

TPWKY – Episode 185 – The Great Smog of 1952

EW [Firsthand]: Fifty years ago, at the time of the Great Smog of December 1952, I was resident medical officer at what was in those days one of London's teaching hospitals, the Middlesex Hospital. As we now know, but did not at the time, the Borough of Westminster in which we were situated was the part of London where the fog was most dense. As from my personal recollection of the smog itself, at its worst it had the effect of completely disorientating me and a part of London I knew well, so that I lost my way on a minor errand from the Middlesex Hospital to Oxford Street 400 yards away. To get my bearings and to discover where I was, I had to creep on the pavement along the walls of the buildings, to the next corner, to read the name of the street. I do not recall any smell, but I do remember an eerie silence as there was little or no traffic. Visibility was less than three meters, and it was bitterly cold. Somehow, although I find this difficult to understand, sufficient ambulances got to us to deliver patients to take up every available bed. The fog itself swirled into the wards, and seemed to consist principally of smuts, so that the wash basins and baths turned darker and darker gray, until it was possible literally to write one's name on them, which I actually did. Within a day or two, I had to telephone the senior surgeon to ask leave to cancel all admissions from the waiting lists until further notice. As I remember the patients themselves, the clinical picture I have in my mind's eye is of middle-aged and elderly people, principally men, gasping for breath, with remarkably little in the way of rales or ronchi to hear in their chests. Within a few days patients with acute respiratory distress spilled over into all wards, regardless of the specialty or gender. They were in the surgical wards, and even in the obstetric wards, and as the majority were men, room had to be found in some of the women's wards. I remember also that the supply of oxygen was stretched to the limit. There were also many deaths. Indeed, I remember the morticians ran out of space in the mortuary, and in the chapel of rest, and we had to use the anatomy department's dissecting room in another building. Bearing in mind the extreme loss of visibility in the streets, I would expect that many people died at home without medical help.

EAU: Oof. Erin.

EW: I mean, that is like from the front

EAU: Right. I mean, that's someone who was there who witnessed all of the, who lived through it and was a physician at the time, so saw so many people

EW: so many more people than the rest. Yes. Yeah, it is. I think it really brings home, you know, like I. I'll, I'll talk more about The Crown later on in this episode, but, uh, I think it, it kind of brings home like what it actually was like to be there and experience this rather than just like reading about it and you're like, okay, but like what does it actually mean? How did people actually get sick? Um, yeah. So that was a firsthand account from a doctor Donald Acheson, and I found it in this like 50 years later type of a recollection of different stories, a symposium about the Great Smog of London in 1952, which is our topic for today.

EAU: It sure is.

EW: Hi, I'm Erin Welsh

EAU: And I'm Erin Allmann Updyke

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

EAU: We're talking about the great smog of 1952,

EW: the great, great smog. Except it wasn't great. It was like pretty bad.

EAU: It was horrific. I mean, great in the in the literal sense, right? Meaning

EW: In one of the literal senses.

EAU: Yes, yes, yes, yes. There you go.

EW: Uh, this is, I am, I'm really excited to do this episode because like yes, it is, it is a very specific topic.

EAU: It

EW: here's the singular event,

EAU: Mm-hmm.

EW: but at the same time, it's really not.

EAU: Oh, it has some pretty wide reaching implications. Erin,

EW: might, it might, it might have a deep historical context. It might,

EAU: I'm excited because you carry this episode and I'm mostly just along for the ride.

EW: I mean, I think it, it helps that I found a really good book, and this is like a, it's, it's a narrative, but, um, but there's, there's a lot to unpack here. And before we do that, it's quarantine time. I mean, we, we would have to drink nothing other than the London Smog.

EAU: The London smog.

EW: Based on a London fog. I mean, you can just do a London fog if you would like, but if you wanna make it dirty, hence the smog part. You can add whatever liquor you want. Um, and in case you don't know, London Fog is Earl Gray tea, steamed milk, some lavender, vanilla. It's really good.

EAU: It's fantastic. It's one of my husband's favorite Bevs

EW: It's such a like [00:05:00] treat. Yeah. Uh, we'll post the full recipe for the London Smog on our website. This podcast will kill you.com as well as on all of our social media channels. If you're not following us, you should be. We're on Instagram, we're on Blue Sky, we're on Facebook, we're on TikTok. I think that covers it. And we also have a website. This podcast will kill you.com. It's got all kinds of things like transcripts. It's got,

EAU: I love not having to do this.

EW: saw your face, like bracing

EAU: I know I was preparing myself

EW: It's got links to our bookshop.org affiliate account. Our Goodreads list links to blood mobile, uh, who provides the music for all of our episodes, uh, and is also on, uh, Instagram these days. Contact us form a submit your firsthand account form. It's, you know, there's a treasure trove, so just check it out.

EAU: it's there. This podcast will kill you.com if you haven't already rated, reviewed and subscribed on your favorite pod catcher. If you're listening on iHeart podcast or Apple Podcast or Spotify, click the the buttons to do the thing. And we're on YouTube as a reminder. Follow the exactly right network channel.

Before Erin, I ask you to tell me all about the great smog. I actually have two corrections that I'd like to make.

EW: It's been a long time since we've done a corrections corner

EAU: It has,

EW: probably too long. It's not like we've been right the whole time,

EAU: No, no, we're just ignoring our minor mistakes, but not today. I was listening through our last episode, which is gallbladder. Um, and so people will probably have pointed this out, but at this point I'm preempting myself, um, with two clarification slash corrections I wanna make. Number one, you were asking a lot, Erin, about like the color of bile. Is it?

EW: into the color for

EAU: I know which I, I love. Um, but now I wanna correct myself. Um, because it, you were like, well, I always thought it was yellow and, and then I made you feel like you were wrong. But you are not wrong. It is a yellow green. It's just on the greener spectrum of yellow than like an orange juice Harvey Wallbanger situation

EW: Right.

EAU: like our quarantini was. Um, so, but however, you also asked about if you are barfing yellow, could it be bile? And I said it could be or it could not be, which is correct. What I wanna clarify is that it doesn't always mean that there's something really serious or dangerous going on. If somebody is vomiting up bile, we get really worried about something like an obstructive process or something like that if the bile is on that greenish side because that means that there's a large volume of bile, which is worrisome. However, if you have been barfing and dry heaving and you have a completely empty stomach, you might have a little bit of bile that refluxes into your stomach mixes with the stomach acid, and then you might have a vomit that's more yellow on that like true yellow spectrum of color that might have some bile in it. So I just wanted to clarify. So no one's like panicking if they're barfing yellow. Uh, we're not a medical advice podcast, but you know what I mean.

EW: Yeah. Okay. Okay.

EAU: then I think dogs also barf bile. That's pretty yellow, pretty frequently.

EW: Um, I have cleaned up a lot of that in my life. Yep.

EAU: Um, and then the second thing is kind of a fun clarification. You asked about liver transplants and whether the gallbladder is like there or not, and I didn't know, so I looked it up. When you do a liver transplant, not only is the donor gallbladder removed during that process, so it doesn't get donated, but the person who's having their liver transplanted also has their gallbladder removed during that process.

EW: Is it just because the gallbladder is like kind of finicky and prone to things going wrong?

