



Fatal Conveniences™: Fireworks

[00:00:00] Fatal Convenience - Fireworks

Darin: The first Independence Day firework display took place in Philadelphia in 1777. Since then, they have become a symbol of the American independence. Ironically, the fireworks which we've long used to celebrate our nation are actually destroying its atmosphere and risking the health of Americans everywhere. That's right. Fireworks offer no true benefit to our society other than this momentary pleasure. It has been so ingrained in our brains that fireworks demonstrate patriotism, but their absence really wouldn't change our lives at all.

[00:00:57] Fatal Convenience Intro

Darin: Welcome to fatal conveniences where we address the things we may be doing in our daily lives that are actually harming us, and in some cases, slowly killing us. Tap water, Teflon, caffeine, blue light, food additives, you name it, we dive into it. We take a critical look at everyday products that really are affecting us and our bodies and the environment and how we can avoid them and find a solution. So, let's dive in.

[00:01:42]

Darin: Okay, I don't want to be a Debbie Downer here but listen, in order for us to change things, we must face it. And I didn't want to believe that fireworks were having this big of an impact, but they are. So we're coming upon July 4th, let's celebrate for sure. Oh my gosh, the greatest country on the planet, many say. Obviously, there are many things that we're not doing so good, and we can go off on that too. But the truth is, we know in our hearts we love this country, and we want to stand for not only the country's independence but our individual sovereignty, our ability to be free, our ability to be independent, to do, to say what we want, to be what we want and go for our dreams. So at the end of the day, that's what it's about. So, do we really need to pollute our air? We don't. The history, right?

[00:02:55] Creating the different colors in fireworks

Darin: Fireworks actually was invented in China during the Han dynasty in 200 BC, around 2000 years ago. The early versions were made from roasting bamboo stalks, and then it would turn black and it would sizzle, and inside the firework would then explode causing these displays. How interesting is that? But normal fireworks are made of black powder, potassium nitrate, charcoal, and sulfur, also metal salts. The type of metal used in Fireworks determines its color. Lithium, keep in mind, we're blasting this over our heads and raining down on us. So nonetheless, lithium makes pink. Sodium makes a yellow color or orange. Copper and barium make green or blue. And calcium or strontium makes red. And then there is also dextran. Dextran is actually used, it's like the type of sugar that is used as a binding agent to hold all these metal salts together. And the black powder, antimony trisulfide is a gray powder that creates the glitter effect, and this is very, very dangerous to breathe in. Then of course the paper is used as the shell to kind of keep all of that together. Fun fact is



at least 90% of the total revenue in the firework industry is for and around Independence Day. And there are about 14,000 fireworks displays across the USA on the Fourth of July. Fireworks are not a thing of the past. In fact, there's a reemergence from about the year 2000. There has been more and more fireworks displays almost every year. Disneyworld is a major source of fireworks and firework pollution. They use an estimated 90,000 pounds of fireworks each year. Listen, it's really hard to avoid fireworks because again, it's so engrained in this American patriotic thing and also parties and weddings and all of these things use fireworks all the time.

[00:05:35] Are fireworks really that bad?

Darin: But why should we care? Here we go. Gaseous sulfur dioxide, carbon monoxide, carbon dioxide, and trace elements including aluminum, manganese, cadmium, this stuff is bad. And most importantly, in the following study, PM 2.5. This is basically a measurement of 2.5 micrometers. That means it's super small, and you can breathe in, and it essentially goes right into your bloodstream, all of this stuff, all of this concoction. PM 2.5 is measured in 315 sites across the US. The study compared PM 2.5 on the Fourth of July to PM 2.5 in the atmosphere on a non-holiday. The study found that PM 2.5 levels increased on the night of the Fourth of July over the United States by 42%. Yep, we just polluted our skies for patriotism and then raining down on us heavy metals all over the place, on our children, on us, increasing asthma attacks, lowering heart function, possibly even leading to heart attacks. Yes, it's crazy, right? Reducing lung function and exacerbating lung conditions, wheezing, coughing, throat, nose, eye irritation, shortness of breath. That's right. The immediate impact of PM 2.5 aside, the particulate matter ruins the environment by raising acidity levels in our water, in the ocean, in the soil, all over the place. That's right. These heavy metals, these particulates are increasing pollution in our air. It's the last thing we need. It's important to safeguard our systems. Again, it's just another layer of a fatal convenience causing us issues, causing us stress, increasing our immune response. Firework displays can travel far.

