

# CHEMICAL HEALTH TREND CORNER:



McLeod County School Districts, like other districts across the nation are experiencing a dramatic increase of students e-cigarette use. The most popular e-cigarette device, called a Juul, looks like a flash drive and fits right in with computer supplies kids bring to school in their backpacks.

These little devices make smoking marijuana easier to conceal from others. Any number of videos on YouTube show teenagers how to swap weed cartridges for nicotine cartridges in their Juuls.

- Inside our Schools E-Cigarette Epidemic Report - Click on CNN link to view video report and read transcript <u>here</u>.
- View YouTube video to learn how to replace nicotine cartridge with a weed cartridge <u>here</u>.
- Read study of e-cigarette chemical content <u>here</u>.

## Fentanyl Now Deadliest Drug in America, Meth Overdoses Growing, CDC Says

By Alexandria Hein | Fox News

Fentanyl is now the deadliest drug in America, beating out heroin and oxycodone which had previously been involved in the most overdose fatalities between 2011 and 2016. In fact, the report released Wednesday by the Centers for Disease Control and Prevention (CDC), discovered a 113 percent increase per year between 2013 and 2016 in the number of deaths involving fentanyl.

Fentanyl is a synthetic opioid that is both cheap to produce and up to 50 times more powerful than heroin and 100 times more potent than morphine. The drug can be absorbed through the skin, posing a risk to first responders or those unaware of its presence, and can be inhaled in powder form which also presents a danger.



"Among drug overdose deaths that mentioned at least one specific drug, oxycodone ranked first in 2011, heroin ranked first from 2012 through 2015, and fentanyl ranked first in 2016. Cocaine ranked second or third throughout the study period," according to the report.

#### DOCTORS CAUGHT BETWEEN STRUGGLING OPIOID PATIENTS AND CRACKDOWN ON PRESCRIPTIONS

Researchers compiled data from 64,000 death certificates on U.S. overdose deaths and compared them with the five previous years. Meth use also played a larger role in fatalities than previous years, with the number of overdose deaths more than tripling between 2011 and 2016.

"From 2011 through 2016, the number of drug overdose deaths increased by 54 percent, from 41,340 deaths in 2011 to 64,632 deaths in 2016. The most frequently mentioned drugs involved in these deaths were the opioids heroin, oxycodone, methadone, morphine, hydrocodone and fentanyl; the benzodiazepines alprazolam and diazepam; and the stimulants cocaine and methamphetamine, the report said.

The percentage of overdose deaths involving meth grew from less than 5 percent to nearly 11 percent.

AS DOCTORS TAPER OR END OPIOID PRESCRIPTIONS, MANY PATIENTS DRIVEN TO DESPAIR, SUICIDE "It's a very dangerous drug to mess around with," Theodore Cicero, a Washington University researcher who studies the rise of meth use among people who use opioids, told the Associated Press.

Cicero said some opioid abusers or heroin users have been turning to meth, which is a stimulant, to offset the down effects of other drugs.

## Does Social Media Cause Depression?

How heavy Instagram and Facebook use may be affecting kids negatively.

Is using social media making our kids unhappy? Evidence is mounting that there is a link between social media and depression. In several recent studies, teenage and young adult users who spend the most time on Instagram, Facebook and other platforms were shown to have a substantially (from 13 to 66 percent) higher rate of reported depression than those who spent the least time.

Does that mean that Instagram and Facebook are actually causing depression? These studies show a correlation, not causation. But it's worth a serious look at how social media could be affecting teenagers and young adults negatively.

One reason the correlation seems more than coincidental is that an increase in depression occurred in tandem with the rise in smartphone use.



A 2017 study of over half a million eighth through 12th graders found that the number exhibiting high levels of depressive symptoms increased by 33 percent between 2010 and 2015. In the same period, the suicide rate for girls in that age group increased by 65 percent.

Smartphones were introduced in 2007, and by 2015 fully 92 percent of teens and young adults owned a smartphone. The rise in depressive symptoms correlates with smartphone adoption during that period, even when matched year by year, observes the study's lead author, San Diego State University psychologist Jean Twenge.

Over that same time period there was a sharp spike in reports of students seeking help at college and university counseling centers, principally for depression and anxiety. Visits jumped 30 percent between 2010 and 2015.

#### Read more here

## One Person Dead, 12 More Hospitalized After Suspected Fentanyl Leads to 'Mass Overdose,' Police Say By Paulina Dedaj | Fox News

A "mass overdose" in a California home Saturday morning left one person dead and another 12 hospitalized after police say the victims may have ingested fentanyl, a powerful opioid. Chico Police Chief Michael O'Brien said at a press conference that police received a 911 call from someone inside the residence of a home in the 1100 block of Santana Court about 9 a.m.