EAU: maybe. Maybe it's just like, because there's a higher risk of complications, but also 'cause we don't need it. And so why not eliminate

EW: less thing to attach reattach after all of

EAU: Attach and reattach or like unattach. 'cause then if you, if you unattach it from the liver and all of its connective tissue there, then it's just gonna be hanging and then Yeah. To reconnect an organ that we technically don't need. So anyways. You lose a gallbladder if you get a liver transplant.

EW: about it?

EAU: How about it? So interesting. We should do more transplant episodes though.

EW: We really should. There's, there's so much that we could do. Uh, yeah.

EAU: Yeah. But anyways, that's the end of my corrections. Erin, will you tell us all about the great smog of 1952?

EW: Uh, I cannot wait. Um, except we have to, because we have to take a quick break, and then we'll get right into it.

EW: The first to notice the deaths were the undertakers, which is probably what you might expect.

EAU: Maybe, but depressing.

EW: It is depressing. Um, but it also wasn't just the undertakers, it was also the florists. Yeah. More calls were coming in than they could handle. There were [00:10:00] funerals being scheduled out for weeks and weeks, and the florists couldn't keep up with the demand for funeral wreaths. Deaths were clearly on the rise in London, but why? In the months that followed the great smog of December, 1952, public health officials and politicians sifted through the records trying to piece together what exactly had happened to kill so many people in such a short timeframe, but the true cost of this tragedy, it wouldn't be comprehended for another 50 years after the last day of that choking smoke.

EAU: Wow.

EW: Yeah. Yeah. I'll, I'll get more into it in a second. Um, but, you know, fog and London had gone hand in hand for centuries, like it was part of the fabric of the city. In Charles Dickens' Bleak House, which was published in 1853, he wrote, quote, "fog everywhere. Fog up the river where it flows among green aits and meadows, fog down the river where it rolls, defiled among the tier of shipping and the waterside pollutions of a great (and dirty) city." End quote.

EAU: Quite descriptive.

EW: love it. Um, ait by the way, this is a new word for me. This is your daily dose of vocabulary. A-I-T it means small island on a river.

EAU: Oh, okay. So specific.

EW: Fog would feature in Dickens' other books as well. And in Robert Louis Stevenson's, Dr. Jekyll and Mr. Hyde. The London Fog provided a cover under which Hyde committed his crimes.

EAU: I feel like there's a lot of that, like, you know, dark and foggy

EW: Yeah. Creeping around the corners. Yeah. Which also, uh, incidentally would be a big theme of the 1952 London fog and like all the crime that was committed under the cover of fog.

EAU: The guise of fog. I don't know if guise is the right word, but you know what I mean.

EW: someone let us know and we'll do a corrections corner next week. Actually we won't because we'll be recording next week anyway. We don't need to get into the details of our logistics here. Uh, when the artist Claude Monet visited

London at the turn of the 20th century, he was entranced by the fog. "Without the fog, London would not be a beautiful city. It is the fog that gives it its magnificent breadth. Those massive regular blocks become grandiose within that mysterious cloak."

EAU: Wow.

EW: I know.

EAU: I wouldn't like London if not for the fog.

EW: Yeah. He's like,

EAU: he's basically saying.

EW: Thank gosh I can't see anything. I can't breathe. Well, anyway, um, Oscar Wilde, Sir Arthur Conan Doyle, TS Elliot, Thomas Hardy Rudyard Kipling. It seemed impossible to write about London without writing about the fog that encircled it.

EAU: Mm-hmm.

EW: Nathaniel Hawthorne wrote in 1857. Sorry, I have like so many fog quotes, but

EAU: I love it.

EW: Okay, good. I do too. I could have done so many more, but I'm sparing you. Okay. This is Nathaniel Hawthorne's quote. Uh, "the fog was denser than ever. Very black indeed, more like a distillation of mud than anything else. So heavy was the gloom that gas was lighted in all the shop windows and the little charcoal furnaces of the women and boys roasting chestnuts threw a ready misty glow around them. And yet I liked it. This fog seems an atmosphere proper to huge grimy London." End quote, and yet I liked it.

EAU: And yet I liked it.

EW: His description is it's, but, you know, largely positive, he liked it, but it does cast a slightly different, uh, light on London's fog than Monet's did a distillation of

EAU: Of mud.

EW: That sounds disgusting.

EAU: Like it would be hard to wade through.

EW: Yeah. Um, yeah, I don't, I don't think I have ever encountered a distillation of mud in the atmosphere personally.

EAU: Well, actually no. I have,

EW: You have where

EAU: oh, when I was in China, when I was working in China in 2014, there was a day that, uh, we woke up and I got texted, Hey, yeah, we're not gonna be able to go sampling today. And I looked out the window and it was yellow. The sky.

EW: That's exactly what the London smog was like. Yeah.

EAU: it was, it was. And you couldn't see, like, you, I couldn't see the buildings across the way. And I was like, uh, what's going on everyone? And they were like, oh, uh, they said, it's just like the farmers burning the trash in their fields or something. And I was like, I don't think that's what this is. But anyways, we couldn't go outside for like a day or two.

EW: Yeah.

EAU: Yeah,

EW: Intense. Okay. Distillation of mud. There you go.

EAU: of mud. It was, it was a thick yellow, the whole air. Yeah.

EW: but [00:15:00] yeah. Okay. That, I mean that about yeah. That sounds like a, like a London fog. Like a pea souper as, as they were called. Um, that, and that muddy fog in London came from the tons of coal burning in the city's factories and houses as it had since the 13th century, which is way, way further back than I

EAU: It's so much longer than I really, I think I only think of it as an 18 hundreds thing.

EW: Right. Industrial revolution did put a different spin on things, but prior to the 13th century, the city was mostly heated by burning wood from the surrounding forests. But as London's population grew faster than the forest could keep up with, and the switch to coal was inevitable, and then just things got a lot worse in the, in the industrial revolution. But coal smoke, yeah. It had filled the winter skies since that time causing illness and sowing the seeds of conflict. There was a religious leader that was executed for the smog at one point in the 16 hundreds.

EAU: What.

EW: Yeah. Um, I think that what had happened was that he, there was like a church that was damaged because of the coal smoke, and so he was like, someone needs to clean this up. We have to stop the coal smoke. And then I think people were upset and they killed

EAU: They killed him for it. Oh my gosh. Hardcore.

EW: Um, probably the truth is a little bit more nuanced than that, but that's what I recollect from when I read this stuff a week ago. Mm-hmm. Um, but these historical fogs really did pale in comparison to those that were enhanced, I think, for lack of a better word, by the industrial revolution beginning in the late 1700s. So when urban populations swelled and then factories continued to churn out more and more coal smoke, that smoke became increasingly toxic in 1873 and estimated 300 people died from bronchitis over the course of a few days and six years later, the fog all but blotted out the sun in the city for four months.

EAU: Oh my

EW: for which like, I don't know if it was like, it's not like nighttime, it's not like the asteroid dinosaurs type situation.

EAU: Still, like I remember Illinois for several months in the winter, not having any sun from just clouds and it was miserable.

EW: Mean, truly horrible. That's when I realized that like, it's not the temperature that matters,

EAU: no. So lack of sun. Yeah. Wow. And that was from smog, like

EW: That was from smog. Yeah. And, and Christmas day apparently actually did more like, looked more like nighttime than it looked like daytime.