[00:08:19] Traveling heavy metals

Darin: Heavy metals from one fireworks display, a study in western Washington State, traveled 62 miles. Then if you say hey, we've got on average 14,000 fireworks displays, you can imagine we're blanketing the entirety of the US. Fourth of July displays in Orange County, California in 2019 produced as much smoke as a small wildfire. In the United States in 2020, there were 15,600 Fireworks related injuries. That's right, 15,000, that's no joke. All of this aside, fireworks misuse is not even reasonably reported and incredibly dangerous. Metal salts do not burn up after the fireworks explosion. Many of them are aerosolized and poison the air, the water, and the soil. And these aerosolized PM 2.5 are easily inhaled and ingested, and they can also be connected to vomiting, diarrhea, asthma attacks, kidney disease, cardiac effects, and potentially even cancers. I know it's one day, but when you add up living in a city with oxygen levels low and already pollution, we're already dealing with all of this stuff. So what am I saying? Fireworks displays aren't great, but it's all of these things added up, added up one after another after another.

[00:10:05] Celebrate your independence responsibly



Darin: Do we need to blast the entirety of the United States with more and more pollution just to celebrate our independence? Why don't we just celebrate our independence with our friends and our family and do things like that and enjoy higher air quality? How about we do that? But again, we're doing this and for the most part, if you're strong and healthy, you don't realize this stuff. You don't know that this is causing any issues. But certainly, pregnant women are infinitely more susceptible and anyone with any sort of heart or lung problems or asthma, they are causing a lot of issues for these people. Fireworks can cause a burst of excess ozone, which in itself can be extremely reactive greenhouse gas molecule that can attack and irritate the lungs itself. So there's a reaction in the atmosphere from the stuff. During the festival lights in Diwali, India, where fireworks are a main event, cardiovascular mortality increased as much as 125%, and cardiovascular morbidity increased by 175%. It is crazy when you actually look at this stuff, and you look at the numbers, it's kind of insane. Also cases of bronchitis, bronchial asthma, wheezing, exacerbation of this wheezing went up 30 to 40% in patients of all ages and genders. So listen, if you have any control whatsoever, just avoid fireworks displays because it's raining down on you, and know where the winds blowing that kind of thing. It's just not appropriate to have fireworks displays in large cities at all because inhabitants are already stressed and strained from the pollution and you're inhaling particulates anyway, and that's already causing issues. So the best thing to do is just eliminate direct exposure of this stuff. And if you do have control, or if you can write your city or region, just say hey, can you not do this, it's not good to health. State of California, it's not a good idea using fireworks at all because it can light up and create wildfires over and over again. There are a lot of studies on this. We have a lot of references in the show notes if you are interested. But as I looked more, it's just not good. And we need to look out for our population that is not healthy, that do have bronchial issues, that do have asthma, that do have cardiac issues, that are susceptible to cancers. So why are we doing this and creating more stresses and strains in our overall population? So, my remedy, stop with the fireworks. I don't even like it anymore. I don't even view them. I want to get home, get to bed and not be around the craziness anyway. Just get together with friends, reflect on what it means to be independent, and enjoy it that way. Have a fireworks display inside in your heart and celebrate who you are, what you are, and the independence that you can express in your life. There you go. That's my option for the Fourth of July. Take it or leave it. I'm just sending the information. All right. I love you all.

[00:13:51] Podcast Outro

Darin: That's it for today's fatal conveniences. Thank you so much for tuning in. If you want this valuable information in email form, you can sign up for my fatal conveniences newsletter at fatalconveniences.com. I send out an in-depth breakdown of what we covered in each episode every Monday after an episode airs. If you make any changes in your life or home from these episodes, I want to see them. Tag me in your Instagram posts and show me how you're avoiding these harmful products and making better choices. It's awesome to see the impacts these episodes have, and I love seeing how creative my audience is. Remember, small changes can have a big impact. Oh, and if you haven't had a chance to check out the interview I released earlier in the week, here's what you missed:

[00:14:53] Snippet - Spirituality With Purpose



Rev. Dr. Michael Beckwith: The Universal presence through universal law will answer every question that you ask, so we have to have an appreciative inquiry. Most people ask the wrong questions. They ask what's wrong, who's to blame, and why me? The universe will answer that question, but it will take you down a spiral of negativity, misinterpretation of your past. But if you ask, how can I serve today, how can I grow today, how can I give today, how can I be a better version of myself today, you'll get that answer.