"Upon arrival, Chico police officers found multiple individuals in what appeared to be life-threatening overdose conditions."

O'Brien said that officers performed CPR and administered six doses of naloxone, which can reverse the effects of an overdose and comes in half-doses. Chico police have been equipped with naloxone since 2018.

FENTANYL NOW DEADLIEST DRUG IN AMERICA, METH OVERDOSES GROWING, CDC SAYS

One male adult died, and 12 other people were taken to an area hospital for treatment. O' Brien said the ages of the victims range from 19 to at least 30.

New Hampshire leads nation in overdoses from deadly drug fentanyl New Hampshire leads nation in overdoses from deadly drug fentanyl Eight of the victims were admitted, and of those eight, four were listed as being in critical condition. O'Brien emphasized that there is "potential for additional fatalities."

He said that while it is still too early in the investigation to be sure, the likely cause of death and injuries is from consumption of the potent drug.



#### DOCTORS CAUGHT BETWEEN STRUGGLING OPIOID PATIENTS AND CRACKDOWN ON PRESCRIPTIONS

"Every indication is that this mass overdose incident was caused from the ingestion of some form of fentanyl in combination with another substance, although that is yet to be confirmed."

Two responding officers were also treated at the hospital after complaining of feeling "some effects" but they were released and are said to be in "good condition." Further details about how they might have been affected were not immediately available.

Police are not clear about how or why the victims might have consumed the substance.

The home is currently being treated as a "hazmat site," but O'Brien said it is "not a danger to the public."

A relationship between the victims has not been established, though police say they all knew each other to some extent.

## Effective Parenting Talking Points E-Cig "Vaping" Trend

Carmen Morrow-District #423 Chemical Health Prevention Specialist

With today's changing drug trends, parents are under more pressure than ever to adjust their talking points to be effective. According to the "US Department of Health & Human Services; A 2018 report from our Surgeon General." This "Vaping" trend has become an epidemic as 1.7 million high school students used ecigarettes in the past month. That's half a million middle school students. What was promoted to help adult smokers quit has become an epidemic among teens. Millions of teens now struggle with a nicotine addiction.

The combination of teens stress levels, wanting a quick stress relief, limited knowledge and practice of healthy coping skills added to the epidemic of teens vaping. The E-Cigarette Companies appear to be targeting our children with flavored e-liquids juices like tutti frutti, cotton candy, and sour gummy worms.

The vaping epidemic has parents asking; "how do I talk to my child about this new craze?" According to "The Partnership for Drug-Free Kids Vaping-What Parents should know." Here are some examples of what to say when your child asks:

## Q:

## Isn't vaping safer than smoking cigarettes?

Your child is exposed to less toxic substances when vaping (as compared to smoking), but there are still significant concerns. Their lungs are exposed to fine particles, metals, other toxins and nicotine which can harm them. You may use the example that, "Driving 90 miles an hour with a seat belt on is safer than without one, but neither is safe." The same goes for vaping. It may be a safer alternative than



smoking cigarettes, but neither one is without harm.

#### Q:

# They are just flavorings, so what's the big deal?

Flavorings are common and considered safe when added to food and eaten, but relatively little is known about the long-term effects on your lungs. For example, there is a chemical called diacetyl that is used as a butter flavoring for candy, yogurt and popcorn, among other foods, and has been found in several e-juices. How these additives interact with the stomach is different than how it may affect your lunas. Diacetyl has been linked to "popcorn lung" which results in scarred lung tissue in workers who have inhaled diacetyl in popcorn factories. Also, e-liquids contain more than just flavorings. Whether it contains nicotine or not, teens also may be taking in fine particles, metals and other toxins. In some cases, teens have vaped eliquids thinking it didn't contain nicotine, when in fact it did. Deliberate or accidental exposure to e-liquids, whether from drinking, eye or skin contact or injecting it, can be severe, causing seizures or even death.

#### Q:

#### Everyone is doing it, so why do you care?

You can say, "I know you may say this because of what you see in school or even on social media, but the real fact of the matter is that the majority of seniors (and more in lower grades) aren't vaping. While it may be a popular activity for some kids, it doesn't mean that it's safe."

