, yes, that is the actual name of it. Um, yes, I am repping a sweatshirt that also has a woolly mammoth on it. Um,

EAU: wish you could see it better. Your mic is in exactly the wrong spot

EW: can you see it now?

EAU: No, there it is.

EW: it out. It's rad.

EAU: It is rad. Yeah,

EW: and it's, it's called Big Bone Lick State Park because there are old salt licks that prehistoric megafauna used to come to for salt. There are so many, lots of fossils of things like mammoth ground sloths, et cetera there, and it's known. I'm like, it's so thrilling to talk about big

EAU: I know.

EW: park. Um, it's known as the birthplace of American vertebrate paleontology because of all of these fossils that have been found there. And it's a, it's funny too, a lot of the fossils that were found are actually reside in other countries because it was like in the 17 hundreds and so, and so they're all just

being shipped out to other places. Yeah. 18 hundreds. Mm-hmm. Um, but also it's, uh, I just have to mention it is in fairly close proximity to the, the Creation Museum, which I just find particularly, um. A little, you know, rich irony

EAU: little on the nose.

EW: it is. Uh, but also at Big Bone Lake State Park State historic site. There is an annual salt festival that is held there. Uh, I've only been once, but I remember some of the salt making demonstrations. It's really cool. Uh, it happens around mid-October, if I remember correctly. So if you're in the area next year, you should definitely check it out. Anyway, that's my little plug

EAU: Shout out Big bone lick.

EW: Um, there's a putt putt, the free putt putt course. We go there all the time. Anyway, uh, back to salt licks and animals and domestication. Uh, you can also see this happening now. So for instance, if you, here in Colorado, if you drive up to mount blue sky, often, the goats will come and to your cars and lick the salt off of your cars.

EAU: Interesting.

EW: Yeah. And it's not like these, these mountain goats are, are on their way to domestication. Just that animals are drawn to salt, as are humans. Many early human settlements were situated close to sources of salt, you know, salty springs, salty lakes, underground deposits of rock salt. Uh, archeological evidence has actually been found at Big Bone Lick, uh, of hu early human habitation. Uh, some sources provided a steady supply of salt year round, while others were more subject to the whims of like climate and environment. You can see this with like rising sea levels or falling sea levels. Like it changes the access to, to salt. And so having access to a steady source became the primary motivator for salt extraction or mining or refining technologies, which date back thousands of years to at least around 3000 b, CE. Yeah. Um, and this is in, in ancient China mostly. And those cities or towns or settlements that over centuries had the salt and the technology to produce it, they were the ones that grew, that often grew wealthy and powerful as they controlled this valuable commodity.

EAU: Hmm.

EW: Why did we want so much salt? Like, did, did we need it?

EAU: Why was it, why was it such a valuable commodity?

EW: Right. Right. Oh, well, we didn't need it in a physiological sense. Right. At least as far as I could tell we needed it because salt has an incredible superpower. It can freeze time.

EAU: Hmm.

EW: Mm-hmm. At the basic level, salt balances fluids, it shifts the amount of water from here to there. And if you overload something like say a fish with salt, that will suck the moisture out of the cells and prevent the growth of microbes since they can't survive in that super salty environment. And so salt is one of our earliest preservatives

EAU: Mm.

EW: Why is this a superpower? Okay, so. Pretend if you will, that you live 5,000 years ago and you make your living, uh, catching and selling fish. So you go out, you cast your nets, you set your lines, whatever it is, however you're catching fish, and then you boat back to shore to pedal your wares. This is pre refrigeration, pre ice. Your window for selling that fish is incredibly small, as is your potential customer base. So if you happen to be selling on a day when everyone's got loads of fish and you're like, well, you know, why? Why would I buy yours over theirs? I can't eat this much fish. You probably have to drop your prices to be competitive if you're able to sell at all.

