

# Heads Up: Real News About Drugs and Your Body

## Lessons and Reproducibles Inside This Compilation:

**Drug Abuse and Impairment**  
Page 1

**The Truth About Hydrocodone**  
Page 3

**Teen Health: Talking With Your Doctor**  
Page 5

**Teens and Decision Making**  
Page 7

To order additional copies of this Heads Up Teacher Edition at no charge, call 800-729-6686 and refer to NCADI XXXXXX-XXXX.

For the accompanying Student Edition, refer to NCADI XXXX-XXXX.

Heads Up compilations are from Scholastic and the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services. These compilations are printed by the National Institute on Drug Abuse. The photographs may not be removed from the program and reproduced or resold. The photographs are rights managed material. This compilation is in the public domain and may be reproduced in its entirety without permission. Citation of the source is appreciated. NIH Publication No. XXXXXX-XXXX. Printed August 2008.

## Drug Abuse and Impairment

### Dear Teacher:

As an educator, you know that the choices teens make can have profound effects, both immediate and long-term. You also know how important it is for your students to function to their full ability, both inside the classroom and beyond.

This latest installment of *Heads Up* from the National Institute on Drug Abuse and Scholastic alerts students to important information on how *impairment* from drug abuse can affect a wide range of one's abilities and have far-reaching consequences. There's also new information on the dangers

of impairment and "drugged driving," an especially serious issue for teens.

I urge you to share this *Heads Up* article with your students, and thank you for working with NIDA to bring facts about drug abuse and real-world consequences to your class.

Sincerely,

Nora D. Volkow, M.D.  
Director of NIDA



## Lesson Plan & Reproducible

**Preparation:** Make copies of the activity reproducible (other side of this page) for each student.

**OBJECTIVE** Students will understand: how drug abuse impairs one's thinking and behavior; what some of the consequences of impairment are; what the dangers of "drugged driving" are.

### NATIONAL SCIENCE EDUCATION STANDARDS

Life Work; Self-Regulation; Thinking and Reasoning

### WHAT YOU WILL DO

- Introduce the topic of *impairment* by asking students to discuss the *consequences* of drug abuse. Ask students what they think impairment from drug abuse means, and why it can lead to serious consequences.
- Have students read the article "Out of It." When they have finished, begin a discussion by asking, *What are short-term and long-term consequences that can be caused*

*by drug abuse? How can impairment from drug abuse lead to these consequences?*

- After the discussion, have students complete the reproducible. When they have finished, reveal the correct answers.
- Wrap up the lesson by discussing with students: *How would you respond to someone who says, "As long as you're not addicted to drugs, or don't overdose, drugs can't cause much harm"?*

### ANSWERS TO STUDENT ACTIVITY REPRODUCIBLE:

1. c; 2. e; 3. b; 4. d; 5. e; 6. b; 7. a; 8. c; 9. b; 10. a.

### ANSWERS TO STUDENT MAGAZINE QUESTIONS:

Vocabulary: 1. c; 2. b; 3. d; 4. e; 5. a;

Reading Comprehension: 1. b; 2. e; 3. c; 4. a.

For printable past and current articles in the **HEADS UP** series, as well as activities and teaching support, go to [www.drugabuse.gov/parent-teacher.html](http://www.drugabuse.gov/parent-teacher.html) or [www.scholastic.com/HEADSUP](http://www.scholastic.com/HEADSUP).

## What Do You Know About Impairment From Drug Abuse?

Answer the questions below to find out what you know about drug abuse, impairment, and the dangerous consequences of “drugged driving.” For each question, fill in the circle next to the correct answer.

- Which of the following health problems is not related to drug abuse?**
  - liver dysfunction
  - cancer
  - psoriasis
  - infectious diseases such as HIV/AIDS
  - heart disease
- Drug use can affect:**
  - memory.
  - moods.
  - judgment.
  - learning.
  - all of the above.
- “Diminished ability” best describes:**
  - the chemical process by which drugs enter the bloodstream
  - impairment from drug abuse
  - lack of potency in a drug
  - engine trouble
- What is the number-one cause of death among people ages 15–20?**
  - measles
  - rheumatic fever
  - muscular dystrophy
  - motor-vehicle accidents
- All drugs of abuse act on a person’s brain and can impair a wide range of abilities, including:**
  - how one perceives something.
  - the ability to think clearly and make judgments.
  - the ability to pay attention, to focus, and to respond.
  - the ability to maintain physical balance and coordination.
  - all of the above.
- The negative effects of impairment happen only when drugs are used in high doses or after prolonged use, not after only one use.**
  - true
  - false
- The most common illegal drug found in impaired drivers and crash victims is marijuana.**
  - true
  - false
- In a 2006 survey, what percentage of high-school seniors reported driving under the influence of marijuana?**
  - 2.5%
  - 26.7%
  - 10.6%
  - 17.3%
- When using drugs, you can respond more quickly to situations.**
  - true
  - false
- When impaired, a person can act in ways he or she wouldn’t normally act if not impaired, such as getting involved in dangerous social situations.**
  - true
  - false

