



Fentanyl Education for Students

<https://www.birdielight.org/>

Fentanyl is the number one cause of death in 18-45 year-old Americans.

We're going to change that.

We have a story to tell, and a promise to make. We've made that promise to Eli Weinstock and to our grieving hearts: a promise to build something good, true, and honest atop this devastated landscape.

OUR job is to spread awareness around the dangers of Fentanyl in drugs and distribute tools to prevent overdose, so **YOU** have the power to save your own life.

*Beth Weinstock M.D.
& Olivia Weinstock*



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Eli's Story

We have a story to tell, and a promise to make. We've made that promise to Eli Weinstock and to our grieving hearts: a promise to build something good and true atop this devastated landscape.

In March of 2021, our beloved son, brother, grandson, cousin, and friend Eli Weinstock collapsed and died at his home in Washington D.C. He was twenty years old, a sophomore at American University, an intern at the Spanish Education Development Center, and an aficionado of hip-hop, snowboarding, and Quentin Tarantino films.

The world lost a bright and playful light— Eli was quick to smile, quick to hug his siblings, and quick to adapt to new situations and friends. He often drew a crowd. He was on his way to a meaningful life of love and connection.

Three months after his death, the coroner reported that two substances were identified in his body; the first mentioned was Kratom, a legal herbal supplement found in CBD stores and some head shops, and second was Fentanyl, a synthetic opioid implicated in over 75% of unintentional overdose deaths in 2021. Eli was unaware that Fentanyl was in what he took. He did not intend to die. Nearly 108,000 people died from an overdose in the last twelve months alone.

I repeat: 108,000 people. In. One. Year.

To that end, we'd like you to meet BirdieLight, an organization with big-sky dreams, one of which is to place fentanyl education in the hands of every high-school and college student in America.

CDC Healthy Schools

BirdieLight's *Fentanyl Education for Students* helps schools and community organizations educate and prepare young people to make safer decisions. It meets the requirements of [Ohio House Bill 367](#) (Opioid Abuse Prevention) and is aligned to the [National Health Education Standards](#) for Grades 9–12.

Standard 1: Concept Comprehension

- 1.12.5: Propose ways to reduce or prevent injuries and health problems. (Lessons 3,4)
- 1.12.8: Analyze personal susceptibility to injury, illness, or death if engaging in unhealthy behaviors. (Lessons 2,3,4)
- 1.12.9: Analyze the potential severity of injury or illness if engaging in unhealthy behaviors. (Lessons 1–4)

Standard 5: Use of Decision-Making Skills

- 5.12.2: Determine the value of applying a thoughtful decision-making process in health-related situations. (Lesson 3,4)

Standard 7: Avoid or Reduce Health Risks

- 7.12.1: Analyze the role of individual responsibility for enhancing health (Lesson 4)
- 7.12.2: Demonstrate a variety of healthy practices and behaviors that will maintain or improve the health of self and others (Lesson 1,4)
- 7.12.3: Demonstrate a variety of behaviors to avoid or reduce health risks to self and others (Lesson 1,4)

Standard 8: Advocacy

- 8.12.1: Utilize accurate peer and societal norms to formulate a health-enhancing message (Lessons 1, 2, 4)
- 8.12.2: Demonstrate how to influence and support others to make positive health choices (Lesson 4)
- 8.12.3: Work cooperatively as an advocate for improving personal, family, and community health (Lesson 2, 4)
- 8.12.4: Adapt health messages and communication techniques to a specific target audience (Lesson 4)

Filling the Knowledge Gap

The Mission of BirdieLight is to educate young people about the dangers of Fentanyl and provide tools to enable them to proactively manage risk.

Nearly 75% of opioid-related fatalities are caused by fentanyl.

What is it?

Fentanyl is a synthetic opioid that is 50-100 times stronger than morphine. Pharmaceutical fentanyl was originally developed for procedural anesthetic/pain management for cancer patients, and is still used legitimately at small doses (on the level of micrograms) in hospital settings. However, fentanyl is also commonly manufactured illegally and mixed illicitly with other opioids (oxycodone and heroin), stimulants such as cocaine and methamphetamine, benzodiazepines (such as counterfeit Xanax), other stimulants (such as counterfeit Adderall) and designer drugs such as Molly (ecstasy). This drug adulteration with fentanyl occurs on the level of milligrams –1000x stronger than legal and regulated fentanyl.