EW: And if you don't sell anything that day, that means that your labor has been lost and you have to go out the next day and try again. Your income, your livelihood, it depends on the whims of the local market. It's a tenuous life to live, but if you could freeze time, at least for the fish, by adding some salt and slowing its decay, you become a whole lot less tied to the day to day shifts in the market. In fact, you're not tied to your local market at all. You could bring your salted fish on long journeys, along trade routes, and your fish now has more value overall since it's loaded with this tasty and precious substance. Nor are you tied to the seasonality of some foods. So during those times of scarcity, like over winter when catch is low and you've eaten through all the food that you've stored for those long months, now you have these frozen in time salted fish getting you and your family through.

EAU: Hmm.

EW: It's amazing.

EAU: It's pretty incredible. I mean, okay, so I have a, can I ask you a question?

EW: Of course,

EAU: So, but this is like thousands and thousands of years ago, 3000 ce you said

EW: 3000 BCE,

EAU: bc um, C uh,

EW: The future. Yeah.

EAU: the fusion, uh, the future, the, you had 3000.

EW: 3000

EAU: Um, what, before people figured out salt,

EW: Uhhuh.

EAU: first of all, how did they figure it out? Like, how did, how did they figure that out? And also before that, was there any, like, was it you could smoke things? Is that, is that all they had or?

EW: Yeah, actually that's a good question. I don't know when smoking, like the relative timing of smoking versus salting. Um, but also, I mean, smoking takes fuel

EAU: Right.

EW: well. Um, the extraction of salts also can take a lot of fuel. Um, but yeah. Uh, what was your other question? So I don't, I don't know about salting versus smoking.

EAU: What, how did they figure, yeah.

EW: I mean, I don't know. Except for the fact that salt tastes good,

EAU: Mm.

EW: right? So I would imagine it was sort of that, that aspect of it. Like there, do I have this quote here? Um, yeah. There's a quote from ancient Egypt, from an old papyrus that reads, there is no better food than salted vegetables.

EAU: Huh?

EW: I'm inclined to agree

EAU: agree.

EW: that. Yeah. Um,

EAU: interesting, Erin, it's so weird to think about like. Someone figured out, Hey, if I like boil this water, what's leftover is this stuff and it tastes really good. Oh, by the way, also, it makes my fish last longer, by the way, now I've revolutionized the world.

EW: Yeah. Right. I know, and it was a trans, truly transformative idea, especially in regions where climatic shifts shortened the growing or harvesting or hunting or fishing seasons, right? So I used fish as an example, and fish would become like the hugest commodity after the 14th century with like salted herring and then later cod. But salt was fundamental to the production of so many other foods, some of which had been salted for centuries, pickling like sauerkraut and other veggies. Um, the salted fish sauce, then range, and Rome called garum miso, pe, soy sauce, cheese, butter. Uh, our dairy products used to contain a lot more salt. So there was a recipe from the 14th century for butter that called for one pound of salt for every 10 pounds of butter.

EAU: that's salty butter.

EW: I know I would, I would have loved it.

EAU: It would be so good. Spread on some toasted sourdough

EW: Perfection. Uh, bacon, ham, olives. I mean, there are so many things that salt has been added to that helps prolong a shelf life. Right. Salami comes from the word for salted, as does salad

EAU: Salad.

EW: Yeah. I think it's like, yeah. Salted.

EAU: That's hilarious.

EW: So it's like so many things. Salt food. Food and salts was, yeah. And it, it was, it's easy to love salt. I think this shows how easy it is to love salt, the number of things that it was added to, and not just for taste, but also for practical purposes, for longevity of the foods. And this utility and love of salt created a tremendous commercial opportunity. Cities that were close to sources of salt, or those that produce lots of salted foods, grew wealthy on the trade that they conducted. And as a result, global trade overall grew enormously. Salt was used for a whole lot more than just salt curing or even just like adding some seasoning to your meal. It was used to cure leather, clean chimneys to solder pipes, glaze pottery, and as a medicine for all sorts of ailments. But it was really by reducing seasonal dependence on foods that salt made its mark on human civilizations.