# The Truth About Hydrocodone



— A message from Dr. Nora D. Volkow,  
Director of NIDA

## Dear Teacher:

While there is good news from the most recent Monitoring the Future Study showing the steady decline in the use of illicit drugs by teens over the past six years, abuse of prescription pain relievers like Vicodin® and OxyContin® remains troublingly high. This latest installment of *Heads Up* from the National Institute on Drug Abuse and Scholastic provides important information about hydrocodone, the principal ingredient in Vicodin®, and alerts students to the dangers of abusing a wide range of prescription medications.

I urge you to share this *Heads Up* article with your students, and thank you for working with NIDA to bring the facts about hydrocodone abuse and its serious consequences to your class.

Sincerely,

Nora D. Volkow, M.D.  
Director of NIDA



## In This Installment

- Important information about the prescription pain reliever hydrocodone.
- Consequences related to abuse of hydrocodone, especially for teens.
- Dangers of abusing other prescription medications like OxyContin®.

## Assessment Tools

Use the Student Activity Reproducible on the back of this page as an assessment quiz to determine what your students have learned about hydrocodone, its risks, and the abuse of other prescription drugs.

## More Information

For more information on prescription drug abuse and addiction, go to:

[www.drugabuse.gov/researchreports/prescription/prescription.html](http://www.drugabuse.gov/researchreports/prescription/prescription.html)

For more facts about drugs and the body, visit:

[www.scholastic.com/headsup](http://www.scholastic.com/headsup) and  
[www.teens.drugabuse.gov](http://www.teens.drugabuse.gov)

For “Monitoring the Future” survey results:

[www.monitoringthefuture.org](http://www.monitoringthefuture.org)

## Lesson Plan & Reproducible

**Preparation:** Make copies of the activity reproducible (on the other side of this page) for each student.

**OBJECTIVES** Students will learn about hydrocodone and the risks associated with its abuse; they will also learn about the dangers of abusing other prescription medications.

**CONNECTIONS TO NATIONAL STANDARDS** Life Work; Self-Regulation; Thinking and Reasoning

### WHAT YOU WILL DO

- Introduce the topic of *hydrocodone abuse* by asking students if they have ever heard of Vicodin® or OxyContin®, or know what they are used for. Discuss some of the beneficial uses of pain relievers, then ask students what they think *abuse* of hydrocodone means and why it can lead to serious consequences.
- Have students read the article “The Lowdown on Hydrocodone.” Begin a discussion by asking, *What kinds of problems can arise when medications are taken*

*improperly or by people other than those for whom they were prescribed? What are the dangers of mixing prescription medications with alcohol or other drugs?*

- After the discussion, have students complete the reproducible again. When they have finished, reveal the correct answers.
- Wrap up the lesson by discussing with students: *How would you respond to someone who says, “All prescription drugs come from a doctor, so they must be legal—and safe?”*

### ANSWERS TO STUDENT ACTIVITY REPRODUCIBLE:

1. b; 2. c; 3. d; 4. c; 5. b; 6. e; 7. d;  
8. b; 9. b; 10. a.

### ANSWERS TO STUDENT MAGAZINE QUESTIONS:

- Vocabulary: 1. c; 2. a; 3. b; 4. d.  
Reading Comprehension: 1. c; 2. d; 3. b;  
4. a; 5. b.

For printable past and current articles in the **HEADS UP** series, as well as activities and teaching support, go to [www.drugabuse.gov/parent-teacher.html](http://www.drugabuse.gov/parent-teacher.html) or [www.scholastic.com/HEADSUP](http://www.scholastic.com/HEADSUP).

## What Do You Know About Hydrocodone?

Answer the questions below to find out what you know about hydrocodone and other commonly abused prescription drugs.

