

HOW CAN I TELL IF MY CHILD HAS BEEN USING OPIOIDS?

CAN A PERSON BECOME ADDICTED TO OPIOIDS?

HOW DO OPIOIDS AFFECT DRIVING?

HOW LONG DO OPIOIDS STAY IN THE BODY?

DO OPIOIDS LEAD TO THE USE OF OTHER DRUGS?

HOW MANY TEENS USE OPIOIDS?

CAN OPIOIDS AFFECT MY CHILD'S GRADES?

CAN A PERSON WHO USES OPIOIDS HAVE A BAD REACTION?

WHAT ARE THE EFFECTS OF OPIOIDS?

# OPIOIDS: FACTS PARENTS NEED TO KNOW

*Revised*

HOW CAN I PREVENT MY CHILD FROM GETTING INVOLVED WITH

## OPIOIDS?

WHAT ABOUT EFFECTS ON PREGNANCY?

WHAT ARE THE SHORT-TERM EFFECTS OF OPIOID USE?

IS OPIOID USE LINKED TO LOSS OF MOTIVATION?

HOW ARE OPIOIDS USED?

WHAT ARE THE LONG-TERM EFFECTS OF OPIOIDS USE?

## WHAT DO OPIOIDS DO TO THE BRAIN?

ARE OPIOIDS MEDICINE?

ARE THERE TREATMENTS FOR PEOPLE ADDICTED TO OPIOIDS?

# A Letter to Parents

You have probably heard a lot about the opioid crisis in the news lately. But what are opioids, and what do they have to do with you as the parent of a teenager?

If your child has had a sports injury, dental work, or surgery, it is possible that he or she was prescribed a pain reliever that contained an opioid. Opioids can be very effective at reducing severe pain in the short term, such as after surgery, but they can be very addictive, especially if they are misused.

Children and adolescents are at greater risk than adults of becoming addicted when exposed to drugs. Particularly when used in treating children or adolescents, opioids should only be taken to manage severe pain, when no other pain medicine works, and for the shortest time necessary—and most importantly, only while under the careful watch of a trained health care provider.

In addition to opioids prescribed for treating pain, there are powerful opioids sold on the street and used solely to get high, including heroin and illicit fentanyl. These are also highly addictive. All opioids—particularly when misused to get high, when combined with other drugs like alcohol or tranquilizers, or when used for pain without proper medical supervision—can result in deadly overdoses.

While opioid misuse in teens has been going down, the rate of opioid misuse increases significantly after the age of 18, so it is critical to talk with teens early and frequently to protect them from experimenting with opioids as they transition into adulthood. Talking to your kids about drugs may not be easy, but it is important.

Here at the National Institute on Drug Abuse (NIDA), we developed this guide to help parents talk with their kids. We also have a companion book, **Opioid Facts for Teens**, that you can share. Sometimes, just beginning the conversation is the hardest part. I hope these booklets can help.

A handwritten signature in black ink, appearing to read 'Nora D. Volkow', written in a cursive style.

Nora D. Volkow, M.D.

*Director*

National Institute on Drug Abuse



# Contents

<b>A Letter to Parents</b> .....	<b>1</b>
<b>I. Talking to Your Kids: Communicating the Risks</b> .....	<b>5</b>
Did you know? .....	6
Opioid misuse can have lasting effects .....	6
Opioids can be addictive .....	6
Opioid use can affect every area of your teen’s life.....	6
<b>II. Want to know more? Some FAQs about Opioids</b> .....	<b>7</b>
What are opioids? .....	7
What is heroin? .....	7
What is the connection between prescription opioids and heroin?.....	8
What are the effects of heroin on the brain, body, and behavior? .....	8
What are the most commonly used prescription opioids? .....	9
How do opioids affect the brain and make people feel high? .....	9
What are the health effects of opioids? .....	9
How do people use opioids? .....	10
How many teens misuse opioids? .....	12
Why do young people use opioids? .....	13
How can I prevent my child from misusing opioids?.....	14
Can my teen take someone else’s prescription opioids if he or she is injured?.....	14
I’ve heard of something called fentanyl. What is that?.....	14
How can I tell if my child has been misusing opioids?.....	15
Can my child use opioids if she is pregnant?.....	15
What is dependence and how is it different from addiction? .....	15
Can opioid addiction be treated?.....	16
Can you overdose on opioids? .....	16
Withdrawal symptoms.....	17
Can you stop an opioid overdose as it is happening?.....	18
What is being done to address the opioid overdose crisis?.....	19
<b>III. Starting the Conversation</b> .....	<b>21</b>
<b>IV. Other Useful Resources</b> .....	<b>23</b>



# **I. Talking to Your Kids: Communicating the Risks**

## Did you know?

**Opioid misuse can have lasting effects.** When opioids are misused, they can have harmful effects on your brain, like slowed breathing. Slowed breathing can then lead to short-and long-term health effects, including coma, brain damage, and death. Some studies have shown that repeated opioid misuse also can affect people’s behavior, decision-making, and responses to stressful situations. So, it’s important to be aware of any changes in your teen’s behavior.

