Chemicals of Concern

Stephanie Siete
Public Information Officer
Community Bridges
Common Sense

Wash your hands, save lives

Avoid touching your eyes, nose and mouth to prevent the spread of COVID-19!

Remember to always wash your hands with soap for 40 seconds!
Hospitalizations were 6 times higher and deaths 12 times higher for COVID-19 patients with reported underlying conditions*

MOST FREQUENTLY REPORTED UNDERLYING CONDITIONS

CARDIOVASCULAR DISEASE

DIABETES

CHRONIC LUNG DISEASE

*compared to those with no reported underlying health conditions

CDC.GOV bit.ly/MMWR61520 MMWR
OVERDOSE DEATHS SPIKED AFTER START OF THE PANDEMIC, DRIVEN BY SYNTHETIC OPIOIDS LIKE FENTANYL

Monthly drug overdose deaths

- Total overdose deaths
- All opioid deaths
- Synthetic opioid deaths

Start of COVID-19 pandemic response in the U.S.
Drug Overdose Deaths on Rise Again

81,000 drug overdose deaths occurred in the United States in the 12 months ending in May 2020 (highest number of overdose deaths ever recorded in a 12-month period)

Acceleration during pandemic

Fentanyl
Cocaine
Meth

3 months later... getting worse

• September 2019 through August 2020

• During this period, there were 88,295 deaths, a record high that is almost 19,000 more deaths (27%) than the prior 12-month period

• Fentanyl and opioids

• 35-44 year olds most vulnerable
Figure 1. National Drug-Involved Overdose Deaths*  
Number Among All Ages, by Gender, 1999-2019

*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision.  
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.
Meth, Fentanyl and Cocaine on Rise

37,137 deaths involved fentanyl or a similar drug
16,539 deaths involved stimulants such as meth
16,196 deaths involved cocaine
Why we all should care...

Drugs don’t discriminate

It’s a community concern

Most drug deaths are from the legal ones

Face of addiction has changed

Let’s prevent pain

Lives matter... all of them

Let’s be in the know...
Doctors are seeing otherwise healthy young people complain of coughing and shortness of breath, with signs of inflammation in both lungs.

Justin Wilson, 25, vaped for about a year and then suddenly collapsed, unable to breathe, on Sept. 1. He had to spend a week in a hospital in Portland, Oregon. Courtesy Jake Wilson
Teenagers and young adults who vape face a much higher risk of COVID-19 than their peers who do not vape, a new study has found.

Nery Zarate/Unsplash

The study, which was published online Aug. 11, 2020 in the Journal of Adolescent Health
Cilia line and protect the lungs, blocking debris.

Burning the cilia or damaging them increases the likelihood of getting sick.
2011-2019 E-cig use in youth

• Increased 1,650% among MS students, from 0.6% to 10.5%
• Increased 1,733% among HS students, from 1.5% to 27.5%
  – This was a 33% increase from the 2018 rate of 20.7%
• In 2019, close to 2.9 million children started using e-cigarettes... more than 7,900 per day!
• This was an increase from more than 2.2 million in 2018 and close to 2.1 million in 2017
2011-2019 E-cig use in youth

• In 2019, 69% of youth who used an e-cigarette reported using a flavored e-cigarette
  – HS (72%) and MS (60%) students

• In 2019, most e-cig using youth reported using a type with refillable pods or cartridges, such as JUUL (54%), followed by a refillable tank system (24%) most often
  – This matches most e-cig using youth reporting their usual brand being JUUL (58%), followed by some other brand (19%) or no usual brand (15%) which could align with users of refillable tank systems
Vaping 101

- Hit
- Rip
- Juul
- Puff Bar
- Cloud
- #DI4J
- ENDS
- Dripping
- Mods
- Suorin
- Wax
- Dabs
- Goo
- #710
- Budder
- Concentrates
- Oil
- Shatter
- Juice
- Honey
Electronic Nicotine Delivery Systems (ENDS)

- Vaporizers, vape pens, hookah pens, electronic cigarettes, e-pipes, mods, juuls, etc.
Vape Watch
More Concealment

