

# POWER OF PREVENTION: EPISODE 11

## THE REAL COSTS OF VAPING: WHAT WE ALL NEED TO KNOW ABOUT YOUTH E-CIGARETTE USE

### **Christin D'Ovidio:**

Welcome to the Power of Prevention podcast. In each podcast, we will go deeper into the topic of prevention in New Hampshire. We'll share our best interviews with you of people who are working tirelessly for their professions, their families, and their communities to stop something unwanted from happening. In this case, substance misuse. This is a podcast for people who are looking for solutions and want to make New Hampshire a better place where we all have the opportunity to live, learn, and thrive. We are hoping to make your lives a little better with these inspirational stories about substance misuse prevention.

Vaping or e-cigarette use has been described as a public health crisis. While the youth smoking rates have been declining over the past 20 years, there are now more youth using e-cigarettes and particularly the disposable vape products now. A huge driver for these youth that are using these products is the direct and illegal marketing of the products to youth that the manufacturers have been doing over the past few years. Using these traditional marketing tactics straight out of the tobacco industry's playbook, the devices were marketed to youth to appear modern, attractive, they appeal to their sense of style and their desire to fit in and be attractive, and they were presented as harmless, and they were not associated with smoking.

Youth vape for many reasons. There's a variety of candy and fruit flavored flavors. The products, they weren't created this way without reason. Additionally, vapes can be easily hidden from parents or teachers, and what many people don't know is that e-cigarettes often contain high levels of nicotine. That is the powerful and highly addictive substance that impacts the development of the adolescent brain, and research also shows young people who have used e-cigarettes, they have higher odds of going on to try traditional cigarettes or other tobacco products. People who care for children like parents and schools really have been overwhelmed, and some schools have even hired bathroom monitors to stop kids from vaping at school.

As a parent, I'm really excited to learn about this topic. I am so pleased that Kim joined us to share insights about why youth are so attracted to vaping and how we can help them avoid this serious public health problem. Are you wondering what you can do to prevent vaping or to support a kid who's trying to quit? Our guest has some ideas. We are thankful to have Kim Coronis with Breathe New Hampshire in the studio with us today. She works on educational programs and policies that support young people in not vaping or using tobacco products, and she has a lot to say about how we can start these conversations with young people. So welcome, Kim.

### **Kim Coronis:**

Thank you. Good morning, Christin.

### **Christin D'Ovidio:**

Good morning. To start, Kim, I'd like if you could help us understand why so many young people are vaping. What is the attraction?

### **Kim Coronis:**

I think one thing we can look at initially that stands out to us in the public health fields are how the devices look back in 2006, 2007, when they first came onto the market. It looked like a traditional cigarette. It was kind of clunky. The devices were anywhere from \$150 and up. The only thing in them were nicotine cartridges, and it was being promoted and sold as a tool to help adult smokers quit smoking, and since then they've evolved a great deal.

We're looking at thousands of flavors, hundreds of device types. They come in very attractive sleek

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designs, they're colorful. The huge draw seems to be the flavors. I think if we got away from flavors, a lot of younger people would be less attracted to them. You don't have that smell of a cigarette, the smokiness. It's less noticeable. It can be concealed more as far as vaping. So I think that's some of the things that have driven the youth market. Also, the way they've been promoted. You're not seeing ads that necessarily are directed to adults who are trying to quit smoking.

### **Christin D'Ovidio:**

E-cigarettes or vaping have been marketed as a tool to help adults quit smoking, but instead they have attracted youth, and we saw rates of youth use skyrocket. Our guest breaks down how this happened.

### **Kim Coronis:**

Our view is no, it is not harmless, and I think most public health organizations agree with that, especially when it comes to youth use. You're talking about young people's brains still developing into their early to mid-twenties. Nicotine is a substance that affects the developing brains, so there are some harms and concerns there, especially again with youth use. The, again, the promotion is that it is safer than or safe. We can only say potentially less harmful. We can't say that it's safe. We don't have the long term health studies. We have 50, 60, 70 years of studies of cigarette use and combustible tobacco product use. We don't have that with these products. They're relatively new. It's just not something that we can state, quite frankly, as to if somebody vapes for 10 or 15 years, we don't know what their health as an individual is going to look like in the next 20 or 30 years. We just do not have that information yet.

So the scary thing is not knowing long term health outcomes like we do for other tobacco products, and the other scary thing is seeing some of the short term health impacts that we have seen, which we can talk about more in a minute.

### **Christin D'Ovidio:**

Well, because I remember there was a lot of news coverage about EVALI and the hospital admissions with infection and lung damage, but what can you tell us kind of about that and then what are the short-term health effects that we know are that we're seeing now?