#### Q: How can I respond to peer pressure?

You can say, "Let's figure out what you may be comfortable saying to your peers. It's best to be direct and use assertive body language (i.e., direct eye contact with strong posture) and to say something like, 'No thanks, I'm not interested,' or 'You guys can, but I don't want to.'" Another strategy for younger teens is to use an "X" policy. Whenever your child is in an uncomfortable situation and wants an easy out, they can text an "X." You can respond by texting back to say that something has come up and they must head home immediately, or you will pick them up.

#### Q: You smoke, so why shouldn't I?

If you've tried to quit, respond by saying "You're right, smoking is unhealthy and I've tried to quit and I wish I had never started. I don't want you to start an unhealthy habit and struggle the way I have, trying to stop."

#### Q: It's legal, so why worry?

Vaping is not legal for anyone under 18 (and at 21 in some states). Many things are legal, but that doesn't mean they are safe or harmless. Alcohol is an example of a legal substance, but can result in DUIs, car

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accidents and major health problems, including liver disease. Similarly, cigarettes are legal, but are highly addictive and proven to cause birth defects and cancer.

#### Q:

## I'm just doing it once in a while and nothing bad has happened.

Respond by asking what your child's experience has been with vaping and pose a question like, "What keeps you from vaping more often?" This isn't to suggest you condone or approve of vaping, but rather to get a sense of what the barriers are to your child's use that you may be able to reinforce. These openended questions can help you understand what your child sees as the pros, and potentially the cons, of vaping.

To be effective a parent, you should be clear about expectations, listen, know the facts, in addition to reinforcing healthy behaviors that compete with vaping. A healthy parent child relationship is one of the most important roles in helping your child manage and avoid drug trends. This relationship develops resilience and fosters open, honest, dialogue helping children avoid the temptation to vape.

## Smoking vs. Vaping — Which Is Better?

## Watch the video here

Cigarettes and marijuana and have been used for centuries, but only recently has

the process of vaporizing these substances become popular. So what does science have to say about this technology? Is vaping actually good for you?

When smoking normally, the heat from fire causes substances to change from a solid state to a vapor. In cigarettes, this releases nicotine which is absorbed into your bloodstream through the lungs, causing increased heart rate, constricted blood vessels, a release of dopamine in the brain, and feelings of alertness. But because nicotine is a stimulant, once it's no longer present, you crash and crave more, which ultimately leads to addiction in many people. In the case of marijuana, the active component Tetrahydrocannabinol (aka THC) is aerosolized and follows the same pathway into your body, but with different effects.

Smoking only takes six seconds for the active compounds to reach your nervous system. This smoke consist of partially burned particles, which creates tar in your body, has cancer causing effects, blackens teeth and destroys taste buds. This is where vaping comes in. If you can heat the active components enough to become aerosolized without starting a combustion reaction with the other compounds, then you theoretically get fast effects without the damage of smoke inhalation.

Vaping typically involves a glass or metal chamber which has an electrical current passing through it. This way, it can be heated to a controlled temperature,



creating a vapor with minimal combustion, meaning you inhale much less smoke. For marijuana users, vaporizers have become popular as the plant material can be heated to a specific temperature usually between 185 and 210 degrees Celsius — allowing just the THC containing vapor to be extracted. For e-cigarettes, using a liquid solution instead of dried tobacco, has become popular; this eliquid contains water, nicotine, a base and occasionally flavourings, and vaporizes at a much lower temperature. But this is where things get tricky.

The "e-liquid" contains a base similar to that used in cosmetics and food which helps maintain moisture without creating sogginess. One common base called propylene glycol, which is also used in theatrical smoke, is known to cause irritation to the eyes and respiratory infections.

## SO WHAT HAPPENS AFTER PROLONGED USE OF E-CIGARETTES?

Scientists are still studying these effects, and even though in America the Food and Drug Administration (FDA) has given the seal of approval, much is still unknown.

E-liquid can also differ greatly between manufacturers with barely any regulation for additives. Some have been found to contain diacetyl, a chemical that is known to give butter its "buttery" taste. Inhalation of this chemical can lead to scarring in the lungs known as "popcorn lung," named after hundreds of workers who inhaled the chemical in a microwaveable popcorn factory and suffered irreversible lung damage. This is an example of how the lack of quality control in e-cigarettes should be a significant concern.

But, current evidence does indicate that vaporizers administer nicotine with far less adverse effects due to decreased carcinogenic products and smoke inhalation. But less harmful does not mean safe. E-cigarettes with added flavouring (such as blueberry or grape) have been found to contain other harmful chemicals.