EAU: gosh.

EW: yeah. And shortly after this 1873 fog event, the Honorable r Russell wrote quote, "in winter, more than a million chimneys, breathe forth simultaneously, smoke, soot, sulfurous acid, vapor of water, and carbonic acid gas, and the whole town fumes like a vast crater, at the bottom of which its unhappy citizens must creep and live as best they can."

EAU: Oh,

EW: Yeah. End quote. The same year he wrote this, the National Smoke Abatement Society formed, which also was, uh, played a role in the 1952 thing. So it was, you know, long standing,

EAU: Yeah.

EW: But we can't place the entire blame for London fog on industry or coal. The British Isles happen to be located in the path of the Gulf Stream, which brings warm waters to the area, keeping winters milder and summers cooler than mainland Europe.

EAU: Mm-hmm.

EW: It shifting winds, however, can do tricky things like stagnating the smoky air over certain regions, preventing it from burning or blowing off. But even so, this was not the delicate white misty fog that you'd expect to see in the countryside.

EAU: Mm-hmm.

EW: It. It was more like the smog that you saw. Erin, the honorable r Russell, described it this way, quote, "A London fog is brown, reddish yellow, or greenish. Darkens more than a white fog has a smoky or sulfurous smell is often somewhat drier than a country fog and produces, when thick, a choking sensation instead of diminishing while the sun rises higher, it often increases in density, and some of the most lowering London fogs occur about midday or late in the afternoon. A white cloth spread out on the ground rapidly turns dirty, and particles of soot attach themselves to every exposed object." End quote.

EAU: Oh, you can really,

EW: It's visceral. Yeah. Yeah.

EAU: I also just realized that it was 2012 and not 2014 that I was there

EW: Oh yeah. In 2014, you were in

EAU: I know. I don't know why I said 2014, probably just my brain was like, ah,

EW: Once it's 10, once it's 10 years ago, it's becomes meaningless. You automatically get a plus or minus [00:20:00] four years.

EAU: Thank you. Okay, then No worries.

EW: Uh, this polluted London air was so distinctive that in 1905, a whole new word was invented to describe it.

ERINS: Smog!

EAU: Yay.

EW: Yeah. Isn't that amazing? I, I never thought about, I mean, I knew that like smog was, what do you call, yeah, what do you call that, that term, Portman?

EAU: portmanteau. that right?

EW: I think someone let us know because our phones are being

EW: used

EAU: you do two

EW: to video this, so we can't Google

EAU: look it up. Two words equals one new word.

EW: I think so. Like frenemy.

EAU: Frenemy. Yeah. Yeah, yeah,

EW: Um,

EAU: Framily.

EW: Fre. Yeah.

EAU: Yeah.

EW: And those are all the ones we can think of. Smog. Smog. There we go. Um, otherwise, you know, sometimes on especially Smoggy Day, peace super, like I said, and restrictions on coal smoke, they existed, but they were largely ignored. Even though the health effects were known in like a more general sense, it was just sort of seen as the price of progress. And there were occasional upsides to this smog, like during the Blitz and World War II when smog masked the city from enemy bombers. But overall, it was a deeply detested, unhappily, tolerated London institution.

EAU: Okay.

EW: All right, so now I want you to pretend, I mean, we're doing this on video, but like I don't have the skills to make this graphic,

EAU: Uhhuh.

EW: so I want you to pretend that there's a graphic of calendar pages turning, you know, like, and then you see December, 1952 emerging on the final page. Yeah. By the time the last month of 1952 dawned the UK had already had quite an eventful year. In February. King George the sixth died leaving Elizabeth to take over the crown. Uh, a severe Yep. If you have seen the crown, this is, I

EAU: That's when it starts.

EW: basically when it starts. Yeah. Episode four is of, this first season is the smog episode, so if you are interested in watching it, that's the one to

EAU: I don't really remember this episode. I've watched the first couple of few seasons. I don't remember this episode at all.

EW: I, I only watched, uh, uh, like for this thing, I, I watched the first four episodes and then for research. Yeah. I was like, this is what a burden that I have to watch TV for my job. Like

EAU: Yeah. It's so hard.

EW: Um, but I do have some nitpicky things that I will say later about

EAU: I can't

EW: episode. Mm-hmm. Mm-hmm. Uh, but also in 1952, there was a severe storm in August that caused substantial flooding in southwestern England leading to the deaths of dozens. There was an air show disaster a few weeks later that led to dozens of spectators killed. And then not long after that, the second most deadly railway crash in England's history occurred with over a hundred people dying.

EAU: I remember that episode, I think only because I looked it up afterwards to be like, is this real?

EW: I don't, so this is so funny 'cause I don't remember this episode and I just watched them and so now I'm, I mean, I think I was distracted during, during the first three

EAU: also wondering if it was a manufactured memory, but I'm pretty sure it's like a whole episode. Was this because it's the coal it hits, it's like in a coal town, right? That this happens.

EW: Oh Aaron, I

EAU: Oh, okay. Sorry. Anyways, maybe I'm getting confused.

EW: was fog that was suspected in the crash. Yeah, and so that sort of foreshadowed really that year, the deadly potential of coal smoke.

EAU: okay.

EW: These disasters and historic events really punctuated what had been another difficult year for the 8 million people living in the city. Sort of like the cherries on top of a very long decade. Just a

EAU: sundae.

EW: a crappy sundae. Just the worst ice cream. Yeah.

EAU: coal flavored.

EW: I can't quite imagine what coal flavored ice cream would be like, but not good.

EAU: Yeah.

EW: Yeah, London was still very much recovering from World War ii, seven years after its end, with many buildings still in ruins or under construction from the air raids that had killed 70,000 civilians across Britain. If you were over the age of 35, you had already lived through two World Wars, which is. Hard to comprehend. Yeah. Um, yeah. Rationing was still in effect for many items, and economic hardship reached every home as well as the government, which, which struggled with mountains of wartime debt. Perhaps the only industry that wasn't struggling in 1952 was the coal industry, which employed over 700,000 people.

EAU: Wow.

EW: A whole lot of coal was needed to heat the homes throughout the country, and in London, [00:25:00] every home was equipped with at least one coal burning fireplace. For the vast majority of people, coal was really the only option that you had to stay warm. Like electric heating wasn't, hadn't, wasn't really a thing quite yet, or was like the transition hadn't happened. But this wasn't the sole reason, or even one of the major reasons that the coal industry was booming. It was booming because they were selling off the higher quality coal as an export to help drive down the national debt. Londoners could really only buy and afford the cheap dirtier burning coal nicknamed nutty slack. Um, I don't know, I should have looked up where it got this nickname, but Nutty slack. Yeah, and you actually, I, if you wanted to heat your living space, you would have to burn a lot more nutty slack than you would've like higher quality coal. And then it also would burned a lot dirtier. So you're ending up producing a lot more toxic smoke and a lot more smoke overall. But with an election on the horizon, the party in power, which was the conservative party or Tories, wanted to distract from discussions about the national debt. Meaning, no talking about cleaner fuel sources, no selling higher quality coal domestically. Nutty Slack was good enough.

EAU: It's great.

EW: great. And there was a lot of it, the largest stock of all grades of coal since the war ended 19 and a half million tons.

