This guide is designed specifically to help educate parents on how drugs work, what types of abuse are common, the risks of addiction for adolescents, and the addiction warning signs.
Parent Resource

CONSIDER THIS1

- 65,000 people died of drug overdose in 2016.
- Overdose is currently the leading cause of death for those under the age of 50.
- Opioid overdose increased by roughly 30% between 2016 to 2017.

THE COST OF SUBSTANCE ABUSE2

- Alcohol and Illicit Drugs cost the US economy $249 billion and $193 billion respectively.
- Cancer is expected to cost the economy $175 billion dollars in 2020.

Introduction

Few parents think of themselves as enforcement officers or drug prevention experts. However, with overdose as the leading cause of death under age 50 in the United States, being informed about substance abuse and how to deal with it may be a requirement for every parent's toolkit. This guide is designed specifically to help teach parents how drugs work, what types of abuse are common, the risks of addiction for adolescents, and the addiction warning signs.

The Brain on Drugs

Addiction is easier to understand when you grasp how the brain communicates. The brain is the body's command center. There are billions of nerve cells around the body called neurons. Neurons send and receive messages to other neurons using neurotransmitters, small messages made of different chemicals. Neurotransmitters are like text messages, sent from neuron to neuron, that report to the brain what is happening.

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1 Surgeon General Report, American Society of Clinical Oncology
2 Surgeon General Report, American Society of Clinical Oncology
Drugs alter the way these neurons communicate with each other. Whether it is alcohol, marijuana, or an opioid, all of these drugs affect the messages neurons send. Different drugs affect the communication system in different ways.

Drugs can mimic neurotransmitters with similar structures that occur naturally in the body. These types of substances, like marijuana, can "forge" messages, tricking the neurons into activating. Other drugs can "spam," or send too many messages, to a neuron. Substances like methamphetamine cause nerve cells to release too much dopamine.

Dopamine is one of the most important neurotransmitters to the reward system in the brain. Dopamine is the chemical responsible for creating feelings of pleasure. When the body feels pleasure, be it from working out or hearing a funny joke, neurons send small amounts of dopamine through the body. This reward system helps us learn actions that should be repeated. We eat because it feels good to eat.

With repeated drug use, the brain eventually adapts to the unusual pleasure messages it is receiving. This means some neurons do not let as many dopamine messages through. Some substances even kill the neurons that receive the dopamine. As a result, the brain requires more dopamine to reach the same levels of pleasure. What would once make a person feel happy may not even register after repeated drug use. Because drugs release these extraordinary amounts of neurotransmitters, users begin to depend on the substances to feel pleasure, forming habits of addiction.
THE Most Popular Drugs

With the sheer number of drugs, and even greater number of nicknames for them, it can be difficult to keep track of all the dangerous substances deserving of your vigilance. It would be impossible to create a convenient guide that covers all the illicit substances parents should watch out for and dive into great detail for how to manage each addiction. Instead, the five most common used and abused substances are listed below along with their more dangerous effects. According to the 2017 Monitoring the Future Study: Trends in the Prevalence of Various Drugs done by the National Institute of Drug Abuse (NIDA):

ALCOHOL

With 70% of people over 18 reporting using alcohol in the last year, alcohol is the most popular drug in America. Unsurprisingly, this popularity has influenced underage drinking. Almost 60% of high school seniors have abused alcohol in the last year.

Alcohol is most dangerous when consumed in high levels, but its effects can be experienced even after one drink. Over drinking can:

- Increase mood swings and depression
- Increase risky behavior and poor decision-making
- Decrease physical coordination
- Cause death from overdose

MARIJUANA

Marijuana has become a hot topic in the political landscape and been legalized in nine states as of 2018. In 2015, 45% of high school seniors reported having tried marijuana, and 6% reported using it daily. With its growing popularity in the social sphere, marijuana use is expected to increase.

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3 National Institute of Drug Abuse (NIDA); Monitoring the Future Study: Trends in Prevalence of Various Drugs (2017)
Despite the popular notion to the contrary, it is possible to become addicted to marijuana. As with many dopamine releasing drugs, marijuana addiction can feature withdrawal symptoms including anxiety and cravings. Long-term use effects include:

- Impaired learning and memory
- Risk of anxiety, psychosis, and depression
- Impaired judgement and decision-making
- Respiratory problems

**NICOTINE**

Although there is significant progress in reducing smoking among teens, nicotine still prevails. Only about 11% of high school seniors reported smoking in 2015. However, in that same year the CDC found that 1 in 4 teenagers were using e-cigarettes and vaping products. E-cigs are presented as the safer alternative to smoking, but their flavored refill canisters can contain as much nicotine as a pack of cigarettes.

Smoking has an extensive list of negative effects including lung cancer and gum disease. Nicotine addiction can cause:

- Irritability
- Cravings
- Cancer
- Depression and anxiety

**ADDERALL**

Adderall is often sought out by students for its ability to increase concentration and energy while reducing the need for sleep or food. It is primarily prescribed to those with ADHD, so it can be safe if used as prescribed. However, 7.5% of high school seniors reported abusing Adderall in the last year.
Adderall can be dangerous when taken frequently or in high doses. The withdrawal-like symptoms from Adderall include fatigue and depression with thoughts of suicide. The effects of repeated use include:

- Elevated blood pressure
- Seizures and possible stroke
- Paranoia and irritability

**PRESCRIPTION OPIOIDS**

There are several pain relief medications that are abused including OxyContin, Fentanyl, and Morphine. In 2016, the US Department of Health and Human Services reported that 3.6% of people aged 12 to 17 reported abusing opioids. That number is double for people aged 18 to 25.