## IS SECOND-HAND SMOKE STILL AN ISSUE WITH E-CIGARETTES?

The answer is yes. Exhaled particles from vaporizers known as "ultra-fine particles" are known to affect pulmonary health. Others are worried that because these "ecigs" are deemed healthier that they are becoming more appealing for young people. A study reported that continued use of e-cigarettes for teens in grades 6 to 12 had increased from 6% to 20% over three years.

On the other hand, much of the information we have on the adverse effects of smoking comes from long-term studies, with cancers appearing much later life. Since vaporizer use is relatively new we simply don't have the same access to longitudinal studies. So we'll wait to see!

#### Meth is On the Rise Again: What Parents Should Know BY THE PARTNERSHIP



"When I took those off-white crushed shards up that blue, cut plastic straw—well, my whole world pretty much changed after that. There was a feeling like — my God, this is what I've been missing my entire life. It completed me. I felt whole for the first time." These are the words of Nic Sheff describing his experience with methamphetamine in his autobiography, Tweak.

Known by street names like speed, ice, biker's coffee, tweak or crystal, methamphetamine — or meth for short is made in a home or lab. It comes in a white powder or pill form and is bittertasting. The form that Nic describes is crystal methamphetamine and looks like glass fragments or shiny, bluish-white rocks. It is a stimulant like caffeine and cocaine, although far more powerful.

Why is Meth is Experiencing a Resurgence? Source: Partnership for drug-free kids- Oct. 2018

In February 2018, The New York Times ran a story, "Meth, the Forgotten Killer, Is Back.

And It's Everywhere." And it seems that it is. Government actions in 2006 restricted access to pseudoephedrine, a key ingredient used in making meth, resulting in a temporary decline in use. However, meth is on the rise again, largely smuggled in from Mexico. According to the DEA's 2017 threat assessment, its purity has been steadily climbing and is now well above 90 percent. It's also cheap, at \$5 per hit. Learn More Here

How Using Social Media Affects Teenagers

Experts Say Kids Are Growing Up With More Anxiety And Less Self-Esteem

Many parents worry about how exposure to technology might affect toddlers developmentally. We know our preschoolers are picking up new social and cognitive skills at a stunning pace, and we don't want hours spent glued to an iPad to impede that. But adolescence is an equally important period of rapid development, and too few of us are paying attention to how our teenagers' use of technology—much more intense and intimate than a 3-year-old playing with dad's iPhone—is affecting them. In fact, experts worry that the social media and text messages that have become so integral to teenage life are promoting anxiety and lowering self-esteem.

Young people report that there might be good reason to worry. A survey conducted by the Royal Society for Public Health asked 14-24 year olds in the UK how social



media platforms impacted their health and wellbeing. The survey results found that Snapchat, Facebook, Twitter and Instagram all led to increased feelings of depression, anxiety, poor body image and Ioneliness.

Read more here

## Is Internet Addiction Real?

With Kids Spending More Time On Screens, Parents Worry That They Are Getting Hooked.

Internet addiction. Phone addiction. Technology addiction. Whatever you call it, a lot of parents are expressing worries that their children are addicted to their devices.

Is the behavior that parents are concerned about really addiction?

What parents are alarmed about is usually two things: the sheer amount of time their kids spend on screens, and their kids' resistance to cutting back on that screen time. Getting them to put away their devices and come to dinner, engage in other activities, go outside or do their homework (without also checking social media and streaming TV shows) seems to be an increasingly uphill battle.

Kids sometimes use the word "addiction" to describe their own behavior, too. In a 2016 survey by Common Sense Media, half of teenagers said they "feel" they're addicted to their mobile device. Three quarters of them said they felt compelled to immediately respond to texts, social media posts and other notifications.

"More often than not, when people say that someone is addicted to the internet or addicted to their phone, they're using it colloquially," notes Dr. David Anderson, a clinical psychologist and director of the Behavior Disorders Center at the Child Mind Institute. By calling it addiction, parents are often communicating their concern that so much screen time is unhealthy, as well as their feeling that they're powerless to stop it. Learn more here

## Understanding Anxiety in Children and Teens

This 2018 Children's Mental Health Report shows how widespread these disorders are and the risks of untreated anxiety.

#### AT A GLANCE

Regular anxiety becomes a disorder when young people have out-of-proportion responses to things most of us cope with easily.

In the past 10 years, there has been increasing recognition of anxiety in young people by health care providers, including a 17% increase in anxiety disorder diagnosis.

Yet anxiety symptoms are minimized or ignored. As little as 1% of youth with anxiety seek treatment in the year symptoms begin. Read more about it here