EAU: Wow. Okay.

EW: Okay. The smog begins. On December 4th. The fog rose long before most residents of the city circling the buildings and blotting out the rising sun. Those who hoped the fog might burn away by noon would be disappointed as the anti-cyclone that drifted over London continued to hover there. And the winds that usually accompanied a system like this just were nowhere to be found. It was shaping up to be a real pea super of a day, and I never thought I'd get to say the word pea souper.

EAU: So many

EW: Yeah. Uh, I love pea soup too, so Feels,

EAU: that about you. I.

EW: Yeah. Well, it's, I've always been a pea soup fan. Gosh. Um, anyway, city officials brace themselves on this day for the logistical troubles that it would cause. Mostly thinking in terms of traffic as the sun rose behind a thick blanket of fog on the next morning, December 5th, Winds yet again, were a no-show, and the only thing that was clear was that the fog was here to stay and it was getting worse. Officials shut down all river and air traffic, buses were delayed. Commuters waiting on train platforms couldn't see more than like 50 yards ahead of them, but even that would seem like crystal clear visibility as the days went on, which is, yeah,

EAU: terrifying.

EW: the fog got its first mention in a newspaper that day with the Manchester Guardian reporting. That quote, "the first real fog of the year has enveloped London today. An old fashioned pea souper thick, drab, yellow, disgusting", end quote, which is like. Yeah. My favorite like, sums it all up in, in just

EAU: Right. That's the meteorological report for the day. Imagine that you're watching tv and they're like, it's disgusting. Back to you, Todd.

EW: Oh. And so this, that reporter and most other Londoners still treated the fog as just like another day in the London winter, but those monitoring, air pollution were getting increasingly concerned, realizing that this was not, in fact just another pea souper. In less than 24 hours, the amounts of smoke and sulfur dioxide in the air had increased five times over, and those were just the things that they could actually monitor. There were other compounds like carbon

dioxide, carbon monoxide, hazardous chemicals like vanadium spewing from diesel oil engines. These, they could only guess were increasing

EAU: Yeah.

EW: if you ventured out into the fog as many people had to do to continue with their, you know, their lives, their work, their school, their shopping, whatever they needed to do, they would return home with fog, stained clothing, tarnished buttons, just a grimy film on exposed skin and hair. Even if you covered your nose and mouth with like a cloth handkerchief or something, it would be stained and gunky almost immediately. Every breath you took, you choked and burned. It triggered asthma attacks and coughing fits particles were visible, drifting in the thick air. Yeah, but

EAU: I feel like I can feel it on my fingers.

EW: I know, I know by the second evening of the fog, ambulance calls had increased by a third, and this is when they could still be dispatched. Uh, spoilers and [00:30:00] the temperatures dropped even lower, leading to more burning coal and more smoke filling the skies By December 6th, which was a Saturday, conditions hadn't changed, and the fog was finally getting some press coverage, although none that adequately conveyed the severity of the situation. Mostly it was complaints about traffic and sporting events being canceled and the higher criminal activity under the fog.

EAU: Ah. Of course the guise of fog.

EW: Yeah. Well, and if so, just here's my little pedantic insert about the the crown. Um, I watched the episode and in it there's like very much immediately alarm for the health of Londoners. And it was like, what is this fog gonna do? People aren't gonna be able to breathe. Like, that part was very pressing and immediate in the show. That is not what the immediate concern was during the time of the smog. And even in the, the, the weeks that followed, it took a long time for people to realize the health effects, um, during the smog. The headlines would've much, would've been a lot more about like, you know, businesses are suffering because of this. Like, that was sort of the vibe. Um, there was,

EAU: annoyance of everything being disrupted and the like, economic concerns, but not so much the health concerns in real life during the moment. Okay

EW: .

EW: And there's a part in the episode where spoilers, if you haven't seen it, it's Churchill's, um, secretary gets hit by a bus and dies because she can't see, she doesn't know if she's in the street or not. That wouldn't have happened because traffic was ground to a stop.

EAU: Oh, okay.

EW: Also, I don't think she existed. Anyway, um, sorry. That's my, well, actually corner over. I'm sorry. It's, I I'm not trying to be like a fun sucker. I'm just like, I just wanna be, you know, truthful.

EAU: You've watched movies with me. I am a total fun sucker.

EW: You are, you are. But it's like fun. a, it's a fun way of being a fun sucker.

EAU: ugh, this wouldn't have, I really kept my mouth shut watching The Pitt. Actually, I was proud of myself very few times. Did I allow myself to talk out loud?

EW: Okay, well let's watch er together and we'll see if your story stays the same. If you're able to be like, uh, another rib spreader. Are you

EAU: not. Not for that. Not for that long. Let's be real.

EW: I swear the rib spreaders in every single episode multiple times. Is that,

EAU: in the er,

EW: In er? Yeah, all the time. All the time.

EAU: No. No.

EW: Okay. Back

EAU: Back to the great smog, please.

EW: Uh,

EW: um, but, okay, so there were some doctors though, during this time, during the, the great smog that were issued a PSA, that were like, okay, if you have any

sort of respiratory conditions, leave, get outta town if you can. But like, who could

EAU: That's easy to do when there's traffic has ground to a

EW: Traffic's ground to a stop. I, I need to work. I can't afford to do this. You know, like there's a lot of, yeah.

EAU: Okay.

EW: Uh, sulfur dioxide levels reached 550 parts per million, and smoked had increased from 400 micrograms per cubic meter to 1600. Um, now I know that you're gonna get into like what those numbers actually mean, but it's a lot like the, these, these concentrations were so high that the instruments actually could not measure them accurately. They were off the scale. Like it was just like, oh, we have no, we can't measure this anymore. It's above this. And yet the smoke continued to flow from houses, from factories, from power plants. It was a really cold December. Healthcare workers struggled to keep up with the patients pouring into their hospitals with pneumonia, bronchitis, tuberculosis, heart failure, and asthma attacks. A few older doctors said it reminded them of the 1918 Influenza Pandemic with so many people gasping for breath on the wards and every bed full, and many more suffered at home because they weren't willing or able to venture out into the fog. And people began to die. But nowhere on any death certificate could the word smog be found. Instead, it was acute respiratory failure or heart disease. And in retrospect, acute respiratory failure due to smog would probably be the most accurate description. Visibility dropped to a yard. Traffic stopped entirely, which also meant ambulances were grounded, unable to navigate in the thick fog. Anyone who stepped outside into the freezing temperatures, like, you know, when that happens and you instantly inhale and then you're already coughing because it's so cold, you're doing that, but you're inhaling this toxic smog and you're choking on that frigid air and coughing and whooping.

EAU: Oh

EW: And so it went Saturday night into Sunday. Sunday into Monday, uh, December 8th, and fog stories began to circulate. And police officer that was standing right outside a storefront heard the crash of windows from a burglar breaking in, but he couldn't see them. So they escaped. A duck flew into a man neither able to see the other.

EAU: Okay.

EW: [00:35:00] Uh, the dog racing track had to be shut down because the dogs could actually catch the mechanical hare. The guy who was guiding it, like on his little machine, he couldn't see in the fog. So the dogs were like. Okay, we caught it. What do we do now? Mm-hmm. Uh, the performance of La Traviata in a North London theater was stopped abruptly after the lead star couldn't sing. She was choking during her first aria, and then the conductor couldn't see past the first row of musicians 'cause his eyes were burning.

