



OVER-THE-COUNTER MEDICINE SAFETY



Johnson & Johnson CONSUMER HEALTH

Dear Educator and School Nurse,

Research shows that young people begin to self-administer over-the-counter (OTC) and prescription (Rx) medication around age 11.¹ Unfortunately, kids often take on this new responsibility with little knowledge about medicine safety. According to the American Association of Poison Control Centers, more than 85,000 children, ages 19 and under, require medical attention each year due to medicine mistakes or misuse.²

The National Association of School Nurses recommends adding medicine safety lessons to the middle school health curriculum. To help you act on this recommendation, Johnson & Johnson Consumer Inc., with support from the education specialists at Young Minds Inspired, have created **OTC Medicine Safety**, a free education program with activities for grades 5–6 and grades 7–8 that can be used to supplement your health, science, and English language arts curricula. The program's five core units and bonus activity explain the importance of over-the-counter medicine safety, show students how to read the *Drug Facts* label, examine some consequences of medicine misuse and mistakes, and present guidelines for safe medicine storage and disposal. For additional online learning tools, visit www.ymiclassroom.com/otcmedsafety.

Please share this program with other teachers at your school. And please visit www.ymiclassroom.com/feedback-otcmedsafety to let us know your thoughts on the program. We look forward to your comments.

Sincerely,

Dominic Kinsley, PhD
Editor in Chief
Young Minds Inspired



Questions? Contact YMI toll-free at 1-800-859-8005, or by email at feedback@ymiclassroom.com.

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CONSUMER HEALTH

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Developed with support of the National Association of School Nurses.

1. Cheryl Abel, Kerri Johnson, Dustin Waller, Maha Abdalla, and Carroll-Ann W. Goldsmith. Nonprescription medication use and literacy among New Hampshire eighth graders. *Journal of the American Pharmacists Association*. 2012: 777–787.

2. American Association of Poison Control Centers' National Poison Data System. Data covers 2011–2021 annual average, ages 0–19.

EDUCATIONAL OBJECTIVES

- Introduce students to key information about over-the-counter (OTC) medicines and how to read and use the *Drug Facts* label
- Build critical thinking about how to recognize unsafe behaviors and apply information to make informed decisions about safe medicine use
- Inspire students to use what they've learned to educate their family and community about how to use and store medicines safely
- Support health, science, and English language arts skills



ABOUT OVER-THE-COUNTER (OTC) MEDICINE SAFETY

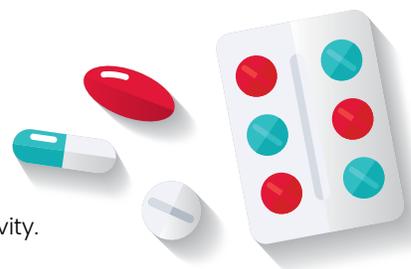
This free, multimedia educational program is designed to inform young people in grades 5–8 and their families about how to use, store, and dispose of OTC medicines safely, as well as how to avoid medicine mistakes and misuse. The program's goal is to build youth's knowledge about OTC medicine safety and encourage responsible behavior *before* they start self-medicating. Throughout the program, an emphasis is placed on reminding young people that they should only take or use medication under adult supervision.



PROGRAM CONTENT

OTC Medicine Safety Teaching Units

The complete program consists of five units that build on one another, plus a bonus activity.



UNIT	CONTENT	ACTIVITY SHEETS AND HANDOUTS
1	Comparing Over-the-Counter and Prescription Medicines Students learn the difference between over-the-counter (OTC) medicine and prescription (Rx) medicine, as well as the safety precautions for each.	QUIZ: Over-the-Counter Medicine Safety Pre/Post-Assessment Quiz MINI POSTER: Over-the-Counter Medicine Safety (for all units) ACTIVITY SHEET: Over-the-Counter vs. Prescription Medicines
2	Understanding the Drug Facts Label Students learn how to find and use the information on the <i>Drug Facts</i> label.	ACTIVITY SHEET: Understanding the <i>Drug Facts</i> Label ACTIVITY SHEET: Find a <i>Drug Facts</i> Label Scavenger Hunt
3	Understanding Medicine Measuring Tools, Storage, and Safe Disposal Students learn the importance of following dosing instructions and how to store and dispose of medicine safely.	ACTIVITY SHEET: Responsible Medicine Dosing ACTIVITY SHEET: Safe Medicine Storage
4	Exploring the Harms of Medicine Misuse Students learn how to use medicine safely and that misusing medicine can be harmful.	ACTIVITY SHEET: OTC Medicine Safety for the Community ACTIVITY SHEET: Use vs. Misuse QUIZ: Over-the-Counter Medicine Safety Pre/Post-Assessment Quiz
5	OTC Medicine Safety Review: Informational Text Analysis Students analyze a range of informational texts about medicine safety.	ACTIVITY SHEET: Editing an OTC Medicine Safety Article HANDOUT A: Informational Text Features HANDOUT B: Text Feature Options
BONUS ACTIVITY	Spread the Word About OTC Medicine Safety! Students create a public service announcement (PSA) designed to promote OTC medicine safety practices to their peers and community members.	BONUS ACTIVITY SHEET: Inspire Others to Stay Medicine-Safe!



