

## Prenatal Exposure to Drugs or Alcohol



**Note:** If you have the Realityworks *Understanding Prenatal Drug Exposure* curriculum and demonstrator, or the *Understanding Prenatal Alcohol Exposure* curriculum and manikin, use those in place of this lesson.

### Lesson Overview

This lesson discusses Fetal Alcohol Spectrum Disorders (FASD) as well as the effects of alcohol and drug use on a fetus and newborn baby; describes the impact of those disorders on individuals in their infancy, school years, and adulthood; lists the financial, family, and social costs of prenatal drug and alcohol exposure, and stresses the importance of abstaining from drinking any type or amount of alcohol during pregnancy and of not using any type of drug in any amount during pregnancy, unless under the supervision of a physician.

### Key Points

- Drug or alcohol use during pregnancy has devastating effects on the fetus and the newborn baby.
- Drug and alcohol use during pregnancy has long-term effects on individuals in their infancy, school years, and adulthood; and impacts families and society financially and socially.
- It is critical to abstain from any type of alcohol use during pregnancy and from any drug use unless under the supervision of a physician.

### Lesson Objectives

After completing this lesson, students should be able to:

- Gain awareness of the facts and concepts surrounding

prenatal alcohol or drug exposure.

- Document their initial knowledge about prenatal alcohol or drug exposure before the start of the lesson.
- Define FAS and FASD.
- Describe how nutrients, oxygen, and other substances (e.g., alcohol or drugs) reach a developing fetus.
- List the effects of prenatal alcohol or drug exposure.
- Explain what happens developmentally when a pregnant woman and her fetus consume alcohol or drugs.
- Identify the long-term consequences of prenatal alcohol or drug exposure for individuals, families, and society.
- Identify guidelines for FASD prevention.
- Identify resources for additional information about prenatal alcohol exposure and its consequences.
- Determine strategies to help a family or mother when prenatal alcohol exposure is a possibility, or when FAS has been diagnosed by a medical professional.
- Summarize important information from the lesson.

### Instructor Information

At any time during pregnancy, a woman's alcohol consumption can harm her growing fetus.<sup>1</sup> The broad range of birth defects that may result from prenatal alcohol exposure is termed Fetal Alcohol Spectrum Disorders (FASD). The most severe of these birth defects is Fetal Alcohol Syndrome (FAS).

A woman's use of alcohol during pregnancy can affect her child physically and mentally throughout his or her life, and can lead to behavioral and/or learning prob-

lems that may become especially evident when the child attends school.<sup>1</sup> The effects of prenatal alcohol exposure may be disabling and have lifelong implications for individuals, families, and society. Any form of FASD is 100 percent preventable.<sup>1,3</sup> Research is clear that completely abstaining from alcohol use during pregnancy prevents all FASD conditions. If a woman does not drink alcohol at any time during her pregnancy, these birth defects will not occur.

## Definitions

### Fetal Alcohol Spectrum Disorders

**(FASD):** Umbrella term for a spectrum of disorders caused by prenatal alcohol exposure that includes physical, mental, behavioral, and learning disabilities.<sup>1</sup>

### Fetal Alcohol Syndrome (FAS):

Abnormal facial features, growth deficiency, and central nervous system problems resulting from prenatal alcohol exposure.<sup>1,4</sup> It is the most severe form of FASD.<sup>1</sup>

## FAS and FASD

FAS has three major diagnostic criteria:<sup>1</sup>

1. Distinctive, abnormal facial features
2. Growth deficiencies
3. Central nervous system problems (structural and/or functional)

### Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
<b>FOCUS: What Do You Know?</b>	<ul style="list-style-type: none"> <li>• <i>Understanding Prenatal Alcohol and Drug Exposure Lesson Pre-test.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Print or photocopy the <i>Understanding Prenatal Alcohol and Drug Exposure Lesson Pre-test</i> for each student.</li> </ul>	5 minutes
<b>LEARN: Facts and Statistics About Prenatal Alcohol and Drug Exposure</b>	<ul style="list-style-type: none"> <li>• <i>Facts and statistics about Prenatal Alcohol and Drug Exposure</i> PowerPoint presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare to present the <i>Facts and statistics about Prenatal Alcohol and Drug Exposure</i> PowerPoint presentation</li> </ul>	25 minutes
<b>SUMMARIZE: Review</b>	<ul style="list-style-type: none"> <li>• Understanding Prenatal Alcohol and Drug Exposure Review Questions</li> </ul>	<ul style="list-style-type: none"> <li>• Class review</li> </ul>	5 minutes