EW: I don't call it a superpower lightly, like salt was also held in great importance by many cultures. I think because of the, the power that it held, it represented purity, incorruptibility, immortality, loyalty, durability, hospitality. Like you better make sure that you have a salt cellar on the table when you have guests over. Some of these salt cellars too, like historically are just so intricate and beautiful. Um, the Romans actually held salt in such importance that they, salt had to be on the table before any other dish was placed there. Uh.

EAU: Huh?

EW: Yeah. Uh, it's used in many different religions, offerings and rituals. It was linked to arousal and passion and creativity. It was thought to be important for fertility. It was the essence of life. So think of the phrase, salt of the earth. Uh, according to the Bible, that's what Jesus said to his disciples. You are the salt of the earth, the best of the human race,

EAU: Whoa.

EW: right?

EAU: Pretty big

EW: Salt of the earth.

EW: It was used to protect from harm. Um, you know, sprinkle a newborn baby with salt is what you're supposed to do. Sprinkle your herd of cows, carry a little

bag of salt around your neck to ward off evil. Or if you've watched the show supernatural, there's always a bag of salt for the barrier for the demons. Yep.

EAU: Protect against demons. Make your witches circles. A hundred percent salt.

EW: And so to spill salt was considered a bad omen. I mean, you know, you're supposed to like throw a little bit of salt over your left shoulder. Uh, there were, that would, that was like, that's the, the least extreme response to a little bit of spilled salt. There are some places where it was like, no. Then you do that and you have to crawl under the table and then do that again. Like, it's like this

EAU: Oh wow.

EW: Mm-hmm.

EAU: How interesting.

EW: And that like spilling salt, being bad luck goes back centuries in Da Vinci's last supper. There's a bit of spilt salt in front of Judas as scar. It indicating that like this isn't that wild. Salt. Salt, yeah. Uh, spilling salt could signify the end of a friendship, or at least a quarrel. Mm-hmm. Uh, friendship was forged in salt. Homer called it a "divine substance" Play-Doh said that it was, quote, "especially dear to the gods plu tar wrote that without salt, practically nothing is eatable. Salt is added even to bread and enriches its flavor. Beyond that salty food aids digestion and it makes any food tender." And

EAU: How interesting. Erin.

EW: I know

EAU: I'm thinking about all of this in the context of what I'm gonna talk about next week, and it just makes it so interesting.

EW: it's, it's quite the, um, rebranding of salt, what we've experienced in especially the last 50 years or

EAU: Right, right, right, right, right.

EW: I mean, a Pliny went so far as to say that quote, "A civilized life is impossible without salt" end

EAU: civilized life is impossible

EW: Impossible. Yep. Is it any wonder then that those who held the salt held the power? Salt itself was not necessarily rare, right? It was never held as more important or equally valuable as gold, for example. That's sort of like a, I dunno what you call an urban legend. That's like a historical urban legend,

EAU: A myth.

EW: maybe. Yeah. That's

EAU: I don't know

EW: I think that might be right.

EAU: I have heard that, so I know what you mean by that.

EW: yeah, yeah. It was just that it, it wasn't evenly distributed across a region and it required labor to extract and to move, and so you had to like spend some, it wasn't hard to get, it was just, it wasn't hard to get in the sense that it was rare. It was hard to get in the sense that it required labor and Yeah. And so those who were positioned to transport or produce salt benefited enormously from the taxes, enforced on moving huge amounts of the stuff, or of salted foods. So in Ancient Rome, some of the first great roads were built for salt transportation purposes. Via Salaria is one of these, it means Salt road,

EAU: So,

EW: Uhhuh, Uhhuh.

EAU: wow. I'm learning so much Sharon.

EW: Ancient Rome also had a treasury position whose job it was to make decisions about salt prices.

EAU: Wow.