Why is it being added to recreational drugs?

Fentanyl increases the potency and addictive potential when it is added to other drugs; it is also cheap to manufacture and distribute. Most fentanyl is manufactured in clandestine labs and smuggled across our border, although some of the pill manufacturing/pressing and adulteration happens in the U.S. Most people who take opioids on a daily basis (opioid pills or heroin) have built up some tolerance to opioids, but even in this scenario a small amount of fentanyl can be deadly. In the last five years, many who are exposed to unsuspected fentanyl are unaccustomed to opioid use, and often aren't intending to take an opioid at all.

Why is it so dangerous?

Similar to other opioids, fentanyl can produce effects such as euphoria, pain relief, sedation, drowsiness, dizziness, vomiting, and respiratory depression, depending on the

dose and an individual's opioid tolerance. Because of its potency, very small amounts of fentanyl can quickly suppress a person's respiratory drive.

Where is illicit fentanyl found?

Counterfeit Pills

Counterfeit pills are a huge problem; fentanyl is found in fake oxycodone, fake Xanax, fake Adderall, and many others. These pills are stamped and shaped to look like an actual pill from a pharmacy, and it is nearly impossible to tell the difference.

Heroin

Fentanyl is more potent than and commonly mixed with heroin.

Methamphetamine

Methamphetamine is a stimulant, as is cocaine, but often these stimulants are cut with fentanyl; illicit drug manufacturers do this to both increase the euphoric sensation of the combination and to save money, working in labs that aren't following any standards to create safe ratios of each drug.

Ecstasy or MDMA- "Molly"

Molly is often used at music festivals, concerts, and parties, and acts both as a stimulant and hallucinogenic. However, ecstasy is rarely pure MDMA; many drug suppliers mix the MDMA with fentanyl or methamphetamine or other opioids, and then add red, yellow or blue food coloring to form a pill sold as MDMA, or ecstasy. Or they mix these drugs and sell it as (fake) Xanax.

Cocaine

Powder and crystal/rock cocaine can also be adulterated with fentanyl; current estimates in the U.S. show that anywhere from 10-20% of cocaine products are contaminated with fentanyl.

Why is this important?

“This Christmas, we’ll have one empty seat around the Monopoly board. The devastated landscape my family now inhabits is hard to comprehend, **but we have hope.**”

– Beth Weinstock M.D.

- Fentanyl is 50- 100 times more powerful than morphine.
- Fentanyl can be lethal in a small dose, and when only ingested once.
- Fentanyl can be easily added to nearly all recreational drugs, mostly pills and powders.
- The fastest-rising age demographic for fentanyl-related deaths is age 15-25
- Fatalities are increasing rapidly within communities of color; deaths among Black, American Indian, and Alaska Native communities increased the fastest in the twelve months from 2020 to 2021.
- The leading cause of accidental death for all Americans age 18-45 is currently fentanyl ingestion.

Let's Get Young People Closer to Safe

Test it

First, think hard about whether or not to ingest any substance that could contain fentanyl. Second, if you opt to move forward with ingestion, **use a tool** –a test strip—to make sure the substance does not contain fentanyl. Always throw away any drug that tests positive. Instructions on how to use a test strip are included in this curriculum.

Tell someone

After testing the substance, make an informed choice on whether or not to proceed with ingestion. If you decide to move forward, tell a friend first what you're taking. **NEVER EVER USE ANY SUBSTANCE ALONE.** This friend – your new “designated driver” – should be sober, so that they are able to help you in the event of an emergency.

Narcan

Make sure there is Narcan or a form of naloxone in the room. Narcan is a life-saving nasal spray that can reverse the effect of an overdose. It's easy to use and can be administered quickly to prevent death or serious injuries from fentanyl and other opioid ingestions..