**Opioids can be addictive.** Opioids are among the most addictive drugs. Over time, opioids can change the brain, which leads to addiction. People who are addicted to opioids can feel a strong need to take the drug again and again. They may also experience severe withdrawal symptoms in the absence of the drug. These negative withdrawal symptoms, coupled with the strong desire to use opioids, are why some people continue to use opioids, despite negative consequences to their health and well-being.

**Opioid use can affect every area of your teen’s life.** Using drugs early in life can lead to poor grades and bad relationships with friends and family. Opioid use can alter judgment and make it more likely your teen could make risky decisions like having unprotected sex or driving under the influence.<sup>1-3</sup>

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<sup>1</sup> Dahl RE. Adolescent brain development: a period of vulnerabilities and opportunities. Keynote address. *Ann N Y Acad Sci.* 2004;1021:1-22. doi:10.1196/annals.1308.001

<sup>2</sup> Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry.* 2005;62(6):593-602. doi:10.1001/archpsyc.62.6.593

<sup>3</sup> Thornberry TP, Krohn MD, eds. *Taking Stock of Delinquency - An Overview of Findings.* New York, NY: Springer Science & Business Media; 2006. //www.springer.com/us/book/9780306473647. Accessed November 7, 2017.



## II. Want to know more? Some FAQs about Opioids

### What are opioids?

There are legal opioids like prescription pain relievers and illegal opioids like heroin and illicit fentanyl.

Prescription opioids are powerful pain-reducing medications. Some prescription opioids are made directly from the opium poppy plant. Others are made by scientists in a laboratory although they have similar chemical structures.

## Heroin is an Opioid

### What is heroin?

Heroin is an addictive illegal drug made from morphine, a natural substance that is found in the seed pod of opium poppy plants in Southeast and Southwest Asia, Mexico, and Colombia. It is a type of opioid. Heroin can come in powder form or as a black sticky substance. Heroin can be injected, sniffed, snorted, or smoked.

Heroin may have many street names including Big H, Black Tar, Chiva, Hell Dust, Horse, Negra, Smack, and Thunder.



# What is the connection between prescription opioids and heroin?

Prescription pain relievers and heroin are chemically similar and produce similar effects. You can become addicted to both and overdose on both. Some people get addicted to prescription opioids and then switch to heroin. Others simply start using heroin.

In some communities, heroin is cheaper and potentially easier to get than prescription opioids, which is why some people who are addicted to prescription opioids sometimes switch. Data from 2011 showed that an estimated 4 to 6 percent who misuse prescription opioids switch to heroin<sup>4-6</sup> and about 80 percent of people who used heroin first misused prescription opioids.<sup>4-6</sup>

More recent data suggest that heroin is frequently the first opioid people use. In a study of those entering treatment for opioid use disorder, approximately one-third reported heroin as the first opioid they used regularly to get high.<sup>7</sup>

# What are the effects of heroin on the brain, body, and behavior?

Just like other opioids, heroin binds to the opioid receptors in the brain and body, causing euphoria and relieving pain. This means that the short-term and long-term effects will be similar to those experienced from prescription opioids. However, people who inject heroin can also experience collapsed veins.

Additionally, people who inject drugs increase their risk of getting HIV or hepatitis C. These diseases are passed from person to person through blood and other bodily fluids. When people share needles or other drug equipment, they can come into contact with these fluids. HIV, and less often hepatitis C, can also be spread through unprotected sex.

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<sup>4</sup> Muhuri PK, Gfroerer JC, Davies MC. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States. CBHSQ Data Rev. August 2013.

<sup>5</sup> Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The Changing Face of Heroin Use in the United States: A Retrospective Analysis of the Past 50 Years. *JAMA Psychiatry*. 2014;71(7):821-826. doi:10.1001/jamapsychiatry.2014.366.