STASH PEN
Really Writes &
Hides Valuables

More Concealment
4 main chemicals

1. Water
2. Flavor
3. Nicotine
4. PG – Propylene Gycol
15,500 E-Cigarette Flavors and Counting

7 out of 10 current youth e-cigarette users said they used them “because they come in flavors I like.”
E-cigarettes

• According to the FDA, electronic cigarettes are battery-operated devices that turn nicotine or other chemicals into a vapor that is inhaled by the user.
• Use on the rise among teens.
• Easy to conceal other drug use.
• Liquid nicotine = potential hazard.
• “Vaping” or using “Dabs.”
• Vaping Pens...
Oils and Damage...

• Nicotine or THC, the high-inducing chemical in marijuana, is mixed with solvents that dissolve and deliver the drugs.

• The solvents, or oils, heat up during aerosolization to become vapor.

• Oil droplets may be left over as the liquid cools back down—inhaling those drops may cause breathing problems and lung inflammation.
Teenage athlete facing ‘certain death’ from vaping-related injury gets double lung transplant

‘What I saw in his lungs is like nothing I’ve seen before,’ says transplant doctor of 20 years

Derek Hawkins | 8 hours ago |
Daniel Ament – Double Lung Transplant Teen

- He went from an athletic, fun-loving happy teen to suddenly having to fight for his life
- **Started vaping winter of 2018, surgery Oct of 2019**
- "I spent 29 days on life support as a 16-year-old and I only had a 10 percent chance of survival," he said.
- Takes 20 pills a day in recovery

Nicotine and Dripping

- Cartridge Style E-Cigarette
- Re-Fillable Tank Style E-Cigarette
WARNING: This product contains nicotine. Nicotine is an addictive chemical.
Who else gets poisoned by nicotine?
Electronic Cigarettes and Liquid Nicotine Exposures - AAPCC

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>271</td>
</tr>
<tr>
<td>2012</td>
<td>460</td>
</tr>
<tr>
<td>2013</td>
<td>1,543</td>
</tr>
<tr>
<td>2014</td>
<td>4,024</td>
</tr>
<tr>
<td>2015</td>
<td>3,774</td>
</tr>
<tr>
<td>2016</td>
<td>2,886</td>
</tr>
<tr>
<td>2017</td>
<td>2,450</td>
</tr>
<tr>
<td>2018</td>
<td>3,146</td>
</tr>
<tr>
<td>2019</td>
<td>5,183</td>
</tr>
<tr>
<td>2020</td>
<td>3,829</td>
</tr>
<tr>
<td>2021</td>
<td>2,482</td>
</tr>
</tbody>
</table>

More than half of these reported exposures have occurred in young children under the age of 6
Juul – The iPhone of e-cigs
E-cigarette company Juul to pay $40 million in North Carolina lawsuit settlement

By Virginia Langmaid, CNN

Updated 1:15 PM ET, Mon June 28, 2021

WARNING:
This product contains nicotine. Nicotine is an addictive chemical.
Much More Nicotine

One pod is equivalent to a pack of cigarettes

200 puffs per pod
• Pre-charged, Simply puff on the device to activate
• Pre-filled, no need for messy refills
• Accurate cigarette-style throat hit
• 200+ puffs per pod, equivalent to 20 cigarettes
• Compact and Portable
• Available in Cool Mint, O.M.G (Orange, Mango, Grapefruit), Strawberry, Mango, Lychee ICE, Lush ICE, Mango, Blue Raz, Blueberry, Watermelon, Cucumber, Grape, Pomegranate, Tobacco, Peach, Cafe Latte, Peach Ice, Pineapple Lemonade, Pink Lemonade, Banana Ice (Limited Edition) and Blueberry ICE

WARNING: THIS PRODUCT CONTAINS NICOTINE. NICOTINE IS AN ADDICTIVE CHEMICAL.
TEEN FAVORITES: DISPOSABLES

- Stig, Puff, EonSmoke
- Dozens of flavors
- Small, easy to hide, multi-packs
- Very cheap, some as little as $3 each

WARNING:
WARNING: This product contains nicotine. Nicotine is an addictive chemical.
Graphic Photos...
Teens and Vape explosions

This is it, I got stitches and wires on my bottom jaw.
Orange County Man Loses Eye after E-Cig Explodes
Man loses 7 teeth after vaping explosion.