ONLINE MULTIMEDIA RESOURCES & DOWNLOADABLE CONTENT	
to enhance your students' educational experience	
OTC Medicine Safety Mini Poster	OTC Medicine Safety Interactive Trivia Game
OTC Medicine Safety Answer Key	Hidden Home Hazards Digital Activity
Standards Alignment Chart	The Perfect Project Digital Storybook
OTC Medicine Safety Video and Quiz	Medicine Safety Kahoot!
OTC Medicine Safety for Families (letter in English and Spanish)	

How to Use the Program

Review the program lessons and resources before starting a unit. Each unit includes objectives and a list of materials needed to help you prepare. A whiteboard or digital display screen can be used to present the poster, activity sheets, and multimedia resources, but is not required. Lessons can be used in classrooms and group settings, as well as with online learning.

Important Message

Before each lesson in the **OTC Medicine Safety** program, emphasize to students that they should *never* take medicine without the approval and supervision of a parent, caregiver, or other trusted adult.



COMPARING OVER-THE-COUNTER AND PRESCRIPTION MEDICINES

Students learn the difference between over-the-counter (OTC) medicine and prescription (Rx) medicine, as well as the safety precautions for each.

TIME: 40 minutes

OBJECTIVES

Students will:

- Define and understand the similarities and differences between OTC medicines and prescription medicines
- Learn how to use OTC medicine responsibly

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ♦ [OTC Medicine Safety Pre-Assessment Quiz](#)
 - ♦ [Activity 1: Over-the-Counter vs. Prescription Medicines](#)
 - ♦ [Over-the-Counter Medicine Safety Mini Poster](#)
- [Over-the-Counter Medicine Safety Classroom Poster](#)
- [OTC Medicine Safety Answer Key](#)
- [OTC Medicine Safety for Families](#) (letter in English and Spanish)
- Paper, pens/pencils
- Optional: Whiteboard/digital display screen

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_5-6/.

HOW TO USE THIS LESSON

1. If time allows, assess students' current knowledge of medication use by having them complete the [OTC Medicine Safety Pre-Assessment Quiz](#). Save the completed quizzes if you plan to have students retake the quiz for a post-program comparison.
2. Introduce the lesson by explaining to students that medications help people stay healthy; however, medicines can do more harm than good if we don't have the information we need to make safe choices about their use.
3. Emphasize that students should *never* take medicine without the approval and supervision of a parent, caregiver, or other trusted adult.
4. Ask students to brainstorm a list of symptoms they have had when they were not feeling well. (Answers may include upset stomach, headache, fever, cough, etc.)
5. Next ask them what they did to get well or feel better. (Answers may include go to the doctor, take medicine, rest, drink water or juice, stay home from school, etc.)

6. Explain that doctors treat sickness in many ways; one way is by recommending medicine. Medicines fall into two main categories:

- **Over-the-counter (OTC) medicines** can be bought in a pharmacy, drugstore, grocery store, or convenience store. You do not need a doctor's prescription to obtain them.
- **Prescription (Rx) medicines** are specially ordered (prescribed) for you by a doctor or other qualified healthcare practitioner. You can only get them from a pharmacist.

Both categories of medicine can be tablets, liquids, or ointments.

7. As a class, brainstorm medicines students are familiar with and decide whether each medication belongs in the OTC or Rx category. Be sure to include under-the-radar OTC medicines, such as cough drops and eye drops. Have students create a t-chart and group the medicines they brainstorm into two lists.
8. Explain that research shows that kids their age are beginning to self-medicate (take medicines on their own). Emphasize that without the information they need to make safe choices about medicine, young people can easily do more harm than good, so it's important to have a solid understanding of medicine safety *before* they become more responsible for their own self-care.
9. Call attention to the *Drug Facts* label on the [Over-the-Counter Medicine Safety Classroom Poster](#). Explain that this label appears on all OTC medicines and provides all the information a person needs to use the medicine safely.
10. Divide the class into small groups. Distribute the [Over-the-Counter vs. Prescription Medicines](#) reproducible activity sheet and have the groups complete it. Discuss the answers as a class and invite any follow-up questions about the lesson. (See the [Answer Key](#) for suggested responses.)
11. **Family/Home Connection:** Distribute the [OTC Medicine Safety for Families](#) letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about medicine safety with their families and **reinforce the importance of always communicating with a trusted adult before taking any medicine.** Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones.