### Educational Standards Supported

**National Family and Consumer Science Standards:** 4.1, 4.2, 4.5, 4.6., 6.1, 7.1, 7.2, 7.3, 7.4, 7.5, 12.1, 12.2, 12.3, 13.1, 13.2, 13.3, 3.4, 13.5, 13.6, 15.1,15.2.5.3

**National Health Standards:** 1.12.5-8; 2.12.1-2, 2.12.10; 3.12.4; 5.12.1-2, 5.12.4-7; 6.12.1-3; 7.12.1-3; 8.12.1-4

FAS is the most severe of the Fetal Alcohol Spectrum Disorders (FASD).<sup>1</sup> Behavioral and cognitive problems associated with FAS may include reduced cognitive ability, learning disabilities, attention deficits, hyperactivity, poor impulse control, and social, language, and memory deficits.<sup>6</sup> The effects of prenatal alcohol exposure are not genetic or hereditary.<sup>7</sup> An individual with a disorder on the fetal alcohol spectrum cannot pass the disorder on to a child. The sole cause of FASD is alcohol consumption during pregnancy.

Note: As you teach and discuss the topic of prenatal alcohol exposure, keep in mind . . .

- Alcohol use is widespread. Some participants may be using alcohol already, and some may have a friend or family member who has a drinking problem.
- Alcoholism is a disease that can result in denial and shame.
- Foster a supportive and constructive atmosphere in the classroom. Focus on our *individual responsibility* for our choices in order to avoid the possible perception of blame, shame, and the judging of others.
- Emphasize the need to respect each other's points of view and individual differences, and to treat each other with dignity, respect, and kindness.

# 6

**FOCUS: What Do You Know?**

5 minutes

**Purpose:**

This activity measures students' knowledge about prenatal alcohol and drug exposure before the start of the lesson, and makes them aware of the many facts surrounding prenatal drug and alcohol exposure.

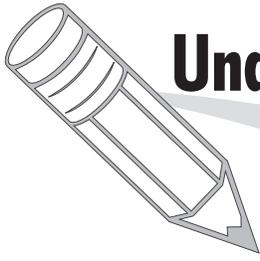
**Materials:**

- *Understanding Prenatal Alcohol and Drug Exposure Lesson Pre-test*

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**Facilitation Steps:**

1. Give each student a copy of the *Understanding Prenatal Alcohol and Drug Exposure Lesson Pre-test*. Allow students 5 minutes to complete.



# Understanding Prenatal Alcohol and Drug Exposure Lesson

## Pre-test

Date: \_\_\_\_\_

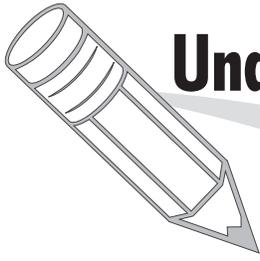
Class: \_\_\_\_\_

*Class name*

1. FAS stands for: \_\_\_\_\_
2. FASD stands for: \_\_\_\_\_
3. What disabilities can result from FASD? Choose all that apply.
  - a. Physical
  - b. Mental
  - c. Behavioral
  - d. Learning disabilities
4. Who can diagnose FAS?
  - a. A teacher
  - b. A parent
  - c. A doctor
  - d. A psychologist
5. Two features of an infant/child with FAS are \_\_\_\_\_ and \_\_\_\_\_.
6. Teratogens are:
  - a. over-the-counter drugs that are safe for an unborn child
  - b. agents that cause physical or developmental defects in an unborn child
  - c. rarely prescribed for pregnant females
  - d. any over-the-counter or prescription drug
7. Two examples of teratogens are: \_\_\_\_\_ and \_\_\_\_\_.
8. Which of the following are features of a drug-affected infant? Choose all that apply.
  - a. Piercing cry
  - b. Irritability
  - c. Lethargy
  - d. Drowsiness
  - e. Continual tremors

**Unit Two—Lesson Six**

*Prenatal Exposure to Drugs or Alcohol*



# Understanding Prenatal Alcohol and Drug Exposure Lesson

## Pre-test — Answer Key

1. FAS stands for: \_\_\_\_\_ Fetal Alcohol Syndrome \_\_\_\_\_
2. FASD stands for: \_\_\_\_\_ Fetal Alcohol Spectrum Disorder \_\_\_\_\_
3. What disabilities can result from FASD? Choose all that apply.
  - a. Physical
  - b. Mental
  - c. Behavioral
  - d. Learning disabilities
4. Who can diagnose FAS?
  - a. A teacher
  - b. A parent
  - c. **A doctor**
  - d. A psychologist
5. Two features of an infant/child with FAS are \_\_\_\_\_ and \_\_\_\_\_.