EW: Salt occasionally seems to have been used as currency, although not as much as is often suggest, suggested. It's another myth. And while the often repeated bit of trivia that Roman soldiers were paid in salt is not true, they were not paid in salt. They were paid in money. Um, the word salary does come from

this period, meaning someone paid an allowance to buy salt. So like if you were paid a salary, it was like, here's your allowance to buy salt. Like that is sort of where

EAU: it. We're not paying you salt, but we're paying you so you can go buy your

EW: Yeah, exactly. Yeah,

EAU: Get your own salt.

EW: Yeah. Get your own salt. Um, you know, that phrase not worth his

EAU: Mm-hmm.

EW: meaning someone is not worth what you're paying them.

EAU: That's so interesting. Erin.

EW: Yeah. I mean, there are salts. There are, so this is what I'm saying, like you are equipped now for trivia.

EAU: Yeah, a hundred percent.

EW: Uh, more salt sayings, or at least one more. Take it with a grain of salt. You know, meaning with a healthy dose of skepticism that seems to have originated for, from a recipe, for an antidote by Pliny the elder who he listed a bunch of things like, okay, so you're grinding together, walnuts and figs and rue add a grain of salt. That was thought to maybe like aid digestion. And so over time, that kind of evolved into its current use. People think maybe it's to like aid digestion of difficult ideas.

EAU: Interesting.

EW: know. I don't know if that's, I feel like some of the salt lore is kind of like whatever you want it to be, and so that's what I want it to be, but

EAU: I like that because I feel like otherwise, when you think about it, you're like, why does this phrase not seem to fit with the rest of the salt phrases?

EW: Right. Take it with a grain of Yeah,

EAU: Because it's like, oh, I'm not, I don't really believe that. So like take it with a grain of salt. So it's like if it's more to age your digestion, I like

EW: of this difficult idea.

EAU: Let's go with it.

EW: We'll go with it. Um, rubbing salt in the wound, for instance, that goes back to the days when salt was sometimes used as a not very effective and extremely painful antiseptic. So it would be like, apply some salt to that wound. Yeah. Uh, back to the salt mines, meaning having to return to grueling or unpleasant work. That phrase originated in the 17 hundreds and 18 hundreds in Russia when prisoners were often sent to Siberia to work in the salt mines. But I mean, salt mines were intense places. So here's a quote from 1555 about salt mines in Poland. Quote, "there are mountains in which the salt goes down very deep here. On the 5th of January 15, 28, I climbed down 50 ladders in order to see for myself. And there in the depths observed workers naked because of the heat, using iron tools to dig out a most valuable hoard of salt from these inexhaustible mines, as if it had been gold and silver." End quote. Yeah, down there. You're so hot, you're naked. You're having to chip away salt, like brutal. Yeah. So these were deeply unpleasant places to work, I would imagine. And often, you know, the ones who were working there were prisoners or enslaved people. They were forced to work there as punishment. Okay. So generally speaking, there are two main sources of salt for easy extraction, salt that's been dissolved in water, like sea water or salty springs. And then there's rock salt, which exists kind of like from that quote in deposits underground. You can get rock salt out of the earth by mining and you can get salt out of water by either boiling off the water, leaving salt crystals behind, which used a tremendous amount of fuel. Forest had been devastated in this process. Imagine like you can't, you

EAU: Interesting. just to get, just to get fuel to burn for, to make salt.

EW: Yep. I mean, and also the, it wasn't like the getting salt was the only reason for devastation of forest, but like it helped.

EAU: They contributed.

EW: Yeah. Yeah. Or there's evaporation, which has the same end result. It just takes a whole lot longer and requires certain circumstances. Right. And that is literally the most like surface level explanation of salt production. And that's all I'm gonna give you. Uh, I have though, actually, it's so funny, like some of the,

the memories that emerged, like, I was like, oh my gosh, I've been to the SALT festival and I've been to a salt extraction site, historical one in Peru at the Salt Mines of Maras. And like, yeah, it goes back hundreds of years at least. And um, it was really fascinating to see these like tears of salt wells all fed by like a salty underground spring. And then there's like, they're harvested. I had for a while, like a little baggie of salt from.