<sup>6</sup> Carlson RG, Nahhas RW, Martins SS, Daniulaityte R. Predictors of transition to heroin use among initially non-opioid dependent illicit pharmaceutical opioid users: A natural history study. *Drug Alcohol Depend*. 2016;160:127-134. doi:10.1016/j.drugalcdep.2015.12.026.

<sup>7</sup> Cicero TJ, Ellis MS, Kasper ZA. Increased use of heroin as an initiating opioid of abuse. *Addict Behav*. 2017 Nov;74:63-66. doi: 10.1016/j.addbeh.2017.05.030. Epub 2017 May 23. PubMed PMID: 28582659. <https://www.ncbi.nlm.nih.gov/pubmed/28582659>

# What are the most commonly used prescription opioids?

Common opioid medicines include:

- hydrocodone (Vicodin®)
- oxycodone (OxyContin,® Percocet®)
- oxymorphone
- morphine (Kadian,® Avinza®)
- codeine
- fentanyl

# How do opioids affect the brain and make people feel high?

Opioids attach to and activate opioid receptors located in many areas of the brain, spinal cord, and other organs in the body, especially those involved in feelings of pain and pleasure.

When opioids attach to these receptors, they block pain signals sent from the brain to the body and release large amounts of dopamine in the brain's reward regions. Dopamine is the chemical responsible for motivating our actions and repeating pleasurable experiences. This release can strongly reinforce the act of taking the drug, making the user want to take the drug again and again despite negative consequences.

# What are the health effects of opioids?

In the short-term, opioids can relieve pain and make people feel relaxed. However, opioids can also have harmful effects, including:

- extreme drowsiness
- confusion
- nausea
- constipation
- slowed breathing

Over time, opioid use and misuse can lead to insomnia, muscle pain, heart problems, pneumonia, and addiction.

## How do people use opioids?

Prescription opioids are prescribed by doctors to treat pain and other health issues, such as controlling coughs and diarrhea. When used as prescribed and for a short time, opioids are relatively safe. But when they are misused, they can be dangerous.

### People misuse opioids by:

- taking a prescription in ways other than instructed, like taking more than prescribed or taking it more often
- getting and using prescription pills from a friend or family member, even if it's for a real medical condition
- taking prescription drugs to get high
- mixing prescription opioids with alcohol or other drugs
- crushing pills or opening capsules, dissolving the powder in water, and injecting the liquid into a vein, or snorting the powder.

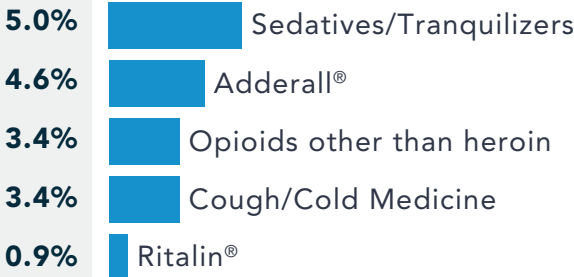
Some opioids, like heroin, aren't available by prescription. People use these drugs just to get high.



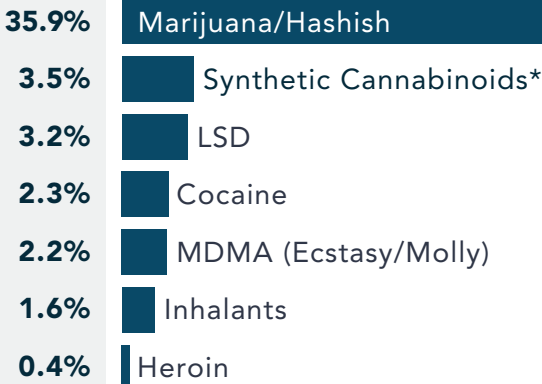
# Past-Year Misuse of Prescription/ Over-The-Counter vs. Illicit Drugs

Among 12th graders in 2018

## PRESCRIPTION/OTC



## ILLICIT DRUGS



\*Synthetic Cannabinoids are called Synthetic Marijuana in the survey.

# VICODIN® AND OXYCONTIN®



Past-year misuse of Vicodin® and OxyContin® among 12th graders has dropped dramatically in the past 15 years.