Man loses part of tongue after vaping explosion.
THURSDAY, June 20, 2019 -- A vape pen exploded in the face of a 17-year-old Nevada boy, breaking his jaw and requiring multiple surgeries to repair the damage, according to a case report in the latest New England Journal of Medicine.

The 2018 incident highlights a little-known danger of e-cigarettes -- the devices can unexpectedly blow up, causing burns and severe facial damage.

“He was [using] this vape pen, and it blew up in his face while he was [using] it,” said one of the doctors who treated him, Dr. Katie Russell, a pediatric surgeon at the University of Utah in Salt Lake City.

The e-cigarette blast was strong enough to break bones and cause extensive tissue damage.
Big Vape
Episode 2

A NETFLIX ORIGINAL DOCUMENTARY SERIES

PRODUCTS COME AT A PRICE

NOV 27 | NETFLIX
What do we really know about vaping?

- E-cigs safer?
- Medical marijuana?
- Too soon to know
- Inhaling oil and getting oil into your lungs is what is causing some of the lung injuries we see
CANNABIS CONCENTRATES

**Crumble**
- Dried oil with a honey-comb like consistency

**Badder/Budder**
- Concentrates whipped under heat to create a cake-batter like texture

**Shatter**
- A translucent, brittle, & often golden to amber colored concentrate made with a solvent

**Distillate**
- Refined cannabinoid oil that is typically free of taste, smell & flavor. It is the base of most edibles and vape cartridges

**Crystalline**
- Isolated cannabinoids in their pure crystal structure

**Dry Sift**
- Ground cannabis filtered with screens leaving behind complete trichome glands. The end-product is also referred to as kief

**Rosin**
- End product of cannabis flower being squeezed under heat and pressure

**Bubble Hash**
- Uses water, ice, and mesh screens to pull out whole trichomes into a paste-like consistency
Then: SMOKE SOME WEED  
Now: DAB SOME SHATTER

Shatter, a translucent, extremely potent cannabis concentrate that looks and breaks like glass, is usually vaporized (“dabbed”) from a vape pen or water pipe.
Butane Honey Oil (BHO)  
Dabs, Wax, Budder, Shatter

- Similar to oils, but more concentrated; thus greater high
- Cooked like meth; acts like meth: psychotic breaks
- Passing butane through a tube packed with marijuana
- Leaves extracted resin behind as a sticky, thick oil–like substance
- Risk of explosion

- Up to 90% THC
THC Potency

• 1960-1990s – 2-3% THC (leafy green)

• Today the oil or concentrate can be anywhere from 70-90% pure

• Quicker high
THC

- Tetrahydrocannabinol
- **Psychoactive ingredient** in marijuana (high)
- Can cause paranoia or anxiety
- Mind altering
- Induce sleepiness
Psychosis is a condition that affects the way your brain processes information. It causes you to lose touch with reality. You might see, hear, or believe things that aren't real. Psychosis is a symptom, not an illness. A mental or physical illness, substance abuse, or extreme stress or trauma can cause it.
INHALANTS

Butane

✓ It can cause severe psychotic episodes even among individuals with no previous psychiatric illness.
✓ It is more common among those that abuse butane, especially those that use it regularly over an extended time span.
✓ Butane-induced psychosis could produce symptoms such as: violence, persecutory delusions, and visual hallucinations
State law permits Coloradans to possess 1 ounce of THC concentrate, also known as hash oil and wax. That amount yields 2,800 single servings as defined by the state. The potency of hash oil typically sold in Colorado ranges 85-90 percent THC. The potency of marijuana smoked in the 1960s and '70s ranged between 2-4 percent.
CBD

- Cannabidiol
- AKA: Medical Marijuana
- Non-psychoactive (no high – does not act on same receptors as THC)
- May reduce anxiety
- May have antipsychotic properties - reducing the psychosis-like effects of THC
- Promote wakefulness
Average THC and CBD Levels in the US: 1960 - 2011

Crystalline THCa was developed as a means of delivering large, quantifiable doses of THCa and is known as the purest isolate anywhere on the market testing at 99-100%.
CBD EDIBLES vs THC EDIBLES: WHAT IS THE DIFFERENCE?
Why CBD Edibles Are Favored By People?