**Any of the following are correct:**

- *Small head circumference*
- *Flat midface*
- *Indistinct ridge between nose and lips (philtrum)*
- *Narrow upper lip*
- *Flat nose bridge*
- *Subtle hand abnormalities*
- *Non-inherited skin folds covering inner corners of the eyes (normal for many Asian and Native American individuals)*
- *Unusually small chin*
- *Minor ear abnormalities*
- *Small size for gestational age*
- *Unusually thin arms and legs*
- *Upturned nose*

6. Teratogens are:
  - a. over-the-counter drugs that are safe for an unborn child
  - b. **agents that cause physical or developmental defects in an unborn child**
  - c. rarely prescribed for pregnant females
  - d. any over-the-counter or prescription drug
7. Two examples of teratogens are: \_\_\_\_\_ and \_\_\_\_\_.
  - **Any of the following are correct: alcohol, mercury, nicotine, isotretinoin (brand name Accutane®, a treatment for strong acne), and phenytoin (brand name Dilantin®, a treatment for epilepsy).**
8. Which of the following are features of a drug-affected infant? Choose all that apply.
  - a. **Piercing cry**
  - b. **Irritability**
  - c. Lethargy
  - d. Drowsiness
  - e. **Continual tremors**

**Unit Two—Lesson Six**

*Prenatal Exposure to Drugs or Alcohol*

## 6

**FOCUS: Facts and Statistics about FAS, FASD, and Drug Exposure**

25 minutes

**Purpose:**

During this activity students learn facts and statistics about prenatal alcohol and drug exposure, the disabilities it can cause, and the importance of not drinking or taking drugs while pregnant. They also learn where families of babies with FAS, FASD, and prenatal drug exposure can seek information.

**Materials:**

- *Facts and Statistics about Prenatal Alcohol and Drug Exposure* PowerPoint presentation

**Facilitation Steps:**

1. Tell students that they are about to learn the facts about prenatal alcohol and drug exposure and the disabilities associated with FAS, FASD, and drug-affected babies.
2. Explain that FAS, FASD, and drug-affected babies are completely preventable through education and by abstaining from alcohol and drugs during pregnancy.
3. Present the PowerPoint presentation, pausing to discuss information of special interest to students.  
**Note:** This is a lengthy presentation (50+ slides), so you may wish to preview it to decide which slides to ignore and which to focus on.

**SUMMARIZE: Lesson Review**

5 minutes

**Purpose:**

This activity reinforces the information students learned in the lesson as an aid for review in preparation for the section quiz.

**Materials:**

- Understanding Prenatal Alcohol and Drug Exposure Review Questions

**Facilitation Steps:**

1. Choose from the following review questions to review the information presented in the Learn activity of the lesson.

**Review Questions:**

1. What are Fetal Alcohol Spectrum Disorders (FASD)?

*An umbrella term for a spectrum of disorders caused by prenatal alcohol exposure that includes physical, mental, behavioral, and learning disabilities.<sup>3</sup>*

2. What is Fetal Alcohol Syndrome (FAS)?

*A medical diagnosis concluded from the following signs:<sup>3</sup>*

- Distinctive, abnormal facial features
- Growth deficiencies
- Central nervous system problems

3. What causes FAS and FASD?

*Exposure to alcohol as a fetus; a woman drinking alcohol when she is pregnant.<sup>3, 4, 5</sup>*

4. What **type** of alcohol is safe to drink during pregnancy?

*None. Exposure to any type of alcohol is unsafe for a developing fetus.<sup>4, 6</sup>*

5. What **amount** of alcohol is safe to drink during pregnancy?

*None. There is no known safe amount of alcohol that can be consumed during pregnancy.<sup>4, 6</sup>*

6. How do drugs or alcohol reach a developing fetus?

*When a pregnant woman has a drink or takes drugs, the alcohol or drug readily moves across the placenta into the fetus's bloodstream through the umbilical cord.<sup>7</sup>*

7. Describe five things that can happen to a fetus when

a pregnant woman drinks alcohol.