### **Kim Coronis:**

So when we were talking about EVALI, that was prior to COVID back in February of 2020, we were looking at national statistics for hospitalizations across the country. People with age ranges from 13 to, I believe, as old as 82. The EVALI stands for e-cigarette and vaping associated lung injury. So these people were hospitalized with respiratory issues, some to the point where they were put on respirators and needed assistance breathing on a daily basis.

A lot of studies were done. It was very difficult and challenging to figure out what the common thread was because it was across the country. Some of the things that resulted from investigation were that all the people that were hospitalized for EVALI had done some type of vaping. They had vaped all different lengths of time. They had vaped different substances, but one of the common themes was in some cases, black market products as well as products that had THC in them, the psychoactive component for marijuana and then vitamin E acetate had been added as a filler to make more of the substance or more of the vape liquid. So when you combine all those things, those were the common ingredients.

And what vaping in general can do is it irritates your lungs, inflames the tissue of your lungs, makes you more susceptible to other respiratory problems. The other thing is the aerosol that's created from vaping can contain very fine particles. Those types of particles settle in our lungs over time, and your lungs cannot easily get rid of them, so if you think of something like for people in California and out west,

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forest fires, they have oxygen warnings or have warnings for air quality, air quality alerts, and a lot of it is because of the particles that are in the air resulting from severe fires, and anyone with a respiratory issue is more subject to have a health challenge when the air quality decreases like that after fires. So when you're talking about people vaping, they're directly inhaling aerosols that contain particles directly into their lungs. It's not just something that's in the air around them. They're directly inhaling this stuff which causes the respiratory issues and the irritation.

### **Christin D'Ovidio:**

That's a great analogy I think for anyone trying to explain it to someone who doesn't really understand how it's not harmless vapor which has been a phrase that was tried to be branded on the product. I think a good way to think about it, maybe even for younger, for some younger people to be able to understand it.

Podcast helps us understand the attraction to vaping and how nicotine impacts the adolescent brain releasing feel good chemicals.

### **Kim Coronis:**

We need to keep in mind that for young people, our brains are still developing into our early to mid-twenties. Substances like nicotine, cocaine, alcohol, all affect and impact the reward center of our brain, and our brains develop from the back to the front. The reward center is located in the front of the brain, but that also is a good thing for us.

On a natural basis, our reward center releases dopamine and adrenaline which makes us feel good. For example, if a young person scores a winning touchdown or has a great dance recital or something, and they're excited, dopamine and adrenaline are naturally released by that part of the brain. What happens with nicotine is upon inhaling, the nicotine travels into the lungs, this gets into the bloodstream, and then within 7 to 10 seconds is delivered to the reward center of the brain, creating that false release of those good chemicals, but unfortunately, the addiction piece comes in when people get used to that good feeling and want to replicate or duplicate it, and they keep using a particular substance, and in this case, it's nicotine that we're talking about. So it can make someone temporarily feel good, but then that disappears and wears off.

### **Christin D'Ovidio:**

We know the pandemic has disrupted routines and relationships. More young people say that they feel stressed, depressed, or anxious. What impact does vaping or nicotine use have on the mental health of young people?

### **Kim Coronis:**

Well, we know from an adult perspective that tobacco use disorder happens at a higher rate for people with mental health challenges. Unfortunately for young people, because your brain is still developing, the impact of nicotine can be more quickly as far as the onset, it can happen more quickly as far as addiction as well. A lot of people of all ages will say that they vape or they smoke to relieve stress and anxiety, when in fact the nicotine can turn that around and create more stress and anxiety because of the way you feel in between using the nicotine.

With COVID, I know the Truth Initiative did one report in particular about the effects of mental health or the impact of mental health on youth, and we saw some interesting information, and the studies were normally rely on National Youth Tobacco Survey. It was hard to do during the COVID years, and they have stated that you can't compare two years of COVID to the most recently released statistics just because of the way that the survey was being given nationally, but in those surveys, young people did

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indicate mental health challenges in that they were feeling depressed or anxious.

And again, just nicotine delivers that good feeling through the release of dopamine and adrenaline, so for some people it's a temporary solution, but unfortunately in the long term, the big picture nicotine can be addictive. So when you're talking about nicotine and substance through the use of either cigarettes or vaping, you're also introducing other chemicals into your system, and that's where more problems occur.

In the end, we think the big picture with young people is you need to try to find the root of the problem. Why are they feeling anxious? Why are they feeling overwhelmed? It could be life in general, it could be school related, and unfortunately, I think for all of us shifting, as you said, our natural lifestyles and our routines so dramatically for a couple of years had effects on people of all ages, but especially young people.