The National Survey on Drug Use and Health reports that 42,249 deaths in 2016 were the result of opioid overdose. Prescribed medications are especially dangerous given how often people overdose on them. Opioids rewire the brain and depress the central nervous system (see The Brain on Drugs). The effects that opioids have include:

- A slow pulse and low blood pressure.
- Poor coordination.
- Nausea and vomiting.
- Feelings of confusion and disorientation.

For more information about these substances and more, please visit: [www.projectknow.com/research/common-abused-drugs-in-teens/](http://www.projectknow.com/research/common-abused-drugs-in-teens/)
Risk Factors

Many of the early warning signs for drug use in adolescence are related to elevated levels of social and environmental stress. Because adolescence is stressful on all those that go through it, it may seem difficult to assess what factors relate to future drug abuse. If parents take an honest evaluation of their environment, they may recognize a few of the criteria that increase the risk of adolescent drug use.

ENVIRONMENTAL

- Adolescents that grow up in households with parents that abuse substances and alcohol are more likely to develop addictive habits later.
- Victims of physical and emotional abuse are more likely to try drugs.
- Peer pressure is increasingly influential on adolescents as they develop. Friends and peers that use drugs can convince other to use them, even those with no previous risk factors.

BIOLOGICAL

- Genetics can be a major factor in addiction. It is estimated that genetic factors may account for 40 to 60 percent of vulnerability to addiction.
- Sex and mental disorders also affect risk. Men are more likely than women to use illicit drugs; however, both sexes are equally as likely to become addicted.

HISTORY

- Early usage of drugs has been linked to increasing the risk of addiction. Generally, the earlier a child uses drugs, the more likely they are to use them later in life.
- Studies show use of prescription drugs following an injury that requires surgical intervention puts teens at risk of exposure to opioids and future drug misuse. These types of surgeries are especially common with student athletes.

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4 National Institute of Drug Abuse; Preventing Drug Use among Children and Adolescents
Signs of Addiction

Many of the signs of addiction can be easily mistaken as normal parts of puberty and "teens being teens". There are several common signs that when observed alone are not troubling, but when observed together may indicate a family member struggling to cope with the effects drugs have.

These signs include:

- Mood swings and erratic emotions
- Missing classes or skipping school entirely
- Disappearing for long periods of time
- Burns on fingers or the smell of smoke on clothing
- Turbulent relationships with friends and family
- A lack of hygiene and personal upkeep

Understanding the risks can help parents identify these symptoms in their loved ones. If you believe your child is at risk or exhibits these symptoms, confronting them may be the appropriate next step.
Prevention: Know the Facts

The best way to fix a problem is to prevent it from ever happening. The following items are preventative steps parents can take to better protect their children from the risks that drugs present.

60% of drugs teenagers start with come from friends and family.
- Store alcohol and medications in a safe location away from your child.
- Dispose of unused prescription medication at local medication drop boxes: DisposeMyMeds.org

First ingestion of drugs is usually age 10 to 12.
- Discuss risks of substance abuse early.
- Know where they are and who they are with.
- Limit technology after bedtime - Sleep deprivation leads to depression and anxiety

Peer pressure is one of the leading reasons adolescents try drugs.
- Practice drug refusal strategies.
- Create a plan with your child to pick them up from bad situations.

30% of teen addiction occurs after dental procedures or sports injury requiring surgical intervention.
- Ask your doctor about non-opioid medication to reduce risks of addiction.
- Keep track of the medication and administer it to your teen as prescribed.

You are your child's first line of support and defense.
- Encourage your child to come to you with problems and keep an open dialogue.
- Be involved with their friends and extracurricular activities.

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5 (U.S. Dept. of Health & Human Services, U.S. Dept. of Justice, National Center for Health Statistics, Substance Abuse and Mental Health Services Administration)
Sources / Additional Resources

Facts About Drugs

- Drugs most common with teens: https://www.projectknow.com/research/common-abused-drugs-in-teens/
- Alcohol driving deaths: https://www.iii.org/fact-statistic/facts-statistics-alcohol-impaired-driving
- Drug Facts from NIDA: https://teens.drugabuse.gov/drug-facts
- E-cigs: https://news.heart.org/cdc-one-in-four-teens-are-vaping/

The Brain and Addiction


Risk Factors

- Post-operation opioid use: https://www.medicalnewstoday.com/articles/320559.php
- Opioid use linked to pre-injury marijuana use: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4695276/
Signs of Addiction

- SAMHSA study about perceived risk: https://www.samhsa.gov/data/sites/default/files/NSDUH-DR-FRR4-2014%20%281%29/NSDUH-DR-FRR4-2014.pdf
- Prevention as the Best Option: https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/preventing-drug-abuse-best-strategy
- Family Check-Up: https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/familycheckup_8_15.pdf
- Dropbox Locations: https://apps.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e2s1

Addiction Prevention Coalition

Pursuing freedom & healing from addiction. At all costs.

For more information about the Addiction Prevention Coalition, visit www.apcbham.org.
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