*The alcohol enters the fetus's bloodstream and the following damage can occur to the fetus (depending on the developmental stage):*

- Heart, lung, and/or kidney defects<sup>5, 8</sup>
- Vision and/or hearing problems<sup>5</sup>
- Genital changes<sup>5</sup>
- Dental and palate abnormalities (e.g., small teeth, cleft palate)<sup>5</sup>
- Brain damage<sup>5</sup>

8. What are the features of an infant/child with FAS?

- Small head circumference
- Flat midface
- Indistinct ridge between nose and lips (philtrum)
- Narrow upper lip
- Non-inherited skin folds covering inner corners of the eyes (normal for many Asian and Native American individuals)
- Flat nose bridge
- Uprturned nose
- Unusually small chin
- Minor ear abnormalities
- Small size for gestational age
- Unusually thin arms and legs
- Subtle hand abnormalities

9. True or false: FAS and FASD are 100 percent preventable.

*True<sup>3, 4</sup>*

10. What are some of the problems an individual with FASD can have throughout his or her life?
- *Reduced cognitive ability*<sup>8</sup>
  - *Learning disabilities*<sup>3, 8</sup>
  - *Attention and memory problems*<sup>3, 8</sup>
  - *Hyperactivity*<sup>8</sup>
  - *Poor coordination*<sup>8</sup>
  - *Judgment and reasoning difficulties*<sup>8</sup>
  - *Communication problems*<sup>3</sup>
  - *Difficulties with school*<sup>3</sup>
11. What can friends and family do to help a pregnant woman deliver a healthy baby?
- *Explain that ANY amount and ANY type of alcohol or drugs can hurt a developing fetus.*
  - *Keep several social activities in mind other than drinking alcohol or using drugs that you and your friends enjoy doing.*
12. What can you do to help the family of a baby with FASD or a drug-affected baby?
- *Encourage them to seek community services.*
  - *Encourage them to visit their local school district's early childhood and family education programs.*
  - *Go with them as they learn about and arrange for available services.*
  - *Offer to stay with the baby to relieve caregiver stress.*
13. What is the difference between prescription and nonprescription drugs?
- *Prescription drugs are prescribed by a doctor and used under a health professional's supervision.*
  - *Nonprescription drugs can be purchased at a pharmacy or drug store without a prescription.*
14. What are examples or types of social drugs, illicit drugs, and dietary supplements?
- *Examples of social drugs are alcohol, nicotine, and caffeine.*
  - *Examples of illicit drugs are heroin, cocaine, marijuana, and methamphetamine.*
  - *Examples of dietary supplements are vitamins, minerals, and medicinal herbs.*
15. What are teratogens, and what are three examples?
- *Agents that cause physical or developmental defects in an unborn child.*
  - *Examples are alcohol, mercury, nicotine, isotretinoin (brand name Accutane<sup>®</sup>, a treatment for strong acne), and phenytoin (brand name Dilantin<sup>®</sup>, a treatment for epilepsy).*
16. What types of drugs are safe to use during pregnancy without a doctor's guidance?
- None. Only a doctor can tell a pregnant woman if a drug is safe for a developing baby.*<sup>3</sup>
17. List five things that can happen to an unborn child when a pregnant woman uses drugs.
- *Small head size*<sup>4</sup>
  - *Sleep disturbances*<sup>4, 5, 6</sup>
  - *Irritability*<sup>4, 5, 6</sup>
  - *Jitteriness*<sup>4, 6</sup>
  - *Feeding difficulties*<sup>4, 5</sup>
18. What are the features of a drug-affected infant?
- *Painful facial expression*
  - *Piercing cry*
  - *Continual tremors*
  - *Small size for gestational age*
  - *Unusually thin arms and legs*
19. True or false: Prenatal drug exposure is completely preventable.
- True.*
20. What are some of the problems an individual exposed to a mother's drug use during pregnancy can have throughout his or her life?
- *Hyperactivity*<sup>5</sup>
  - *Attention deficits*<sup>5</sup>
  - *Loss of control*<sup>5</sup>
  - *Mood swings*<sup>5</sup>
  - *Abnormal or delayed development*<sup>4</sup>
  - *Increased susceptibility to infectious diseases*<sup>7</sup>

- *Breathing problems*<sup>8</sup>
- *Hearing problems*<sup>8</sup>
- *Vision problems*<sup>6, 8</sup>
- *Learning disabilities*<sup>5, 6, 8</sup>
- *Behavioral problems*<sup>5</sup>
- *Neurobehavioral symptoms*<sup>6</sup>

## Endnotes

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