• CBD is a non-psychoactive element, hence, it does not create any intoxicating effects.
• Therefore, you will be able to experience the pharmaceutical benefits provided by the cannabis plant without getting high.
• The commonly recognized benefits of CBD edibles include its effectiveness in relieving pain, reducing anxiety and depression, promoting better sleep, etc.
THC Edibles

- THC also has different medicinal properties... it can cause intoxicating effects in people, hence, it is considered illegal.
- But products that contain only 0.3% of THC are allowed, as it will not create a “high” feeling as the amount is very low.
- The main problem with THC edibles is that it may contain higher concentrations of THC than the permitted levels.
  - Hence, it can have mind-altering effects. Also, if you use them for a long time, it can result in addiction too.
MEDICATED NERDS ROPE – 400MG THC

- $30.00
- A sweet medicated candy and gummy edible so tasty, words can’t even describe. Made in a variety of flavors from Strawberry, Blueberry, Cherry, and Grape, Medicated Nerds Rope are infused with 400mg THC in each rope
- Buderflydelivery.com
## Edibles Dosing Chart

**THC per dose**

<table>
<thead>
<tr>
<th>Dose Range</th>
<th>What to Expect</th>
<th>Who's it for?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2.5 mg</td>
<td>Mild relief of pain, stress, anxiety, and other symptoms. Improved focus and creativity.</td>
<td>First-time consumers; Microdosing.</td>
</tr>
<tr>
<td>2.5-15 mg</td>
<td>Stronger symptom relief. Euphoria. May impair coordination and alter perception.</td>
<td>Patients with persistent problems; Restless sleepers; Social butterflies.</td>
</tr>
<tr>
<td>15-30 mg</td>
<td>Strong euphoria. Unaccustomed consumers may experience negative effects. May impair coordination and alter perception.</td>
<td>Well-seasoned consumers; Medical patients with developed tolerances; Experienced consumers seeking to sustain sleep.</td>
</tr>
<tr>
<td>30-50 mg</td>
<td>Very strong euphoria in unaccustomed customers. Likely to impair coordination and alter perception.</td>
<td>Consumers who have poor GI absorption of cannabinoids; People with significant tolerance to THC.</td>
</tr>
<tr>
<td>50-100 mg</td>
<td>Highly likely to impair coordination and alter perception. Can cause negative side effects such as rapid heart rate, nausea, and pain.</td>
<td>For experienced THC individuals only; Patients with cancer, inflammatory disorders, or conditions that necessitate high doses.</td>
</tr>
</tbody>
</table>

Please note everybody processes cannabis differently and could have a different edibles experience. Always start low and slow and follow packaging guidance. Visit Leafly.com for more resources.
Then

- 1960-1970s – 2-3% THC (leafy green)
- 420 (chemicals, time to smoke, date to party)
- Smoked weed
Now

- 20-30% THC (leafy green)
- 710 (oil, concentrated w more chemicals)
- Vaped, smoked, edible, dabbing
- Might not smell it
- Looks like butter, honey, oil
- Synthetic: cooked with butane
  - 90% THC
  - Psychotic breaks
  - Violent behaviors
A man in Michigan died over the weekend after apparently using liquid fentanyl in a vaping device.

The victim, a 39-year-old Alpena man, could not be revived by medics who found him in a home in Maple Ridge Township on Saturday — when he and his wife manufactured the synthetic opioid into a vaping liquid after buying it online, MLive.com reports.

The unidentified man passed out after taking a "number of hits" from the pipe and never regained consciousness.