EAU: It is just so wild to think about people's trying to like do life

EW: And they're like, this is just how it's supposed to be. Like, it's another, I think it, it speaks a lot to sort of the, and, and maybe we'll talk about this later on, but like, the insidiousness of this and how, how easy it is in some respects to be like, oh, it's bad. It's a little bit worse than yesterday. It's a little bit worse than yesterday. It's a little bit, and then you just keep going on and then you're like, when you're in the midst of it, I think it's hard to realize just how bad it is.

EAU: Right. You have to be able to like take yourself out and like look back and be like, oh, that's, we shouldn't have been just living with that.

EW: Yes. Yeah. Uh, and then in retrospect you're like, how did, how, how is this allowed to happen for so, so long?

EAU: Right.

EW: But yeah. Um, a few more fog stories. So there was a milkman who walked six miles through the fog on his usual rounds, but he collapsed and died on his way back, less than a mile from his depot just collapsed. Um, at the Smithfield Livestock show, 11 cattle died and 150 more had trouble breathing in the toxic air. This was, these were the deaths that were actually most reported on during the smog and like in the weeks after it was these, because it was so, it was like, I think extreme and it was visible. And so it was like these, a lot of these cows were brought in from out of London, and then suddenly they're dying and they're like expensive cows or

EAU: And it's like all at once kind of a

EW: it was much more of like a visible, here's this contained thing. All these cows are having trouble breathing. That's weird. And even though you're, you're also having trouble breathing. But I, I did read in another firsthand account in this, from that, that symposium that someone was like, you know, it was a, a child or like a young man during this. And he's like, I remember my father.

And, uh, many men my father's age all had bronchitis. Like it was one of the most chronic Yes. Chronic conditions just from like life working in factories in the war, stuff like that. And so I think it was like, yeah, smoking the expectation of bronchitis was like, well, yeah, of course you're gonna have a hard time breathing,

EAU: Right.

EW: yeah.

EW: Um,

EAU: So it was like they, I wonder if that, interesting to think about like the Crown's representation of being very worried about the health effects, and I feel like it's, it's a lot harder to put yourself in those shoes, right. Of like, we didn't really know as much about the health effects and everyone was sicker to begin with, so it's like maybe just to make it believable for watching something today, they had to be like, look, we, we would be worried about this

EW: Right,

EAU: today.

EW: Don't, don't worry. We see this happening. Yeah. I mean, it also just makes for better drama.

EAU: Right, right, right. Yeah.

EW: Churchill is not a fit leader, blah, blah, blah. You know, like that kind of thing. So, um, but yeah,

EAU: Okay. Interesting.

EW: When the smog finally lifted on Tuesday, December 9th. Those stories like we've talked about, those were the, the ones making front page news in the weeks that followed. The cost was illustrated more by like these quippy little anecdotes or the economic costs, like businesses that had to shut their doors or by the inconvenience that the smoke, the smog caused, uh, traffic stopped, rugby matches canceled. The true human toll was yet to be calculated, and when it finally was, it revealed a catastrophe. 12,000 people had died as a result of the smog. 12,000 and and thousands more would suffer long-term respiratory issues. The great smog of 1952 had a lasting and profound impact on air quality

regulations around the globe. But before I get into the fallout of this public health crisis, I'll turn it over to you, Erin, to tell me like why people were getting so sick. What is it about the smog that was making them sick and killing them?

EAU: Yeah, I will try in order to try and explain what the smog was doing to people. I wanna take a quick step back to talk a little bit about like fog and smog more generally,

EW: Ooh, weather lesson.

EAU: Whether, yeah, I mean, not really. 'cause when I started getting deep into [00:40:00] the, like, meteorological literature, um, it was quite quickly overwhelmed and I still don't understand anticyclones and inversions and, uh, add, advection or something else.

EW: Yeah. No idea.

EAU: But we're gonna, we're gonna do what we can. Okay. So you had, kind of alluded to this, Aaron, there are parts of the world. London, you know, the UK being one of them here in San Diego being another, San Francisco being another very classic where fog is prone to form. So let's talk a little bit about what that formation of fog looks like. Typically, I. The air closest to the surface of the earth is the warmest air, right? Because the sun is warming our earth. And then through that, like heat transfer, the surface of our earth warms the air that's closest to it, and typically warm air rises and it continuously rises into the atmosphere and cold air higher up in the atmosphere will sink. And this creates, it's because warm, because air physics,

EW: Okay. That's enough for me.

EAU: And this kind of turbulent mixing, what it usually does is carry off most of our ground level pollution, higher up into the atmosphere. That's what typically happens. It is, isn't it? But sometimes we can see what's called an inversion event, where under the right conditions there is a pocket of warm air that sits higher up in the atmosphere. These conditions might include like warm air coming off the ocean and sort of popping up onto land and sitting just a little bit higher so that the air closest to the earth is actually cooler and often wet. And because of this we see little to no mixing of the air, and we can get fog formation. This warm air on top is like a cap where the cold air can't rise above it 'cause it's more dense than this warm air up above.

EW: So it just like, like con, condensed, air, humidity, et cetera. More water's held.

EAU: super saturated pocket that can result in fog and smog, as you alluded to. Erin, is a combination of smoke and fog. So when these masses of air get trapped low down in our atmosphere, they're trapping all of our atmospheric pollutants along with them. Meaning we have both particulate and gaseous pollutants that are trapped inside this fog layer. And it turns out that particulate matter, like what is released extremely like very high quantities with coal burning, especially particulate matter can serve as a nucleation site, basically, where water can condense around these teeny tiny aerosolized particles and then be even more apt to form fog, which we now call smog.

EW: Okay. Okay. So everything's just sort of sitting there and not, and not going anywhere. 'cause there's nothing to blow it off. Nothing to burn it off. Yeah. Okay.

EAU: and that is exactly what we saw happen in London in the winter of 1952. There was also on top of it, kind of a perfect storm of conditions that led to this. That winter was particularly cold in London, which meant that more people were using more of this nutty slack coal to keep their houses warm. Additionally, that summer, the summer before the electric trams in London had been switched out in favor of diesel buses, which were giving a lot more pollution into the air.

EW: Not good.

EAU: And so even apart from this particular fog, smog event, it was estimated that every 24 hours between these coalfire chimneys and the diesel tailpipes, there was at least a thousand tons of smoke, 2000 tons of carbon dioxide, and somewhere between estimates I saw ranged between 370 and 3000 tons of sulfur dioxide, as well as carbon monoxide, nitrogen dioxide, other heavy metals and more being spewed into the atmosphere around London. On top of that, you had this meteorological phenomenon that happened, right? The fog. You had these toxic products of combustion, this coal heating, the diesel buses exacerbated by these cold weather conditions and what you mentioned, Erin, the kind of long-term aftermath of World War II and all of the things that had been going on in London this year. It was a perfect storm

EW: So like this would've been, I mean, I just, it sounds like the air was pretty toxic regardless, but then when it's all sitting there, it's extra bad.