- Hydrocodone is similar in potency to**
  - aspirin.
  - morphine.
  - antihistamines.
  - cough syrup.
  - allergy medicine.
- Which is not a brand name for hydrocodone?**
  - Vicodin<sup>®</sup>
  - Anexsia<sup>®</sup>
  - OxyContin<sup>®</sup>
  - Lorcet<sup>®</sup>
  - Norco<sup>®</sup>
- As an opioid, hydrocodone is**
  - extremely addictive.
  - able to slow down one's breathing.
  - particularly dangerous with alcohol.
  - all of the above
- Hydrocodone should be taken**
  - whenever you feel pain.
  - at least once a day.
  - under the close supervision of a doctor.
  - only if you are 18.
  - all of the above
- What ratio of high school seniors abused Vicodin<sup>®</sup> in 2006?**
  - 1 out of 3
  - 1 out of 10
  - 1 out of 17
  - 1 out of 40
- What key structure of the brain is involved in reward, motivation, and addiction?**
  - amygdala
  - hippocampus
  - cerebellum
  - medulla oblongata
  - nucleus acumbens
- For what health conditions are benzodiazepines prescribed?**
  - anxiety
  - panic attacks
  - acute stress reactions
  - all of the above
- For what health conditions are stimulants prescribed?**
  - fever
  - attention-deficit hyperactivity disorder
  - bronchitis
  - measles
  - the common cold
- Since prescription medication is prescribed by a doctor, it is automatically safer than illicit street drugs.**
  - true
  - false
- It is illegal to use or sell drugs prescribed for someone else.**
  - true
  - false

# Teen Health: Talking with Your Doctor

— A message from Dr. Nora D. Volkow,  
Director of NIDA



## In This Installment

- Important information for teens on talking about personal health issues and drug abuse with doctors and other health-care professionals
- Guidelines for teens on recording personal health information
- Resources for teens in need of help with a drug problem

## Reproducible

Use the Student Activity Reproducible on the back of this page as a guideline for students to create their own health journals.

## More Information

- Downloadable teen health questionnaire:  
[www.ama-assn.org/ama/pub/category/1980.html](http://www.ama-assn.org/ama/pub/category/1980.html)
- Transcript of “Drug Facts Chat Day” questions and answers:  
[www.drugabuse.gov/chat/2007](http://www.drugabuse.gov/chat/2007)
- National Suicide Prevention Lifeline:  
**1-800-273-TALK**
- Drug treatment centers in your area:  
[www.findtreatment.samhsa.gov](http://www.findtreatment.samhsa.gov)  
**1-800-662-HELP**
- More facts about drugs and your body:  
[www.scholastic.com/headsup](http://www.scholastic.com/headsup)  
[www.teens.drugabuse.gov](http://www.teens.drugabuse.gov)

## Dear Teacher:

As you know, life can get pretty complicated for teens given the range of physical and emotional changes they go through. Getting teens to talk about what’s going on with them, especially with a doctor or another health-care professional, is crucial to keeping them healthy and safe from substance abuse.

This latest installment of *Heads Up* from the National Institute on Drug Abuse (NIDA) and Scholastic provides important information for teens on how to talk to doctors about sensitive medical and emotional issues, and to establish positive patterns for dealing with health issues in the future.

Talking with doctors and health-care professionals is crucial for teens dealing with a drug problem, and helps those who are not abusing drugs from starting. I urge you to share this *Heads Up* article with your students, and I thank you for working with NIDA to bring this important information about teen health to your class.

Sincerely,

Nora D. Volkow, M.D.  
Director of NIDA



## Lesson Plan & Reproducible

**PREPARATION** Make copies of the activity reproducible (on the other side of this page) for each student.

**OBJECTIVE** Students will learn that taking control of their own health includes developing effective relationships with doctors and other health-care professionals.

**CONNECTIONS TO NATIONAL STANDARDS** Life Work; Self-Regulation; Thinking and Reasoning

### WHAT YOU WILL DO

- Introduce the topic of “talking with your doctor” by asking students to discuss a range of health-care issues that teens can face, such as acne, weight issues, eating disorders, smoking, drinking, drug abuse, depression, teen sex, and physical and emotional changes.
- Have students read the article “Talking With Your Doctor,” then meet in small groups to discuss: *What kinds of health issues are the most difficult to talk about and why? What benefits could there be in talking*

*to a doctor about these concerns?* Discuss responses together as a class.

- After the discussion, hand out the reproducible. Review it with students and encourage them to start their own health journals to keep track of health issues.
- Refer students to the downloadable teen health questionnaire (see at left under “More Information”). The questions on this form can give teens additional ideas for information to keep track of in their journals.
- Encourage teens to talk with their doctors and other health-care professionals about their health issues.