EXTENSION ACTIVITY

Ask students: *How does a medicine become approved for over-the-counter use?* Have students research the question and write a paragraph describing their findings.



UNDERSTANDING THE DRUG FACTS LABEL

Students learn how to use the information on the *Drug Facts* label.

TIME: Two 40-minute class periods

OBJECTIVES

Students will:

- Identify the *Drug Facts* label and learn the terms used on it
- Know the importance of reading and understanding all the information on the *Drug Facts* label
- Learn the potential consequences of not reading and understanding all the information on the *Drug Facts* label
- Identify the steps to take in the event of a medicine mistake

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ♦ **Activity 2: Understanding the *Drug Facts* Label**
 - ♦ **Activity 3: Find a *Drug Facts* Label Scavenger Hunt**
 - ♦ **Over-the-Counter Medicine Safety Mini Poster**
- **Over-the-Counter Medicine Safety Classroom Poster**
- FDA's "**Medicines in My Home**" video
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Sample OTC medicine packaging:
 - ♦ Two empty bottles of a fever reducer (if possible, both a liquid and a solid-dose product)
 - ♦ Two empty bottles of pain reliever
 - ♦ Two empty bottles of antacids
 - ♦ Two empty packages of cough drops
- Paper, pens/pencils
- Computer with internet access and whiteboard/digital display screen (for video)
- Optional: **The Perfect Project Digital Storybook**

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_5-6/.

HOW TO USE THIS LESSON

1. Begin by focusing students on the overall importance of reading directions. Ask: *What could happen if you only read part of the directions on a test?*
2. Discuss the students' responses and emphasize the importance of reading informational text carefully and in its entirety. Otherwise, you might miss some key piece of information that is vital to completing a task properly or getting the desired results.
3. Direct students' attention to the *Drug Facts* label on the poster (displayed on a whiteboard, if possible). Explain that all over-the-counter medicines come with a *Drug Facts* label designed to help make sure the medicine is used safely and correctly. The labels are required by the U.S. Food and Drug Administration (the FDA).
4. Show the FDA's "**Medicines in My Home**" video if possible. Pause the video when necessary to highlight the different sections on the *Drug Facts* label and invite student questions.
5. Distribute copies of the **mini poster** to students. As you review each section of the *Drug Facts* label, have students follow along on the handout and read the description of each section aloud.
6. Start with the "Directions" section of the *Drug Facts* label. Explain that every medicine comes with dosing instructions that tell how much to take and how often to take it. The dosing instructions for OTC medicines appear in the "Directions" section of the *Drug Facts* label. The purpose of these instructions is to help make sure that the medicine is taken correctly. Emphasize that when the instructions are not followed correctly, the medicine may not work the way it is meant to. It may even make you feel worse or hurt you. That's why you should always read the **whole** *Drug Facts* label before taking any medicine and follow all directions on the label. Remember, only take or use medicine under adult supervision. Have a student read the description of the "Directions" section of the label.
7. Continue reviewing the remaining sections of the *Drug Facts* label by having a student read each section description aloud and then discussing why this information is important for medicine safety.
8. Reinforce the new vocabulary words featured on the label. Create a vocabulary list, explaining that these terms provide us with the information we need to use medicine responsibly. Key Terms:
 - **Active Ingredients:** Lists the ingredients in the medicine that make it work.
 - **Uses:** Describes the symptoms that the medicine treats.
 - **Warnings:** Provides important safety information, including side effects, questions you should ask a doctor before taking the medicine, and medicines to avoid using at the same time.

(Continued on the next page.)



UNDERSTANDING THE DRUG FACTS LABEL (CONTINUED)