Lesson One → Understanding Opioids


Overview

In this first lesson, students will achieve a basic understanding of the synthetic opioid fentanyl, and have the opportunity to distinguish between pharmaceutical fentanyl (often used in routine medical care) vs illicit/illegal fentanyl.

Outcomes

- Students will be able to place fentanyl on the opioid spectrum
- Students will be on their way to understanding how to avoid fentanyl.

Resources

- Slide Show: [BirdieLight Lesson One](#)
- Video: [Seven Days: A Film About The Opioid Crisis in Arkansas | PBS](#)
- Video:  [Breaking Down the Stigma of Addiction: A Witness' Story Through Art](#)

Lesson Plan

In this first lesson, we are going to learn about the synthetic opioid fentanyl. It's important that we define and identify the threat, before we move on to the next lesson where we will learn about the "why"; why illegal fentanyl has killed, and continues to kill, so many young people in our country.

- Review images and chemical structure of the synthetic opioid fentanyl.
- Brief overview of opioids, including their legitimate use for pain control and the different types of opioids (legal vs illegal).
- Discussion: How can opioids help us? How can they harm us?
- Define the difference in legal pharmaceutical drugs that are regulated, and illicit drugs that escape regulation.
- Discussion: What happens in your body when you take an opioid?
- Discussion: What happens when you ingest too much of an opioid?
- Discussion: What makes an opioid habit-forming?
- Common scenarios of opioid ingestion.

Closure

- We learned about the synthetic opioid fentanyl, and identified the difference between legitimate hospital/medical use of fentanyl, and illicit or illegal fentanyl.
- We learned about opioids as a class of drugs, and how they affect your body.

Lesson One → Understanding Opioids

Teaching Steps

Activity 1: BirdieLight Slide Show & Review Activity

- **Slide 1:** Today we will learn the basics about opiate chemicals and the vocabulary people use to discuss them.
- **Slide 2:** What is an Opiate? Is an Opioid different?
 - Opiates are a class of drugs naturally found in the poppy plant. Examples include morphine, codeine, and heroin. Opioids are similar but are either partly or completely manufactured in a chemical lab; examples include oxycodone, hydrocodone, and particularly fentanyl, which is entirely synthetic and can be made without the poppy plant.
 - Vocabulary alert! These terms, **opioid or opiate**, are now commonly used interchangeably! So don't worry which word you use, just know that all of these drugs resemble each other chemically, and all of them can block pain signals between the body and brain.
 - What they all have in common is the ability to bind to a receptor in your brain called the **mu-receptor**
- **Slide 3:** Here, the cow is the Mu-receptor in your brain (get it?) and the grass is the opioid (such as fentanyl, morphine, heroin, oxycodone, and hydrocodone) binding to the receptor.
- **Slide 4: What happens in your body when you ingest an opioid?** Once an opioid binds to the mu-receptor in your brain, several things can happen, and can often happen in just a matter of seconds, depending on dose and mechanism of ingestion.
 - First, opioids can control **pain**. They are used frequently in hospitals and medical settings at manageable doses to control pain during procedures and surgeries.
 - Second, opioids can create a **euphoria**, defined as an intense feeling of

unrealistic well-being or happiness. This euphoria is the reason opioids are sought out and sold in large quantities illegally. With time, for some individuals, this euphoria-seeking can lead to problematic drug use and/or an opioid use disorder (addiction).

- Third, because these chemicals are so powerful—particularly fentanyl— the euphoria can be followed by a **loss of consciousness** (passing out or fainting). If the dose of the opioid was powerful enough, this fainting can quickly be followed by a **loss of the drive to breathe**, or even **death**.

So What is Fentanyl?