### ANSWERS TO “TEST YOURSELF” STATEMENTS IN THE STUDENT MAGAZINE:

1. True; 2. False; 3. False; 4. True; 5. True.

For printable past and current articles in the **HEADS UP** series, as well as activities and teaching support, go to [www.drugabuse.gov/parent-teacher.html](http://www.drugabuse.gov/parent-teacher.html) or [www.scholastic.com/HEADSUP](http://www.scholastic.com/HEADSUP).

Name \_\_\_\_\_

Date \_\_\_\_\_

## Creating a Personal Health Journal

**F**ace it: As a teenager, you're going through more changes now than at any other period in your life outside of infancy. A personal health journal is a great way to keep track of all that's going on with you as you learn more about yourself and your health.

A health journal is great for recording things like:

- what's happening with your body, e.g., how you are feeling, symptoms, body changes.
- questions and/or concerns you have about your health.
- questions and/or concerns you have about health issues, such as drug abuse, alcohol and tobacco, and teen sex.
- your moods, feelings, and thoughts, and how you think they might be connected to your health.

While your journal is personal and private, it's helpful to refer to it to share facts when you visit your doctor or other health-care professionals. The more information you give your doctor, the better he or she will be able to help you. Also, as a patient, you have a right to ask questions that concern you; referring to a journal is a great way to cover your concerns.

### Tips to Get You Started

**GET A NOTEBOOK THAT SUITS YOU:** Choose a notebook that you can carry comfortably. You might want to bring the journal to medical appointments to refer to when you talk with your doctor, or to use for taking notes during your visit. The journal can be especially helpful if you move, change doctors, or are hospitalized for any reason.

**COMPILE YOUR VITALS:** Write down as much of your medical history as you know. Ask your family and/or doctor for anything you're not sure about. Write down any medications/drugs you are currently taking, allergies, and any illnesses in your immediate family. There's a helpful form you can download at [www.ama-assn.org/ama/upload/mm/39/periodic.pdf](http://www.ama-assn.org/ama/upload/mm/39/periodic.pdf), which you can fill out and use for getting down the basics.

**GET IT OUT:** Use the journal to record any questions and concerns about health issues, such as alcohol, tobacco, drugs, physical development, sex, eating or weight issues. Also write down any emotional issues you may be dealing with, such as problems at school, difficulties with family and friends, and anything you're concerned about.

**NOTE CONNECTIONS** between your health and your feelings.

**UPDATE YOUR JOURNAL REGULARLY:** Make sure you date your entries and also note the time of day.

**KEEP TRACK** of upcoming health appointments as well as follow-up doctor instructions. Use your journal to make notes of discussions with and advice from your doctor.

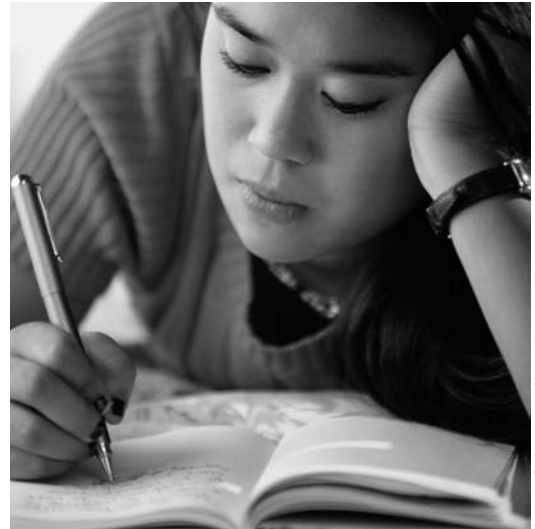


Photo: © Photodisc/Alamy.

# Teens and Decision Making



## Dear Teacher:

— A message from Dr. Nora D. Volkow,  
Director of NIDA

### In This Installment

- The latest science on:
- How decisions happen differently in the teen brain versus the adult brain
  - Why emotions have an edge over logic in teen decision making
  - How teens can “shape” their brains by choices and actions

### More Information

- For facts about drugs and the body, visit [www.scholastic.com/headsup](http://www.scholastic.com/headsup) and [www.teens.drugabuse.gov](http://www.teens.drugabuse.gov)
- For help with a drug problem, go to [www.findtreatment.samhsa.gov](http://www.findtreatment.samhsa.gov), or call 1-800-662-HELP

As a teacher of teens, you’re aware that your students are going through important developmental stages as they mature into accomplished, independent adults. During this time, it is critical for them to understand the concept that *different areas of the brain mature at different rates*, a fact that has profound functional and behavioral implications.

This latest installment of *Heads Up* reports on important research, which shows that the teen brain is “under construction”—and how this fact impacts decision making. Students will gain insight into how rushed decisions—acting quickly before thinking something through—result from the influence of feelings and emotions (rooted in the more mature limbic system of teens) over *logic* (rooted in the yet-to-mature prefrontal cortex).