We also have to be careful with suggesting what can help them. I mean, a lot of schools initially a couple years ago were treating use of tobacco products or use of vape products on school grounds with the reaction would suspend them which doesn't really help them and doesn't teach them anything. So looking at the bigger picture, we need to kind of develop support teams for young people, whether it's the guidance counselor, the school nurse, the SAP at a school, a [inaudible 00:14:00], or anybody that's trained to work with young people but also offering them ways to quit using nicotine like My Life My Quit. That's an example where you're able to reach out, they can reach out confidentially to a trained tobacco treatment specialist or quit smoking or quit vaping coach.

So we have to make them aware of some of the possible health outcomes. Also let them know that there may be another reason why they're turning to vaping or smoking. Try to direct them to other forms or other ways and means of releasing the anxiety and tension. Suggest that they replace the vaping and the smoking with going for a walk or yoga or deep breathing, almost like you do when an adult that's trying to quit smoking. Just give them some other alternatives to try to relieve the stress, anxiety and work with them that way. But again, it has to get back to the root of the problem just like we do with adults that are trying to quit smoking.

### **Christin D'Ovidio:**

That's really good advice, and I imagine that Breathe New Hampshire has maybe provided assistance or worked with some schools to educate staff maybe around best practices on what to do in these situations that you were just talking about. What would you say about how parents or anyone that is responsible and cares for a child or young person, how can they talk to young people about this, and what can they do to have that discussion and then help the young person to stop using the products?

### **Kim Coronis:**

First of all, it's extremely difficult for anyone of any age to quit using any nicotine product, whether it's cigarettes, dissolvable products, or vaping. It doesn't matter if you're an adult, it doesn't matter if you're a young person. It could take multiple times to quit, and I think that's the first thing to share with anybody of any age that you may not get it to happen the first time you try. For many people, it's multiple attempts. I think directing people of any age to programs that offer that quit coach and somebody that has been trained as a tobacco treatment specialist, that's a great start because they can actually work more with the person as an individual to find out what triggers their use of nicotine and perhaps what behaviors they can change or what environmental things they can change to get away from the nicotine or get away from the cigarettes or the vapes.

I think for all of us working with young people, we need to realize that those students that are born in 2007, 2008, and after they're growing up with vape devices and vapes and e-cigarettes being out there. It's something that's part of their life. It's not a new product to them because they're growing up in that age

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where they see it, hear about it, through social media see it even more, so for them, it's more of a routine thing, but I think just letting them know that their people do care, that we want to understand why they make some of these choices, but also to try to get them on a path to make healthier choices.

It's interesting when we work with students through our vaping unveiled program, when we do presentations not just for adults but for young people, the questions we get are pretty amazing. They want the information, they want to understand, and when you start sharing information with them as how it in fact it may impact your brain or impact your lung health, they do have good questions. And I think when we can share concrete information and share our concerns as to what happens when you use these products, they understand that they do have to make some choices that maybe it's promoted as a social thing to do, but it's not necessarily the safe thing to do.

### **Christin D'Ovidio:**

I think you mentioned some other products when you were speaking before, and I wanted to know if you could kind of talk a little bit about some of the other stuff that might be out there like these, I think you said gummies, and then I've also read about synthetic nicotine. So what is going on with these other nicotine products?

### **Kim Coronis:**

There's a ton out there. They continue to evolve. I think years ago we knew about cigars, cigarettes, and what we used to call dip tobacco or snuff. Now you have, I think within 10 years ago even you had orbs and strips and sticks, things that look like toothpicks that are loaded with nicotine. Orbs look like Tic Tacs, for example. They're that shape and size. And then strips were looked like Listerine strips almost. Now you've moved forward another 10 years, and you're looking at products, gummies are actually loaded with nicotine. They are like a gummy candy. They come in a 10, I think they're 12 to a 10 at times, various nicotine levels, which is the other concerning factor with all of these products. The levels of nicotine in this country are not regulated for these products, so you're seeing amounts in wide ranges for whether it's a vape or a gummy or a dissolvable.

As far as the synthetic nicotine you mentioned, that's a kind of a more recent thing, the last couple of years. There are companies that are creating what they are marketing and promoting as tobacco leaf free or tobacco free nicotine. It doesn't mean that it's any less addictive. It means it's created in a lab. It's not necessarily taking the components from a traditional tobacco plant and harvesting the plant. So we know probably even less about synthetic nicotine because so many different companies are now making it in their own labs. It is still high volume, high concentration, but that is being seen in dissolvable products. It's being seen in the gummies. There's actually some companies out there that have a line of dissolvable products, and they had a whole section that is just geared toward young female purchasers just based on the flavors and the way that the design of the container that it comes in.