## KEY

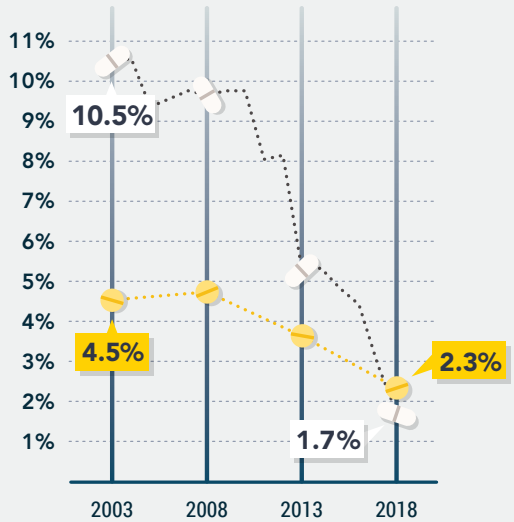


Vicodin®



OxyContin®

Source: *Monitoring the Future National Survey Results on Drug Use: 1975-2018: Overview, Key Findings on Adolescent Drug Use.*



## How many teens misuse opioids?

According to NIDA's annual Monitoring the Future Survey of 8th, 10th, and 12th graders, the use of one popular prescription opioid, Vicodin®, has been decreasing since 2009.<sup>8</sup> In 2018, 1.7 percent of 12th graders misused Vicodin. These declining numbers likely reflect the hard work of parents and local community public health experts. However, opioid misuse rates increase after the age of 18, so it is critical to talk with teens early and frequently, to reinforce these health messages as they prepare to leave home and start their adult lives. For more information, please visit NIDA's **Drug and Alcohol Use in College-Age Adults in 2017** infographic.

<sup>8</sup> Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2019). Monitoring the Future national survey results on drug use, 1975-2018: Overview, key findings on adolescent drug use. Ann Arbor: Institute for Social Research, The University of Michigan



## Why do young people use opioids?

Curiosity, peer pressure, and the desire to fit in with friends are common reasons that preteens and teens start misusing opioids. For some, opioid use begins as a way of coping with anxiety, anger, depression, or boredom. Preteens, and teens in particular, may struggle with depression and anxiety but do not recognize it or want to talk about it. Parents often assume there is nothing wrong if their children do not discuss their feelings. Being high can be a way of simply avoiding the problems and challenges of growing up. Parents, grandparents, and older siblings are models who children follow, and research suggests that family members' use of alcohol and drugs plays a strong role in whether a young person starts using drugs, such as opioids.

Addiction means a person continues to seek and take the drug despite negative consequences. All aspects of the teen environment—home, school, and community—can influence if they will try, or even become addicted to drugs.

## How can I prevent my child from misusing opioids?

There is no quick or simple solution to prevent teens from misusing opioids. However, it can be done. Research shows that parents have a big influence on their teens. So, talk openly about the effects of opioids and other drugs with your children and stay actively engaged in their lives.

To help you get started, the next section provides some key points about opioids that you can share with your kids to help them make the best decisions to avoid opioid misuse. These key points address the types of questions and comments that we receive daily from our **NIDA for Teens** website and **Drugs and Health Blog**. Following that section, all the facts, questions, and listed resources will help equip you with even more information to talk about with your teen.

## Can my teen take someone else's prescription opioids if he or she is injured?

No. It is dangerous to give your child someone else's medication, even if he or she is in real pain. You should never give your children opioids that were not prescribed for them. Doctors prescribe opioids specifically based on a person's physical and medical history, such as weight, other medical conditions, or how opioids interact with other medicines your child might be taking. Without talking to a doctor, you won't know how the opioids will affect your child or what dose should be safely given. If your child is prescribed opioids, make sure you monitor their use carefully.

## I've heard of something called fentanyl. What is that?

Fentanyl is another type of opioid that is similar to morphine. It is 50 times stronger than heroin. As a prescription, it's used to treat severe pain and is also used in surgeries. But fentanyl is also made and used illegally. It is sometimes added to heroin or to other drugs, like cocaine and methamphetamine, causing potent and unpredictable drug combinations that can lead to fatal overdose.

## How can I tell if my child has been misusing opioids?

Changes in your child's behavior—such as not brushing their hair or teeth, skipping showers, changes in mood, and challenging relationships with friends and family—can be signs that your child is misusing opioids or other drugs. It's also important to look out for changes in grades, skipping classes or missing school, loss of interest in activities or friends that used to bring enjoyment, changes in sleeping and eating habits, and getting in trouble at school or with law enforcement. These changes could all be related to drug use—or may indicate other problems.

## Can my child use opioids if she is pregnant?

Even when taken as prescribed, opioid use during pregnancy may increase the risk of miscarriage or low birth weight. It can also cause neonatal abstinence syndrome, a medical condition where the baby is born dependent on opioids and has withdrawal symptoms after being born.