EAU: Exactly. It's not, it's just not moving, right? So instead of any of this being blown away and you're only exposed to, you know, the, the immediacy of it, you're being exposed to multiple days worth, just, just chopped on top of each other. So you had mentioned some of these numbers, [00:45:00] Erin. 12,000 people were estimated to have died in total due to this smog. If we break it down a little bit further, it's estimated that 4,000 more people died in London on average, just during those four to five days of the smog itself. With 8,000 more people dying from long-term effects over the next three months due to this fog. And this is again, four and 8,000, 12,000 total more deaths than the baseline.

EW: Right. It's not like 12,000 people died in two and a half months. It's on top of what was the historic average.

EAU: Average, historic and no age group was spared entirely. Deaths in adults almost tripled the mortality of newborns doubled, and those ages one to 12 months more than doubled. Deaths in children rose by half, and in young adults by two thirds, and overall, about half of the increase in deaths was attributable to either bronchitis or pneumonia. With deaths from bronchitis increasing eight to 10 times based on different estimates and pneumonia deaths increasing by at least three times. We also saw increases in deaths that were reported as respiratory tuberculosis, cancer of the lung, coronary disease, myocardial degeneration, and the nebulous category of other respiratory diseases.

EW: Hmm.

EAU: influenza deaths also increased during this time, although I think this is a little bit contentious because at some point the government tried to say that most of

EW: They were like, oh, this was influenza epidemic. It wasn't smog.

EAU: there was no influenza epidemic at the time. So, but plus you also have to think that like even if flu, certainly flu was circulating, right, it's flu season, exposure to these pollutants certainly would leave a person more susceptible to a severe infection afterwards or during the event.

EW: Mm-hmm.

EAU: Then we also saw increases just in hospital admissions. Apart from the death rate, we saw 163% increase in respiratory disease hospital admissions, and a 48% increase in total hospital admissions. And that's just for people who

could actually get to the hospital. So what was it that was doing all of this, right? We both, yes. Smog. I mean, honestly, yes, that, that's the answer, Erin. Because we both know and don't know more specific than just to be able to say smog. Okay. During the early 1950s, the only routine air quality measurements that were being taken were of smoke, which is essentially the concentration of suspended particulate matter

EW: And that's mostly from coal smoke or like from other things too.

EAU: it's other things too, but primarily coal smoke. Especially in London. Yeah. Like it was mostly from coal. Um, but all they could measure was that smoke suspended particulates and sulfur dioxide,

EW: Mm-hmm.

EAU: Maximum daily recorded concentrations of the smoke and the sulfur dioxide during this four day smog event, like you mentioned, Erin, were incredible. They actually peaked at 10 to 12 times higher than what was typical for the time. And these are certainly underestimates because of just how overwhelmed the filters that were monitoring air quality actually became.

EW: God, it, it reminds me kind of, of like Chernobyl when they're first measuring and they're like, wow, this is really high numbers. And you realize that the little detectors are only detecting, they're maxed out. And so it's like we know it was at least 10 times higher, but how many times actually was it higher?

EAU: it's like when I do a point of care A1C and it just says like, over 12%. And I'm like, well, what does that mean? How then we get a real one? But anyways, um, so yes, so it, it was really bad. And the average during that fog, so not just looking at the peak, but even the average concentrations during that smog event were five to six times the typical average for smoke and sulfur dioxide. And I'm not getting into the nitty gritty on the numbers here because they're, they're hard to kind of conceptualize. But the other thing is that we couldn't measure all of the other known pollutants because coal smoke and diesel engines also release a ton of other pollutants that certainly contributed to the respiratory and cardiac issues that we saw.

EAU: We can assume, if you assume that the concentrations of the other pollutants increased kind of in proportion to smog. To the smoke and the sulfur dioxide, then we would've seen significant increases in carbon monoxide, carbon dioxide, nitrogen dioxide, as well as heavy metals and other

contaminants of this coal especially. On top of that, Erin, 'cause we're not done, some proportion of just the sulfur released by burning this coal would've been sulfur trioxide. So with three oxygens instead of two, and

EW: worse than sulfur [00:50:00] dioxide.

EAU: The reason that it's

EW: Quadro oxide? No, just kidding.

EAU: the reason that it's worse though, Erin, is because when that mixes with water in the air, it becomes sulfuric acid and so on top of just some amount of sulfur trioxide being produced, sulfur dioxide could have been oxidized to sulfur trioxide. So basically, you can think of this fog also containing sulfuric acid mist as some proportion of it.

EW: Like a, that's horrifying.

EAU: Yes. I mean that's acid rain, right? Except it was acid mist.

EW: Yeah.

EAU: Um, and the smoke itself was also not just one thing, right? It, it is soot, which can be like carbonaceous and like non-carbon aous little particles that are really, really, really fine. But we also saw fly ash, which is that ultra fine type of ash that comes up out of your chimneys, but also salt, gypsum, heavy metals, like I said, and the EL elevated levels of air pollution were not only seen during this event. They actually lasted for at least two months after this smog event as well. And sulfur dioxide tends to get a lot of the attention when it comes to what was the ultimate cause of people's deaths. Why did we see so many deaths? But in truth, it's not just sulfur dioxide. And this is where things get a little bit kind of like confusing and difficult and why I am not focusing as much on the, like how many parts per million are we talking?

EW: Uh huh.

EAU: Because when we look at a lot of our data on like exposure to these gases, like sulfur dioxide comes from animal studies and studies where we're looking at occupational exposures and in a lot of cases, including this great smog event, the concentrations in the atmosphere were likely not high enough that you would expect based on our animal studies and occupational risk like

thresholds, you would not necessarily expect significant effects just from sulfur dioxide alone.

EW: Mm-hmm.

EAU: However, there's clear data, epidemiological data, and from this event that increases in sulfur dioxide from these kind of pollutants, increases mortality, increases respiratory complications. So something is clearly missing in this story. And really what it is, is that it is not the one thing, it's a combination of all of these. So one of the things that we see is that the particulate matter in this smoke likely plays a huge role as well as the synergistic effects of the sulfur dioxide. Its conversion into sulfuric acid and these smoke particles.

EW: It's not just, uh, the individual, it's not just some of the parts. It's more than the sum of the parts. It's all of these things interacting

EAU: exactly, exactly

EW: guess that's what synergistic means. Yeah.

EAU: right. Well, yeah, but that, but that, but that is what it is. Like we could

EW: way more words. Yeah.

EAU: saying it so that it, so that it's emphasized. Right. Um, because one of the things that we see is that some of this particulate matter, it can get really down deep into our alveoli, right? It can cross over into our bloodstream, which can potentially cause inflammation. It can cause damage to the lungs itself resulting in both short and long-term respiratory issues. We know that asthma prevalence was higher in the cohort of people exposed as babies to the great smog. Um, and that particulate matter, making it so deep, we think maybe helps some of these gaseous pollutants actually make their way deeper into our lungs and have more of an effect themselves than they would if they were alone in the air,

EW: makes sense. Yeah. Oof,

EAU: Of course on top of that, there was increases in carbon dioxide. So carbon monoxide. How much of a role was that also playing? You've got an increase in carbon monoxide. Your oxygen isn't being shunted as efficiently. 'cause your blood, blood cells are covered in carbon monoxide. So like, there's all of these things that are playing a role together.

EW: Mm-hmm.