Researcher: Fentanyl deaths up 122% in West Virginia
Herbal supplement linked to string of overdose deaths in US
Fentanyl is now a weapon of mass destruction: DHS

MORE ON:
DRUG OVERDOSES
The United States has 5% of the world’s population & consumes 80% of the global opioid supply

Arizona Department of Health Services, 2017
The most common drugs involved in prescription opioid overdose deaths include:

- Methadone
- Oxycodone (such as OxyContin®)
- Hydrocodone (such as Vicodin®)
Heroin Purity

- In 1980s = 3.6% pure
- 1990 = 18% pure
- 1998 = 41% pure
- Today = 60-90% ???
- No longer have to inject heroin to feel the effect. Purity so high effects felt by snorting or smoking
Figure 5. National Drug Overdose Deaths Involving Heroin*, Number Among All Ages, 1999-2019

- All Heroin
- Heroin in Combination with Synthetic Opioids other than Methadone
- Heroin without any Other Opioid

* Amongcd deaths with drug mention as the underlying cause, the heroin category was determined by the TAD 1120-13 multiple cause of death code. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.
Heroin mimics Oxy

- Heroin in the Heartland – CBS News 60 Minutes
Figure 4. Fentanyl Combination Reports to NFLIS-Drug, 2014 - 2019

Source: National Forensic Laboratory Information System-Drug Retrieved July 10, 2020
Deadly Dose

- 2-3 milligrams of fentanyl can induce respiratory arrest, depression and death

- 2-3 milligrams is the same as 5-7 grains of salt
Fentanyl: Overdoses On the Rise in Arizona

Fentanyl is a synthetic opioid approved for treating severe pain, such as advanced cancer pain. Illicitly manufactured fentanyl is the main driver of recent increases in synthetic opioid deaths.

100x more potent than morphine¹

50x more potent than heroin¹

References:
¹⁺² DEA Drugs of Abuse Resource Guide 2020
² Arizona Department of Health Services Opioid Update & Surveillance Data Summary February 2020
³ Arizona HIDTA as of January 09, 2020 | Created and Distributed by the Arizona High Intensity Drug Trafficking Area.
Fentanyl Pills and Crystals

“Lollipop”

Fentanyl Powder

Patches
FENTANYL: Overdoses On the Rise in Arizona

Fentanyl is a synthetic opioid approved for treating severe pain, such as advanced cancer pain. Illicitly manufactured fentanyl is the main driver of recent increases in synthetic opioid deaths.

ILlicitly ManUfactured FENTANYL

Fentanyl is often used to cut other illicit substances including heroin, cocaine, and methamphetamine to increase the potency as well as increase profit potential for manufacturers and distributors.

References:
1, 3 DEA Drugs of Abuse Resource Guide 2020  |  2 Arizona Department of Health Services Opioid Update & Surveillance Data Summary February 2020
4 Arizona HIDTA as of January 09, 2020  |  Created and Distributed by the Arizona High Intensity Drug Trafficking Area.
COUNTERFEIT DRUGS

OXYCODONE
REAL
FAKE

ADDERALL
REAL
FAKE

SOURCE: DEA
RIP
Hannah Cupp

Alternative Pain Management

- Massage
- Meditation
- Biofeedback
- Hypnotherapy
- Chiropractic
- Aromatherapy
- Acupuncture
- Exercise
- Other relaxation therapies
Don’t waste time...

• Learn something new?
• Tell others
• Be proactive
• Prioritize healthy decisions/conversations
• Be honest and direct
• Keep it real
Parents Against Vaping e-cigarettes (PAVe)

www.ParentsAgainstVaping.org

@parents_against_vaping

@ParentsVsVape

Parents Against Vaping E-cigs
Adolescent Resources

Communitybridgesaz.org
Thepathwayprogram.com
Charliehealth.com
Teenlifeline.org
Life is a precious gift. Use your days wisely.
Thank You!

Stephanie Siete
Public Information Officer

Access to Care - 24/7
877.931.9142

CommunityBridgesAZ.org
https://www.facebook.com/CommunityBridgesAZ
ssiете@cbridges.com
602.377.4591

© 2017. Community Bridges, Inc. All rights reserved.