EAU: you eat it?

EW: I did at some point, and then I don't know what happened to it. I lost it in the move, like one of my thousands of moves. Yeah. Um, and, and then there are also, there are lots of other steps and aspects to the extraction or production of salt. You know, things like purification, the different types of salt, the origins. Some are more prized than others. Some are considered crude or adulterated or like just gross salt production was so central to some towns and cities that they took their name from. The presence of salt mines Salzburg in Austria, meaning roughly salt settlement. Mm-hmm. Salt coats in Scotland, Saltville in Virginia, hall in Germany, many towns in England ending with witch, like middle witch, north witch sandwich salt. Like, which is often, which is from, from what I can tell, which is often tied to like the, like artisan production. Like there were like goods that were made there, but a lot of witches towns that end in which are, were like salt towns.

EAU: were salt towns. How interesting.

EW: Salt production was extremely profitable as was its transport in 2000 B, CE, the Chinese government became the first to basically create a salt monopoly and to use it to become extremely prosperous, putting taxes on both domestically produced as well as imported salt. And it would be like, I mean, it would be, we can make salt for this amount. We'll charge 10 times that, like that kind of thing.

EAU: Mm-hmm.

EW: And thousands of years later, Venice did the same thing first as a producer of salt, and then by controlling commerce and supplying it to much of southern Europe. The Venetians themselves described salt as quote unquote, "the true foundation of our state",

EAU: Okay.

EW: right?

EW: It was like salt made Venice in many ways, and while salt could make a region prosperous like Venice, in other cases, such strict control over the stuff could lead to unrest.

EAU: Hmm.

EW: France had long, had a salt tax since the 13th century, and man, people hated this tax. First of all, it was really unevenly applied and this like, there could probably be a textbook written about the salt tax. Um, but it was really unevenly applied and so some regions were exempt while others weren't. Um, second, it was kind of a flat tax so that people were forced to maybe buy a certain amount of salt even if they didn't need all of it and pay taxes on it regardless of how much they made. And so it was kind of this like unfair tax because everyone had to pay a certain amount,

EAU: Okay. Okay.

EW: makes sense.

EAU: Yeah.

EW: And, and salt was really expensive, so like the, when people had to buy that, you know, the amount of that set amount of salt were required to, that would be about one eighth of a peasant yearly income. And it was like locally very expensive, or like within France, so it was, that was 10 times more than it cost just across the border. And so salt smuggling became a huge thing. And

EAU: like healthcare in the us. Sorry.

EW: Yeah, yeah, yeah. Um, yep. And, and so yeah, people would go across border and smuggle salt back because they're like, I don't wanna buy salt here. It's way too expensive. And then there were like designated salt police who had the right to enter houses to search for smuggled salt based on their own suspicion.

EAU: Entire salt police.

EW: So, I mean, they probably did more things, but

EAU: I like to imagine that all they did was salt.

EW: same. Same. Yeah. Again, there is like so much more to the salt to salt tax. Um, but it, like, it, it's, it's so intense. The, the Catholic church even sided with the French government adding a treatise in 1674. That stated quote, "for all Christians smuggling of salt is a mortal sin" end quote. ridiculous. If you were caught, it could mean death. Every year, thousands of people were arrested for salt smuggling and either put in the galleys, forced to do labor, or they were hanged.

EAU: What.

EW: Isn't this ridiculous? Yep. One paper I read estimated that the last year before the French Revolution, 3,500 citizens were sentenced to death or the galleys for salt smuggling. Um, and so salt, because of all of this ridiculousness around salt, it became a symbol of the injustices of the government, of the monarchy. And so it has been suggested that salt was a contributing factor to the uprising, leading to the French Revolution,

EAU: Wow. Not just the cake thing.