EAU: So we can't say it was this one thing, it was all of these

EW: All of these

EAU: that led to significant respiratory and cardiovascular effects that we still see today from exposures to smog. And we still don't, like we, we can't as easily break down, here's the one thing because it's not, it's the combination of all of these things.

EW: all of the things together we can't disentangle. Yeah, yeah.

EAU: So Erin. Since we can't disentangle it and we're still dealing with it, can you tell me a little bit more about how the great smog of 1952 has affected how we think about air quality

EW: The fallout. Absolutely. Yeah. Let's, let's do it. From what you just told us, Erin, it is. Easy to see why the death toll from the great smog was as high as it [00:55:00] was 12,000 people. We know a lot more, even though we don't have the full picture, but we do know a lot more now than we did back then about how air pollution can be terrible for our health. That wasn't clear almost at all, back in the early months of 1953, when public health officials began to examine the full impact of that terrible smog event

EAU: Mm-hmm.

EW: for centuries, people had connected the dots between pollution and bad health. Like it's, it would be hard to overlook that. I mean, my asthma, right?

EAU: asthma. Yeah.

EW: Uh, which is more nuanced than that, but still that was part of it. But, but the question of can coal smoke or smog actually kill people? It remained an open question in part because no one knew exactly what the mechanism would be. And I think because of how you just explained it, it, it's, it's reasonable to be like, well, we don't quite know. It's all these things together. And I think there was another question of like, well, did someone die because of the fog? Or did the fog just exacerbate an underlying health problem? Bringing someone a little closer to death? And if that's the case, like what do you put on the death certificate? This is, I think, was a contentious issue also during COVID, but it's like, if the smog hadn't existed, would this person have survived that week?

EAU: Certainly people with either preexisting heart or lung conditions were more susceptible. Absolutely. But that there's still, it's the smog.

EW: respo The smog. Yeah. Yeah. And so, yeah, like, like you said, it was looking at historic averages that helped people to see, okay, there was an actually a huge increase then compared to past years. And so, um, just, just like to, to illustrate this too, like after when, when people were finally looking at this and coming to terms, uh, they were getting angry. One coroner wrote, quote, "this fog was a killer and wiped out a great number of people who would've otherwise survived with their chronic bronchitis and emphysema, damaged hearts, et cetera. What are our wonderful scientists doing in an age of jet propulsion, atomic energy, these wretched people can't solve the problem of a lousy fog" end quote. It's harsh.

EAU: It is harsh,

EW: Um, I think it's, it's. I understand where he is coming from to some degree, right? Because it's like, yeah, we are making huge technological advancements in so many areas, and yet people are still dying from a centuries old problem. What are we doing here? You know? I mean, and it's,

EAU: some of that today.

EW: I mean, I think this is where that, uh, a good deal of that rage is misdirected, right? Because I'm sure that scientists would've been more than happy to, more than willing to solve the problem of smog. But what was really holding them back was politicians and, uh, corporations

EAU: Uh huh Uhhuh.

EW: And so maybe that question would've been better phrased as, what are our wonderful politicians doing? And the answer would be stalling, denying, downplaying, not all. Of course. Hashtag not all politicians. There were a few politicians. I can't, I have to not do that. I hate it.

EAU: I really liked it

EW: Oh, really?

EAU: Uh

EW: Okay. There were a few politicians in the Labor Party, namely Norman Dodds, who stood up against the conservatives in power, demanding that the fog deaths be investigated, and that step should be taken to ensure that something like this never happened again. Naturally, the conservative Party was reluctant to take on any responsibility holding onto their claims that nutty slack was perfectly safe to burn, that it was just the excessive cold and damp that led to the increase in deaths, that it was just, it was just weather. Erin, it was weather.

EAU: Yeah. Cold and damp. It's your phlegm.

EW: It's your, it's just your phlegm acting up, you know, you know, take some emeds or something. Don't do that.

EAU: Don't do that.

EW: But this, this delay tactic, this denial tactic, it wouldn't work for too long. News of the smog had traveled around the world and the US government actually reached out to the British Ministry of Health requesting documents about the smog to help them in their own investigation of air pollution and health.

EAU: Mm.

EW: Because the 1952 Great smog, although it was the most severe, uh, it wasn't an isolated event in 1930 in Belgium, a similar set of weather circumstances that faced London, uh, led to a toxic smog settling over an industrialized valley, killing 60 people and sickening thousands. And in 1948 in Pennsylvania, a toxic fog crept in over an industry town choking residents' lungs with hydrogen fluoride and sulfur dioxide from the zinc factory and other, uh, factories in the area doing other things. In that smog event, 20 people and 800 animals died. [01:00:00] And it really woke up the US to the air pollution crisis, and so their interest in the 1952 smog was motivated by this and understanding how this happened so that we can do something to prevent it.

EAU: Mm-hmm.

EW: The British Ministry of Health was horrified that the UK would be one step behind the US when it came to these matters. And so they quickly issued a questionnaire to the families of those who had died during the smog week and certain symptoms popped up time and again, things like vomiting, chronic chest trouble, headaches, delirium, exhaustion, chronic coughing, pain after drinking

water, things like that. And, um, so initial estimates kept being revised down by the conservative party. So it was like, well, we think that 6,000 people died in December, and they're like, all of December. Do we really need to count all of December? Let's bring it down. But like, even, even just looking at the smog days, it is, the numbers are staggering. Like you said, it was estimated to be about 4,000. Um, I, in the first 24 hours, we can kind of break this down even more. Four. The first 24 hours, 400 people died. Day two, 600 people. Day three, 900. Day four, another 900. Day five, the final day, 800. And again, these are excess deaths.

EAU: Excess on top of the historic average over the last like several years.

EW: Yeah. Deaths. That would not have happened if the smog had not happened. Yeah. During that time, there were hospitalizations, extra claims for sickness benefits. And it's hard to imagine that a single person in London would've been unaffected in some way, untouched in some way by the fog, right? Whether it was a family member themselves, someone else, they knew, their work, anything. And after months, the fog, the smog was finally getting the press that it deserved with headlines like "London fog deaths, investigations in progress", and, uh, "clamor rises in London for smog relief" because what the heck were people supposed to do the next year?

EAU: Yeah.

EW: Right? The conservative government was hesitant to criticize the coal industry or to look for alternative fuel solutions because, A, it was too expensive. And B, don't bite the hand that feeds you. Delay in denial was the name of the game. Londoners had brought the song themselves. They should be buying better coal. False.

EAU: Excuse me. You

EW: How could they? Yeah,

EAU: told me I can't.

EW: right. Oh, we don't have enough data yet to make a decision. Also false.

EAU: We know that's never true.

EW: Oh, we're not sure which component of the smog might be an issue. We're not. It's, it's not clear that it, it is an issue. Also false. They had the data, the, the

data existed in a confidential report stating that sulfur dioxide levels were astronomical. And as you discussed, we know that it's not just sulfur dioxide, but it is still play plays a role.

EAU: huge role. Huge role. Don't get me wrong.

EW: And the thing is there, the delay tactic did work for a while. Much the frustration of Dodds and other members of the Labor Party who were really pushing for, uh, you know, accountability and also the National Smoke Abatement Society, who was like. We've been saying for years. Yeah. Uh, by late spring of 1953, the smog had taken a backseat to massive floods, the budget crisis, and a serial killer murdering people in London, primarily actually women. Yep. If you're interested, if you're a true crime person, John Reginald Christie is the name, and actually the book that I read to do most of my research for this called Death in the Air tells like the simultaneous story of John Reginald Christie and the Great Smog.