So again, flavors in general for all of these products cover the harshness of the other chemicals in the product. When you're vaping, the flavors mask the harshness of the chemicals. When you look at vape liquids, you're starting with a very heavy oil looking substance and oil type of liquid. You cannot heat it up at a variety of temperatures with a variety of chemicals in it for the flavors and expect to get water vapor. So that's where the aerosol piece comes in.

With the non combustible products, again, a lot is not known about synthetic nicotine, and you're looking at marketing that has different colorful items, but also flavors are the key thing and the different nicotine levels. So the warnings that say this contains nicotine, nicotine may be an addictive substance is probably not necessarily enough of a warning because the nicotine levels can vary so much in the products.

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### **Christin D'Ovidio:**

That's a great point. It really goes back to what you were saying before where in one instance we're talking about the health effects of the products and all of a sudden now we're talking about a product being marketed as not, you don't have to worry about those health effects because it's just nicotine, it's avoiding the reality of what you said before as well, that young people's brains are still developing and that developing any type of substance use disorder because of the pleasure center in the brain or the pathways in the brain feeling good with these products means that they can really look like they're for adults to have a safe way to quit with lower health effects, but it's completely attractive to a young person who's looking for something that makes them feel better.

### **Kim Coronis:**

The thing, it's that temporary kind of feel good for 20 or 30 minutes or so, but then you need something again to get back to that feeling. We try to just suggest they create that feeling naturally. You can get that reward center of your brain activated by doing other things that are safer, playing sports, music, hanging out with friends and family. There are other ways for the reward center of your brain to react and release dopamine and adrenaline that again, naturally can make us feel good when it's done properly.

### **Christin D'Ovidio:**

Well, you've really brought up a lot of interesting points and provided some great guidance, I think, on how schools and people who care for youth can approach dealing with young people that are using these products and really being cognizant about the fact that people can't just stop a behavior that is chemically causing a tobacco use disorder or nicotine use disorder. I think that's a really great point, so thank you.

### **Kim Coronis:**

I think overall, our best resource is to listen to the young people, listen to their questions. We have that opportunity when we visit schools because we try to do question and answers obviously every session that we do, and sometimes we get questions in advance so we have an opportunity to see kind of what they're thinking, and I just find it interesting in the requests that we have started to get this year and the requests that we were getting last year were coming more from the middle school age group, middle school schools, which is not a good thing because it means that it's happening more at the younger age levels.

I had an opportunity last week to visit a school, and it was sixth, seventh, and eighth graders, and even how sixth graders versus eighth graders, some of the questions were very interesting and very different because just the way our brains are and the way we all think can be different, but when you are looking at young kids for the sixth graders, their big question was, "If it's so bad for everybody, why is it still out there?" Putting it basically. And then you have to kind of get across to them too. There are a lot of things that are sold or that we are able to buy that are not necessarily good for us, but in this case for this product, there's a lot of things that impact your brain and your lung health directly that we do know about right now, so if you can share with them what we do know and what we are worried about moving forward, they will think about it. And I just, I'm always amazed at the questions that they have at a young age.

### **Christin D'Ovidio:**

One thing that we ask all of the guests when they come on our show is how do you describe prevention?

### **Kim Coronis:**

Creating awareness and knowledge in this case about vaping and the potential health harms, but also

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giving people the tools to find out more or to quit if they choose to quit. Maybe what I'm saying might trigger some questions or thoughts if they are someone who is vaping or if they ever thought about vaping, but I also want to give them the direction or the avenues to pursue to find out even more information on their own, whether it be through our vaping unveil page on our website or My Life My Quit, or The Truth Initiative has a lot of things. There are very vetted resources out there, but a lot of times, like the rest of us, sometimes you're looking at the web for fun things to do, not necessarily research to do. So as much as we can make people of all ages aware of some of the potential health harms, but also give them, if they want to take the next step and find out more, give them those ideas and those resources to pursue that next step.

### **Christin D'Ovidio:**

Thank you. Well, Kim, I really want to thank you for being a part of this show today and for sharing all of the knowledge you have and the work that Breathe New Hampshire's been doing around this in the state of New Hampshire.

### **Kim Coronis:**

Well, thank you. We appreciate the invitation to join you folks, and it was nice to be a part of this program.

### **Christin D'Ovidio:**

Thank you. I'm so pleased Kim joined us to share insights about why youth are so attracted to vaping and how we can help them avoid this serious public health problem. When parents, teachers, and other caring adults connect with the young people in their lives about the things they value and are important to them, they help them build the skills to cope with difficult situations in a positive way. Talking to youth about the facts and negative consequences of vaping and nicotine addiction is a form of prevention. I hope we've inspired you to have these conversations.