EW: not just the cake. Don't let them eat salt.

EAU: Don't let No, they can have cake. No salt.

EW: Yeah.

EAU: How interesting. Erin.

EW: Isn't that. Wild. And it's like probably aspects of that have been exaggerated. But that is what, like I have citations for these myths, right? Um, but that's not the only revolution where salt has featured prominently. The oppressive, uh, British tax and monopoly on salt in India led Gandhi to march to the sea in 1930 in an act of civil disobedience. And eventually this helped pave the way for Indian independence ending British colonial rule. So, you know,

EAU: I love it.

EW: I mean, given all of this, like, it is really strange to think about this thing that we probably all take for granted, salt as something that created empires. Incited revolution was integral in religious ceremonies and held such important meaning for thousands of years. Salt was a big deal. From the time of its first widespread production 5,000 years ago to the industrial revolution, salt was if

not king, at least one of the major players in shaping human history. And over that time, salt intake went from not very much at all.

EW: This is worthy of a larger discussion, but one book estimated that our paleolithic ancestors consumed less than one gram of salt per day today. What is it? Like eight and a half grams on average per day?

EAU: 10.

EW: 10. Okay. I saw eight and a half somewhere. But yeah, the dietary or like nutritional epidemiology is

EAU: Yeah.

EW: a challenge. Um, but we went from not very much to orders of magnitude more, and as we added more and more salted foods to our diet, our salt consumption skyrocketed. Some regions that ate a lot of salted fish, like uh, people in Sweden in the 16th century for example, are estimated can't, this does not seem right to me, but I, I read it somewhere, are estimated to have eaten around 100 grams per day.

EAU: Whew.

EW: So I, it seems impossible. Like maybe, maybe that's if you're looking at just the straight salted fish, but if the salt was rinsed off or if the fish were soaked and so like, I can't imagine it being

EAU: That would be so salty.

EW: Like it hurts my mouth

EAU: Mm-hmm. I'm like dry thinking about it.

EW: Yeah. Um, but in, in the book, salt Kurlansky says that Europeans in the 16th through the 18th centuries were taking in about 40 to 70 grams per day. But I've also seen lower estimates around like 18 grams per day.

EAU: That's so interesting, Erin. 'cause I was gonna ask you if you, if there were any estimate, 'cause I couldn't find any estimates from like, you know, the last few hundred years. Um, oh. This is all just such good fodder for next week.

EW: fodder. Uh, but this is, yeah. So if, even if it's at the lower end of the estimate, like 18 grams, let's say it's 20 grams, that's still double what the average American consumes today, which is actually, uh, double than what is recommended. And so we are doing a lot better nowadays, like even though we're told that we're not, we are doing a lot better now than we were a few hundred years ago. Why did salt intake go down? It's not because of health concerns. Lemme just get that outta the way. It was because of refrigeration.

EAU: Oh, that totally makes sense.

EW: It blew my mind.

EAU: Yeah. So everything was way, way, so, okay. There was, let me just,

EW: yeah, yeah. The recap us.

EAU: So back in the day, like when we, humans evolved into humans and started doing agriculture and all of that, initially we were consuming a minimal amount of salt. We weren't adding salt to our things. We were getting salt just from the places like animals and salt. If it was there, et cetera.

EW: For most of human history, we consumed very little salt, is what it seems. Yeah.

EAU: Then we figured out, whoa, you can use salt to make things last a lot longer. So we started eating crept, tons of it,

EW: Tons of it.

EAU: so an unbelievable amount. Then we invented the refrigerator and we're like, cool. We don't need as much salt. Fascinating.

EW: There you go.

EAU: Now we are today.