EW: Yeah. Anyway, but the proposed solutions for 1953 in case of another smog event, they were insufficient. It was like, we'll, we'll hand out respirators to those who need them, and we'll give out masks. Actually, we'll sell masks, which were ineffective. They were tested and found to be ineffective and they were like, yeah, that's whatever. We'll do it anyway. It's a nice, it's a nice visual thing that'll give people a sense of security. So they'll go outside more and breathe in more toxic air, uh, devise a meteorological warning system, which actually was a good idea. Banning the burning of trash, decreased driving, stay inside during smog events. Largely reactive solutions with the exception of the meteorological warning system. And so thousands of Londoners were now facing winter of 1953 with respiratory issues that they did not have the year before, and little guidance on how to protect themselves. The government had formed a committee, uh, actually I think multiple committees. The Beaver Committee was the primary one to, to determine the extent of the 1952 smog health and economic impacts, and to better understand the link between pollution and health. The first interim report was released in late 1953, and it was really sobering, right? The [01:05:00] economic costs of pollution were massive, hundreds of millions of pounds and prolonged exposure to the smog could lead to long-term health effects. And the final death toll over the two and a half months following the first day of the smog was found in a tiny little graph to be 12,000, three times the initial estimate.

EAU: Yeah.

EW: But this number, this 12,000 number, it disappeared in later versions of the report. And I don't know if that was like an intentional omission or just like people didn't, it didn't register. For most people who read this interim report.

EAU: put it in the teeniest, tiniest part of the something, and so then they sketchy.

EW: And so for decades after the, the line was that 4,000 people died in the smog event, and

EAU: They just only looked at that initial number and ignored the, the fact that you have to look at the

EW: The long, the next couple of months. Yeah. And so it wasn't until almost 50 years later in 2001 when epidemiologists examined deaths and illnesses during this time that the 12,000 number resurfaced as like, no, this is actually what we think was the true human toll of the great smog in addition to a hundred thousand cases of respiratory illness. Uh, but yeah, even, even with those staggering numbers omitted from the report, the need for preventative, not just reactive solutions to the problem of air pollution was clear. Things like smokeless chimneys, alternative heating methods, and fortunately, a smog like that scene in 1952 did not return in 1953 or in the years that followed. And the passage of the 1956 Clean Air Act, um, helped to ensure this, and this Clean Air Act did incorporate many of the recommendations that were laid out in the Beaver Committee report. And this also is, was a, like a really monumental. Piece of legislature. It was the world's first air pollution legislation. And it wasn't perfect by any means. A lot of people were like, this could have been stronger, this could have been this or that. You know, you can't make everyone happy. Uh, but it did provide a path forward, and not just for the UK but really the rest of the world. And many countries ended up passing their own air quality legislation over the following decades, inspired by the 1956 Clean Air Act. I mean, this did not mean that smog went away at all. Londoners continued to get sick or die from polluted air, including in December of 1991 when an estimated 150 people died in a smog event. And air pollution remains a global problem. Like it has not gone away.

EAU: Uh, world Health Organization estimates that 6.7 million deaths worldwide each year are caused by air pollution.

EW: It's thousands of people every day.

EAU: Yep.

EW: Yeah. Um, and we, we will definitely cover air pollution, other aspects of air pollution in the future on this podcast Air quality index. We've been wanting to do that for a while.

EAU: you Kenton.

EW: Thank you, Kenton. Um, yeah, there's, there's a lot, there's a lot more to cover when it comes to air pollution, but this, I feel like, was sort of a big turning point.

EAU: yeah,

EW: And, and I think that for me, like the, there, I was trying to think of take homes, like what does a great smog mean to me? What can we learn from the great smog? And there's like a lot, but, you know, but I think that, like, it, it shows how easy it is to be complacent when there's no visible crisis, when there's no like apparent crisis. And the great smog event in retrospect was a crisis, but at the time people did not realize it. And they had been living. And part of it is because they had been living with this fog, this smog for years. And part of the reason for that complacency too, I think is because the smog did not hit people equally. There that did tend to affect those who are the more disadvantaged, whether it was because maybe they had chronic bronchitis because they had worked in factories because they couldn't afford to, you know, have a, a white collar office job or something like that, you know, and

EAU: you know, even worse types of chimneys or even worse quality coal

EW: where they lived. Um, that too, because the smog was also not evenly distributed in the city. And also just that, like, it all comes back to public health because I'm just like, why?

EAU: always, Erin

EW: We need prevention, not reaction.

EW: Like, I mean, reaction is important, but prevention, it makes everything so much better,

EAU: Yeah, but I mean, it is, it is interesting to think about how, like when we, when you tell this story now, it feels so clear that it was in fact a catastrophe during the moment. But it's really interesting to try and understand a time when in the moment it just [01:10:00] felt like a slightly worse version of what you're

used to. And so it's hard to understand the feeling of like, oh, we didn't realize how bad of a catastrophe it was until way after. It's so, so interesting to try and like, I wonder how many, nevermind. I know exactly how many catastrophes we're living through right now with feeling like we're not realizing how bad of a catastrophe it is. Hello. Climate change.

EW: Hello. Everything. I know, and that's the thing. I think it's, it comes, kind of comes back to this like idea of reaction. Is that like, do we have to wait for a catastrophe? Do we have to wait for 12,000 people to die in a smog event before doing something about this? Like the Smoke abatement society would've, or whatever. What they would've very strongly disagreed with that. They've been trying for decades to be like, we don't need a catastrophe to do something.

EAU: know. We know, right? Oh gosh. Now I'm feeling a

EW: Sorry on that happy note.

EAU: If you wanna know more.

EW: Yeah, there's, I've got some sources. I have some papers, uh, including, I do, I did really enjoy the firsthand account, sort of, um, the symposium. But the main source that I used was a book titled Death in the Air, the True Story of a Serial Killer, the Great London Smog, and The Strangling of a City by Kate Winkler Dawson. It's a great read. Yeah.

EAU: I actually read a lot of old papers for this, which is fun. I don't usually read old papers. Um, but I've got one from 1953 that was from The Lancet, the mortality in the London fog incident 1952. Uh, and then another one from 1954 from the Journal of the Royal Sanitary Institute that was called Air Pollution and the London Fog of December, 1952. Um, but also some of those update ones that you had mentioned, Erin, the 2001, that was the reassessment of the lethal London Fog of 1952. And then another one from 2008 that was like comparing the role of influenza versus pollution. Um, and then a few others, uh, you can find all of them on our website. This podcast will kill you.com under the episodes tab.

EW: You certainly can. Big thank you to Blood Mobile for providing the music for this episode and all of our episodes.

EAU: Thank you to Tom and Lianna and Brent, and Pete and Jessica and everyone who is helps us make this podcast possible.

EW: Yes. Yeah. Uh, truly, truly thank you. And a big thank you also to our listeners and our patrons, your support. It means the world to us. It, we make this podcast for you, and please always, we, we wanna know what you think,

EAU: Yeah. Let us

EW: let us know. Well, until next time, wash your hands.

EAU: you filthy animals.