

Prescription Drug Misuse in Adolescents

On August 16, 2017, federal Centers for Disease Control and Prevention released alarming figures on teen drug overdoses. Drug overdose deaths for adolescents ages 15-19 doubled from 1999 to 2015. Dr. Christopher Ruhm of the University of Virginia explained that the research points to opioid analgesics, heroin and fentanyl as being the main culprits. CDC also reports that the majority of the overdoses were unintentional. Researchers like Dr. Ruhm believe the figures will be much higher in 2016 and 2017.

According to NIDA, prescription drugs are the third mostly commonly abused drugs among adolescents 14 and older, after alcohol and marijuana. 18% of 12th graders reported that they misused prescription drugs in their life time. Another study by the National Institute on Drug Abuse found that 11.4% of people age 12 to 25 used prescription drugs non-medically in the past year.

Prescription drugs are misused in a variety of ways. Taking someone else's medication is considered misuse. Taking a prescription medication in a way other than prescribed or to get high is misuse. Mixing prescription drugs with other substances like alcohol is also misuse and can be very dangerous.

Three types of commonly misused prescription drugs:

Stimulants – often used to treat attention-deficit hyperactivity disorder (ADHD)

Opioids –used to relieve pain

Depressants – used to treat anxiety and sleep disorders

When prescription drugs are misused, there can be harmful effects on the body and the brain. The effects vary based on the type of drug being misused.

Effects on the body and brain:

Stimulants – can cause an increase in body temperature and heart rate. Can also make the user feel paranoid. Stimulants cause dopamine and norepinephrine to buildup in the brain.

Opioids – can cause drowsiness, confusion, nausea, respiratory depression and may induce euphoria. Opioid medications bind to opioid receptors, which affect pleasure and pain levels. Opioid misuse can permanently damage the opioid receptors making it very difficult to treat pain.

Depressants – can cause slurred speech, shallow breathing, drowsiness, disorientation, lack of coordination and seizures. Depressants cause an increase in neurotransmitter, gamma-aminobutyric acid (GABA), which increases the inhibition of brain activity and makes the user feel calm.

Prescription drugs can have long lasting effects on the brain and can lead to addiction. When prescription drugs are taken at high doses and without the supervision of a physician and pharmacist, dependence may occur and the brain's reward system may be altered. The impact can be particularly



1 IN 6 TEENAGERS
ADMIT TO TAKING PRESCRIPTION DRUGS TO
GET HIGH OR CHANGE THEIR MOOD

(drugfree.org)

harmful on the developing brain. The pre-frontal cortex, which helps us strategize and control impulses, is still developing in adolescence. The developing brain is vulnerable to addiction, as the neural pathways are not completely hardwired until after adolescence. The brain adapts to higher doses of a drug which causes the user to need larger and larger amounts of a drug to get the same initial effects, also known as tolerance. A user may also begin using harder drugs like heroin or fentanyl to get high for a lower cost. If the drug use is ceased, withdrawal systems are likely to occur.

Youth who are misusing drugs may withdraw from family, friends, school and activities they once enjoyed. Their health may also decline as a result of the misuse. Pay attention to changes in behavior and physical symptoms of prescription drug misuse. If you believe your son or daughter is misusing prescription drugs, contact your physician.

What you can do:

Prevention, early intervention, and education are key to protecting adolescents from accidental overdoses and prescription misuse.

- Monitor Internet Use: the internet is making it easier for youth to access drugs and to get more information on how to get high. Monitor the websites youth are visiting and social media activity to prevent substance misuse.
- Review your medicine cabinet regularly and lock up medications. Participate in drug take-back programs if you have expired or unused medications.
- Educate: talk to your teen about the dangers of prescription drugs.
- Ask teens what they are experiencing at school and at friends' homes.
- Ask a pharmacist or physician if you have any questions about medications being prescribed.
- Set a positive example

Resources:

<http://www.cbsnews.com/news/more-than-one-third-americans-prescribed-opioids-in-2015/>

<https://teens.drugabuse.gov/drug-facts/prescription-drugs>

<https://www.nbcnews.com/https://www.nbcnews.com/storyline/americas-heroin-epidemic/teen-drug-overdoses-doubled-1999-2015-cdc-reveals-n793006>

https://www.dea.gov/pr/multimedia-library/publications/prescription_for_disaster_english.pdf

<https://www.samhsa.gov/homelessness-programs-resources/hpr-resources/teen-prescription-drug-misuse-abuse>