The information within this issue can help teens see the value of taking a moment to think before they act as a means to making smarter and more rational decisions. These steps can help protect them against making “bad” decisions, such as using drugs, alcohol, and tobacco, all of which carry serious risks of health and other consequences.

I urge you to share this important article with your students, and hope you will use the thought-provoking activities below to help your students apply what they’ve learned in their daily lives.

Sincerely,

Nora D. Volkow, M.D.  
Director of NIDA



## Lesson Plan & Activities

### NATIONAL STANDARDS

**Science (NSES, NRC):** Life Science: Regulation and Behavior; Science in Personal and Social Perspectives: Risks and Benefits

**Language Arts (IRA/NCTE):** Evaluation Strategies; Evaluating Data

### KEY CONCEPTS

Recent scientific discoveries show that while one’s brain reaches maximum size somewhere between ages 12 and 14, development continues all the way through one’s early twenties. A key area of development is the **prefrontal cortex**, the brain region responsible for planning and sizing up risks and rewards. This area is not fully matured in adolescents—as a result, the faster-maturing **limbic system**, the emotional control center, gains an edge during decision making.

### BEFORE READING

- Have students brainstorm examples of decisions that a person might make. Ask them to identify **emotional** versus **logical** aspects of each decision.

### COMPREHENSION EXERCISE

- Use the reproducible on the back of this page to reinforce key information presented in the article.

### CRITICAL THINKING

- How might the science of adolescent brain development explain the fact that teens can be more influenced by the immediate emotional rewards of a choice, and less concerned with consequences—even though they may logically recognize these consequences?
- How is synaptic pruning affected by choices and actions?

### DISCUSSION QUESTION

- When faced with a spur-of-the-moment decision, why can pausing for a moment make a difference?

### WRITING PROMPT

- Have students list choices and behaviors they find challenging and rewarding, and identify the desired short- and long-term benefits of each.

ANSWERS TO REPRODUCIBLE: 1. teens; 2. brain; 3. neurons, neurotransmitters; 4. prefrontal cortex; 5. axons, dendrites; 6. synapse; 7. b; 8. a; 9. a; 10. b; 11. a. 12. a; 13. c. ANSWERS TO STUDENT MAGAZINE: 1. d; 2. b; 3. a; 4. c; 5. e.

For printable past and current articles in the **HEADS UP** series, as well as activities and teaching support, go to [www.drugabuse.gov/parent-teacher.html](http://www.drugabuse.gov/parent-teacher.html) or [www.scholastic.com/HEADSUP](http://www.scholastic.com/HEADSUP).

## Teens and Decision Making: A Quiz

Use what you've learned from reading the article to answer the questions below.

### Fill in the Blank

1. Acting before thinking something through happens more often in \_\_\_\_\_ than in adults.
2. Decisions stem from a series of events in the \_\_\_\_\_, which happen almost instantaneously.
3. Specialized cells called \_\_\_\_\_ talk with each other by way of electrochemical impulses and chemical messengers called \_\_\_\_\_.
4. Since the limbic system matures earlier than the \_\_\_\_\_, it is more likely to gain an upper hand in decision making. This imbalance helps to explain a teen's inclination to rush decisions.
5. Inside the brain, information travels through a network of neurons, which have thread-like fibers called \_\_\_\_\_ and branch-like structures called \_\_\_\_\_.
6. A \_\_\_\_\_ is the small space between an axon and a dendrite where information is exchanged.

### True or False

7. The brain reaches its maximum size between ages 5 and 7.  
(A) True    (B) False
8. Brain development continues through a person's early twenties.  
(A) True    (B) False
9. Myelination boosts the brain's efficiency because it increases the speed of a signal traveling down an axon by up to 100 times.  
(A) True    (B) False
10. Synaptic pruning increases the number of synapses.  
(A) True    (B) False
11. Teens have the potential, through their choices and the behaviors they engage in, to shape their own brain development.  
(A) True    (B) False

### Multiple Choice

12. The prefrontal cortex, a key brain region located directly behind your forehead, is an important control center for:  
(A) thinking ahead and sizing up risks and rewards.  
(B) coordinating motor responses and keeping your balance.  
(C) mounting an emotional response to stimuli.  
(D) responding to loud noises.
13. The limbic system, a part of the brain that matures earlier than the prefrontal cortex, plays a central role in:  
(A) sports.  
(B) speaking foreign languages.  
(C) emotional responses.  
(D) thinking ahead.