If a pregnant woman tries to stop taking opioids without medical help, she can put the baby at risk. It is important for pregnant women to tell their doctor about all the medications and other drugs they are taking, or planning to take, so that the baby has a greater chance of being born healthy. If a pregnant woman is misusing opioids, there are treatments that can help her.

## What is dependence and how is it different from addiction?

Many people who take prescription opioids for pain become dependent, but that is not the same as being addicted. Dependence occurs when your body has gotten used to the drug for pain, but then you feel really sick when you stop taking the drug. If your child is prescribed opioids, you should talk with his or her doctor about how to safely stop using them.

Addiction means a person continues to seek and take the drug despite negative consequences. It is possible to become dependent on opioids without being addicted, but dependence can lead to addiction in some cases.



## Can opioid addiction be treated?

Quitting opioids can be hard, but it is possible. You can work with your child's doctor to develop customized treatment plans that can include medications and therapy. There are three FDA-approved medicines to treat opioid addiction and reduce cravings, offering options to meet individual needs. Buprenorphine and methadone are medicines that bind to the same receptors in the brain as opioids, called opioid agonists or partial agonists. Naltrexone is another medication that treats opioid addiction, but it is called an antagonist, preventing opioids from having an effect on the brain. Additionally, the Food and Drug Administration recently approved a medicine called lofexidine to help make withdrawal symptoms easier for people who are trying to stop using opioids.

While many treatment centers do not offer medication, the National Academy of Sciences recently issued a scientific report stating that opioid agonists or partial agonists are especially effective, save lives, and have better long-term outcomes than other medications or no medications at all.<sup>9</sup> A combination of medication with behavioral therapy can reinforce treatment goals, rebuild relationships with friends and family, and build healthy life skills.

## Can you overdose on opioids?

Yes. Opioid overdose can cause slowed breathing, which can cause hypoxia—too little oxygen reaching the brain. Hypoxia can have psychological and neurological effects, including coma, permanent brain damage, or death.

<sup>9</sup> National Academies of Sciences, Engineering, and Medicine. 2019. Medications for Opioid Use Disorder Save Lives. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25310>.



## Withdrawal Symptoms

Withdrawal symptoms from opioids can begin as early as a few hours after the drug was last taken and can include:

- muscle and bone pain
- sleep problems
- diarrhea and vomiting
- cold flashes with goose bumps
- uncontrollable leg movements
- severe cravings for the drug

Some people confuse withdrawal pain as the actual pain they started taking the drug for. Only a doctor can help evaluate the best approach to reducing the pain or discomfort during withdrawal.

## Can you stop an opioid overdose as it is happening?

Yes, with quick action. If you think your child has overdosed on opioids, the most important thing to do is call 911. When medical personnel arrive, they will likely administer naloxone — an FDA-approved medicine that can block the effects of opioids and rapidly reverse an overdose. Naloxone is available as an injectable liquid solution, an auto-injector, and an FDA-approved nasal spray.

Some states require doctors to write a prescription for naloxone, while others have passed laws that allow pharmacies to sell it without a personal prescription. This allows friends, family, and people in the community to keep naloxone on hand to save someone who is overdosing.

However, it is important to remember that naloxone doesn't take the place of medical care. It only works to reverse an opioid overdose in the body for 30 to 90 minutes, so it is possible for a person to still experience the effects of an overdose after naloxone wears off. Also, some opioids are stronger and might require multiple doses. Therefore, it is critical to call 911 so the patient can receive immediate attention.

People given naloxone should be observed constantly until emergency care arrives and they should be monitored for another two hours after the last naloxone dose is given to make sure breathing does not slow or stop. An overdose reversal is a key time for patients with opioid addiction to be connected with treatment for their addiction.

# What is being done to address the opioid overdose crisis?

Federal, state, and local governments, as well as advocacy organizations, researchers, and health professionals are working together to tackle this public health crisis from every angle.

## Such strategies include:

- improving access to treatment and recovery services
- promoting the use of naloxone by first responders and bystanders
- strengthening our understanding of the crisis through better public health monitoring
- developing safe and effective medications and strategies for pain management
- improving medications to treat people who are addicted to opioids
- improving prevention strategies

Researchers funded by the National Institutes of Health (NIH) are exploring better ways to prevent and treat opioid misuse. They are looking at how opioids work on brain pathways so they can develop safer opioid medications that do not have the risk of addiction. Read about the NIH HEAL<sup>SM</sup> (Helping to End Addiction Long-Term) Initiative here: <https://www.drugabuse.gov/drugs-abuse/opioids/nidas-role-in-nih-heal-initiative>.