EW: And now we are here today still eating salt because salt tastes good. I mean, that's like, that's the other thing is that like, and I know that you're gonna get a little bit into the sort of this, the evolution, the salt cravings and stuff like that, but there's a difference between tasting good and like needing salt for, but it is, it seems like it has been suggested that be, that we think of salt, like tastes,

salt tastes good to us, that's an adaptive trait because we would have needed more salt historically, I think, or we would've been maybe more on the edge. I

EAU: the tenuousness of it, because we are omnivores, whereas like carnivores don't really have a salt. We will talk more about it next week, but yeah, a hundred percent. It's a, it's a, there are reasons why salt tastes so good to us.

EW: And there are reasons also. I mean, there are reasons that salt tastes good and so therefore removing salt from foods, even though it's better for our health, makes people not want to eat those foods. Which means that the salt industry doesn't want us, doesn't want to remove the salt from foods. Anyway, we'll get to that next week too. Um, but also, I'm just putting in a plug now for a book club episode that's coming out later this season, all about the history of refrigeration. It is fascinating. It's called by Nicola Twilley. And so, um, stay tuned for that. But yeah, it wasn't just refrigeration, there was also canning, so there were just alternatives to salt when it came to long term storage or transport of foods.

EW: Yeah. At the same time, the industrial revolution had made salt extraction mu much simpler using updated technologies and fuel. And so you have the simultaneous like drop in demand just as it had become easier to produce. And so that explains in part why it's so cheap today. I mean, this was quite the fall from Grace for salt to go from this like esteemed substance without which civilized life is not possible or whatever pliny said to, oh, we don't need you anymore. You are not welcome

EAU: may be bad. For me,

EW: Yeah, that's, it's kind of hurt. That's like, that's quite a transformation.

EAU: salt is just like, ugh.

EW: And then the death blow was about to come. Things were about to get a whole lot worse for all NACL, the salt wars were about to begin. Yeah.

EAU: me,

EW: I mean, this is what you're gonna tell me about. Uh,

EAU: I thought I thought it was a real war.

EW: no, no, no, no. I mean, it's just like, I also don't know if it's just for the early part of the, uh, debate about salt or like also if salt wars can be applied to the discussions that have been happening over the last few decades. But anyway.

EAU: tell you

EW: In the late 18 hundreds when salt consumption began to decline, salt had a very different reputation than it does today. Rather than being seen as a contributing factor to cardiovascular disease, kidney disease, and other health issues, it was avoidance of salt that was thought to be bad for your health.

EAU: interesting.

EW: What changed? It started with a trickle of papers suggesting that salt maybe wasn't as healthful as previously thought. In 1899, a couple of researchers put forth the idea that salt pulled water from your tissues, increasing plasma volume and water retention. And then a researcher named Achar in 1901 suggested that salt consumption led to the edema of bright's disease, which is chronic inflammation of the kidneys and possibly a whole host of other conditions. And then in 1904 is kind of really when the salt. The, the, not really, the tides began to turn, but it was like this was the sticking idea. Two French scientists am. Bard and Bouchard published their hypothesis that high salt intake led to hypertension 1904, and this kicked off what would become known as the salt wars.

EW: Um, side note, though, these two scientists were not the first to suggest the salt blood pressure hypothesis or sodium blood pressure. In fact, several thousand years before, around 2,600 BCE, an ancient Chinese medical text warns of the relationship between salt and hypertension.

EAU: interesting.

EW: Quote, "if too much salt is used in blood, the pulse hardens" end quote. Isn't that fascinating?

EAU: It is really fascinating. It was like someone said it way back when, but they're like, yeah, it's fine

EW: Yeah. Yeah.

EAU: We're all dying from infectious disease well before hypertension becomes a

EW: I mean, that's probably a big part of it too. They're like, well, just never got it. Never caught up with you. Yeah. Uh, but thousands of years later, we're still fighting about this. Right after the paper by AM Bard and Bouchard, other researchers attempted to replicate their findings. Essentially what these, these two had done was feed six patients with hypertension, varying amounts of salt, and found that those who were on lower sodium diets had a reduction in blood pressure. But the replication part of this was tricky there. They often didn't include controls. The first study by Ambar and Bouchard did not, uh, the results were not very clear cut. It was like for some, maybe it did something for others, it didn't, you know, and it didn't specifically implicate salt and only salt in the blood pressure changes that they observed because it was like a whole dietary shift. So it was like, was it less salt or was it also that you're eating more rice or, you know what I mean?