- **Slide 5: Chemical Structure:** basically fentanyl is just carbon and nitrogen and oxygen molecules that look like this. More importantly, a lot of these molecules together form a white powder that looks like the stuff **on the tip of this pencil**. The small amount of fentanyl you see here, if ingested, can be fatal.
 - Fentanyl is synthetic, meaning it has to be made in a chemical lab. It can't be grown in a field like morphine and heroin, which are derived directly from the poppy plant. But most other opioids, such as heroin and morphine, have a somewhat similar structure.
- **Slide 6 Legal vs Illegal:** When used in a controlled setting, and prescribed by a doctor, opioids can be an important part of medical care. They allow people in severe pain to live more comfortable lives, and they allow procedures to get done under light sedation. However, even legal opioids can be problematic; you will learn in the next lesson how legally-prescribed opioids led to an American addiction crisis.
 - **Legal:** Because fentanyl and other opioids are often used for medical reasons, it is legal for doctors and pharmacists to prescribe and dispense these medicines. Fentanyl in particular is prescribed usually on the level of MICROGRAMS. Other legal opioids include hydrocodone, morphine, and oxycodone.
 - **Illegal:** some opioids are manufactured without any regulations or oversight. These are distributed through drug supply chains and then sold in a variety

of ways, including via social media channels such as Snapchat or Tiktok. This version of fentanyl may be distributed in doses as high as MILLIGRAMS, one thousand times stronger than what a doctor would prescribe. Other illegal opioids include heroin, as well as opioids within counterfeit pills that have been manufactured falsely to look like legitimate pills that come from the pharmacy.

Help vs Harm?

Help – some opioids (manufactured in a controlled setting and regulated) are the most effective medications we have to relieve pain related to surgery, cancer, and trauma such as bone fractures.

Harm – first, both legal and illegal opioids can be habit-forming and lead to a substance use disorder. Once a person has a problematic addiction, a complex series of life disruptions can occur, often including ill health, job loss, family disruption, and arrest and incarceration. At higher doses, opioids can be deadly.

- **What is Addiction?**

Addiction is a neuropsychological disorder characterized by a persistent desire to engage in a behavior, despite ongoing negative consequences. This compulsion creates a state of physical and psychological dependence on a substance.

- **Slide 7:** Addiction is a chronic dysfunction of the brain – this dysfunction involves the reward and memory area of the brain. When a person takes an opioid, the pleasure chemical dopamine is released; sometimes, depending on many circumstances, the brain will continue to seek out this pleasure which often leads to increasingly more chaotic behavior to obtain the drug.

- The person using the drug often can't recognize how disruptive the drug-reward cycle has become to their life.
- A person who regularly uses certain drugs, particularly opioids, may start to feel flat, without motivation, and/or depressed, and is unable to enjoy things like they used to. Because the person needs to keep taking the opioid, often at higher doses, to experience any level of reward, this only makes the problem worse. The person is caught in a vicious cycle, needing to take larger amounts of the drug to produce a familiar high, an effect known as **tolerance**, and also to prevent themselves from feeling ill from opioid withdrawal.
- Opioids are ingested in a variety of ways:
 - In medical settings (hospitals, procedures) and when given by a pharmacist:
 - IV (intravenous) - for pain control and sedation
 - Pills or patches - for pain control such as cancer pain, after surgeries, after breaking a bone, or when needing a minor procedure
 - In the unregulated drug world
 - Heroin - intravenous, snorting, smoking
 - Counterfeit oxycodone, hydrocodone pills - swallowed or snorted
 - Fentanyl- pills/powders, liquid within heroin and others.



1. **What does it mean to say fentanyl is a “synthetic” opioid?**

2. **What are legitimate and legal uses of fentanyl?**

3. **Fentanyl is ___ times more powerful than morphine.**

4. **What is the immediate effect of illicit fentanyl on the brain?**

5. **Why is fentanyl dangerous? (circle the correct answer)**
 - a. It can suppress a person’s drive to breath
 - b. It can cause a loss of consciousness
 - c. Impairment occurs so rapidly that a person can’t call for help.
 - d. All of the above

6. **_____ is a chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual’s life experiences.**

If you or someone you know is at risk for a fentanyl exposure, please contact a trusted adult.

Additional Questions for Discussion:

- If you broke your ankle today, and the staff at the hospital wanted to give you fentanyl to help with pain while they fixed the ankle problem, would you be nervous about the fentanyl? Why or why not?
- Addiction is considered a “disease” and is often described as “hijacking” or changing the brain. This is a scary concept – can a chemical actually take over your brain and leave you no choice but to continue using the substance? Discuss if you agree or disagree. If you disagree, why do you think it is so hard for people to stop using opioids?