Scientists are also developing better ways to deliver medications to the body. This includes long-lasting and implantable formulations that can deliver medication to treat opioid addiction for weeks or months, instead of having to take a pill daily or every other day.





## III. Starting the Conversation

As this guide has shown, opioid misuse can affect the health and well-being of children and teens at a critical point in their lives — when they are growing, learning, maturing, and laying the foundation for their adult years.

As a parent, your children look to you for help and guidance in working out problems and in making decisions, including the decision not to use drugs. Even if you have used drugs in the past, you can have an open conversation about the dangers. Whether or not you tell your child about your past drug use is a personal decision. But experience can better equip us to teach others by drawing on the value of past mistakes. You can explain that there is an opioid crisis in the country and that misusing opioids can have potentially harmful effects on the developing brain.

## Tips for Parents

- Be a good listener.
- Set clear expectations about drug and alcohol use, including real consequences for not following family rules.
- Help your child deal with peer pressure to use drugs.
- Get to know your child's friends and their parents.
- If concerned, have your child evaluated for mental health issues such as depression or anxiety.
- Monitor your child's whereabouts.
- Carefully monitor your child's medications.
- Do not leave unused opioids in accessible places in your home.
- Supervise teen activities.
- Talk to your child often.
- Do not ignore signs that your child is changing in negative ways.

Because opioids are available by prescription, many children and teens don't understand their danger, and even fewer recognize that heroin is an opioid. Many also do not realize that dangerous fentanyl is added to many street drugs. Misusing opioids can be harmful and can alter the course of young peoples' lives, preventing them from reaching their full potential. That's reason enough to have this difficult conversation with your children. Be certain that the discussion focuses on how much you care about your child's health.

We hope this guide encourages and helps parents to begin the dialogue and, more importantly, to keep open the channels of communication.

Want to become involved? Consider coordinating an event during National Drug and Alcohol Facts Week using free NIDA materials or contact us at [drugfacts@nida.nih.gov](mailto:drugfacts@nida.nih.gov). See <https://teens.drugabuse.gov/national-drug-facts-week>.

# IV. Other Useful Resources

There are numerous resources available, many right in your own community, where you can get information to help you talk to your children about drugs.

Some helpful sources to get such information are your local library, school, or community service organization. You may also contact the government organizations listed below.

## **National Institute on Drug Abuse (NIDA)**

NIDA, as part of the National Institutes of Health, offers a wide variety of free publications, education materials, and videos to help parents talk to their children about drug use.

### **Free resources include:**

- **Family Checkup**, (online or hard copy) that provides parents with research-based skills, such as videos with conversation tips on how to help their children make good personal choices
- **Drugs: Shatter the Myths**, a booklet that parents can give to their teens to help answer frequently asked questions about drugs and drug misuse
- **Step-by-Step Guide**, an online guide that offers guidance on what parents can do if their teen appears to be misusing drugs
- **Principles of Substance Abuse Prevention for Early Childhood**, an online report that addresses early interventions and their positive effects on development

Visit our **Parents & Educators** page for a list of other materials.

NIDA has more information about opioids and other drugs on both our **main website** (<https://www.drugabuse.gov/>) and our **NIDA for Teens** (<https://teens.drugabuse.gov/>) site. To order this and other hard copy NIDA publications, please visit [drugpubs.drugabuse.gov](http://drugpubs.drugabuse.gov).





### **National Institute on Alcohol Abuse and Alcoholism (NIAAA)**

Visit NIAAA at [niaaa.nih.gov](http://niaaa.nih.gov) for information about a variety of alcohol-related issues, which frequently intersect with other drug use problems.

### **National Institute of Mental Health (NIMH)**

NIMH at [nimh.nih.gov](http://nimh.nih.gov) provides the latest research findings and many other resources that cover information on mental health disorders and drug misuse. Drug misuse often begins while children are battling depression or anxiety.

### **Substance Abuse and Mental Health Services Administration (SAMHSA)**

SAMHSA's treatment locator can help you find a drug or alcohol treatment program near you. Visit [samhsa.gov](http://samhsa.gov) for more information about substance use disorder prevention and treatment policies, programs, and services.

### **Drug Enforcement Administration (DEA)**

Visit [dea.gov](http://dea.gov) for information about various drugs and laws related to drug use. The DEA also has a site with resources for parents, educators, and caregivers at [getsmartaboutdrugs.gov](http://getsmartaboutdrugs.gov).



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