EAU: Yeah. Such good questions.

EW: Um, some scientists did observe a reduction in blood pressure with declining levels of sodium while others saw no difference whatsoever, and so it was like kind of all over the place. By the mid 20th century, the consensus was a weak one. Yes, low salt diets did seem to improve blood pressure, but only in a subset of people. Add onto this, the fact that low salt diets are not tasty when you've been used to eating loads of salt and people were not keen on the idea of limiting salt as a way to treat high blood pressure. But some researchers kept on looking, 'cause if salt reduction can be helpful, like how and why this could save lives.

EW: And so the second half of the 20th century saw a ton of studies, much more carefully designed, carried out on the relationship between sodium intake and hypertension. And as with the earlier research, the results were mixed and the message became complicated, not easily communicated within a headline because whoever actually reads like the body of text in an article, the nuance surrounding any aspect of nutrition and health is huge. And salt is no exception. There are industry groups like the Salt Institute also through their hat and their consultants, sometimes physicians or academics into the mix, which further muddied the waters. And after years of back and forth and well technically and commentaries on articles and replies to those commentaries, it seems that we now have maybe a clearer picture. The relationship between sodium and hypertension, maybe not. I'll let you tell us next week.

EAU: Okay. I can't wait to, that was such a good setup, Erin

EW: Oh, thank you. Thank you. Thank you. Um, salt I, yeah.

EAU: I am thrilled to keep going with

EW: Me too.

EAU: because yeah, that was just such a good way to set up, especially this idea that. H like thousands of years ago, we were consuming minimal salt many thousands of years ago.

EW: Yes.

EAU: Then for potentially thousands of years, we were consuming so much salt. And now where are we at today? I can't wait to tell you next

EW: are we? Oh, it's so exciting. And there is, like, this was, there is so much to the history of salt. You could, uh, read whole books on, on recipes with salt. Uh, I mean there really that, um, the Kurlansky salt book just is mostly recipes that I feel like is, is what it ended up being. Um, it, it's, it's a really interesting, I just love the history of food too, I think is what I'm realizing.

EAU: yeah.

EW: but yeah. But if you would like to learn more about salt, I've got some sources for you. So, um, I don't know if I would give the salt book a resounding recommendation. I actually found it like. Not very well organized. Uh, and so a little bit disappointing in that regard. But there are lots of other papers about salt. There was one by, I think it was called Bo Cillo from 1994. A history of salt, uh, block from 1976. Salt and Human History. There's, and then if you wanna learn about the origins of the Salt Wars, there's one by Dela Antonio and O'Keeffe from 2017 called The History of the Salt Wars. And just a, a whole bunch more that I will post on the website. This podcast will kill

EAU: will kill you.com.

EW: Yeah, yeah. Uh, thank you to Blood Mobile for providing the music for this episode and all of our episodes.

EAU: Thank you to Leanna and Tom and Brent, and Pete and Jessica and everyone else at Exactly right. Network for making all this possible.

EW: Yeah. Uh, and thanks to you listeners for listening. Tell us what you think about salts. Do you have any fun salt facts to share?

EAU: And make sure that you're subscribed so that you don't miss next week's episode. You know

EW: yeah. Yeah, because that's where the, the meat of it really

EAU: No. So this was meat,

EW: No,

EAU: salted meat, but I'm,

EW: this was the seasoning. Next week is the substance.

EAU: uh, and a special thank you also to our patrons. Thank you so much for your support. It really does mean the world to us.

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

EAU: You filthy animals.