- **Directions:** Tells the amount or “dose” of medicine to take, how often to take it, and how much you can take in one day.
 - **Other Information:** Tells how to store the medicine.
 - **Inactive Ingredients:** Lists ingredients not intended to treat your symptoms, like preservatives and flavorings.
 - **Questions or Comments?:** Tells how to call the manufacturer if you have questions about the medicine.
9. To reinforce students’ understanding of the label, divide the class into eight groups and give one sample OTC medicine container to each group. Have each group share answers to the following questions:
- *What symptoms does the medicine treat?*
 - *How is a person supposed to take the medicine?*
 - *Are there any warnings about the medicine?*
 - *What are the medicine’s active ingredients? Are there inactive ingredients?*
 - *What other information can you find on the Drug Facts label?*
10. Explore the consequences of using OTC medicines incorrectly. Ask students what they think could happen if someone did not read all the information on the *Drug Facts* label. Discuss these possible consequences:
- Ingredients may cause allergic reactions.
 - Medicines can be harmful if you take too much and may not be effective if you do not take the proper dose.
 - Certain medicines can interact with other medicines and may cause side effects or harm when mixed.
 - Many medicines contain the same active ingredients and should never be taken at the same time.
11. Point out the **Poison Control Center** (also called the **Poison Help Line**) phone number on the *Drug Facts* label, **1-800-222-1222**. Explain that anyone can call this number to ask any questions about a medicine. It is not just for reporting that someone may have been poisoned. You can call to ask how to take or give a medicine or what to do if there’s been a medicine mistake — for example, if someone took a medicine by accident.
12. Share the following with students:
- Calls to the Poison Help Line are free.
 - All calls are confidential.
 - Medical experts answer the phone 24/7, 365 days a year.
 - Unlike 911, it doesn’t have to be an emergency to call.
- Call with questions or for information, or if you have an emergency.
- Poison center experts get more than 2 million calls a year about all kinds of things. They have heard everything, so don’t be embarrassed to call.
13. Ask students if they notice anything else their sample OTC medicines have in common. Point out that they all have an “Expiration Date,” after which the medicine should not be used.
14. Distribute copies of the **Understanding the Drug Facts Label** activity sheet. Have students complete the “Think It Through” questions and review the answers as a class. See the **Answer Key** for suggested responses.
15. For more practice reading the *Drug Facts* label, distribute copies of the **Find a Drug Facts Label Scavenger Hunt** activity sheet for students to complete with a trusted adult at home. Explain that they should look at the *Drug Facts* labels on OTC medicines in their home to find medicines that have the information shown in each box. When they find a match, they write the name of the medicine in the box. Have students share their findings.
16. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Share *The Perfect Project* Digital Storybook with your students. Discuss the questions at the end of the story and try the experiment as a class!

UNDERSTANDING MEDICINE MEASURING TOOLS, STORAGE, AND SAFE DISPOSAL

Students practice locating information on the *Drug Facts* label and learn about measuring tools, where to store medicine, and how to dispose of it safely.

TIME: 40 minutes

OBJECTIVES

Students will:

- Identify dosing information found in the “Directions” section of *Drug Facts* labels (when, how, and how often to take the medicine)
- Explain the importance of reading and understanding dosing information
- Learn why using proper dosing tools is important
- Describe what makes a location safe or unsafe for medicine storage
- Brainstorm ways to raise awareness about safe medicine storage and disposal

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ♦ **Activity 4: Responsible Medicine Dosing**
 - ♦ **Activity 5: Safe Medicine Storage**
 - ♦ **Over-the-Counter Medicine Safety Mini Poster**
- FDA’s “Medicines in My Home” video
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Empty OTC medicine bottles filled with colored water and their dosing devices:
 - ♦ Medicine that recommends a 2.5 mL, 5 mL, or 10mL dose
 - ♦ Pediatric medicine
 - ♦ Adult medicine
- Kitchen spoons of different sizes
- Paper, pens/pencils
- Computer with internet access
- Whiteboard/digital display screen
- Optional: **Up and Away website**

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_5-6/.

HOW TO USE THIS LESSON

PART 1

1. Begin with a class discussion about the importance of using the right tools when measuring different things. Ask students:
 - *Why do they think there are different measuring tools for liquid and dry ingredients when cooking/baking?*
 - *What are some different ways that people make mistakes when measuring things?*
2. Encourage students to think about why accurate measurements are important. Ask:
 - *When is it okay to get less-accurate measurements or even to estimate?*
 - *When is it important to get really accurate measurements? Why?*
3. Ask students to think back to the **Understanding the Drug Facts Label** activity. Ask: *Do you remember which section of the label talks about how much medicine to take?*
4. Discuss different information contained in the “Directions” section of the *Drug Facts* label (amount of medicine to take, how often to take the medicine, and how often to take it). As a reminder, display the **Over-the-Counter Medicine Safety Classroom Poster**.
5. Explain that students are going to learn why reading and understanding dosing instructions is important, and why medicines should always be measured using the proper dosing or measuring devices under adult supervision.
6. Emphasize the importance of following dosing directions and using the dosing device that comes with a medicine with a demonstration. Show students a sample of OTC medicine that comes with a dosing cup. Have students imagine that this medicine’s *Drug Facts* label recommends a dose of 2.5mL, 5mL, or 10mL. Explain that by conversion, 2.5mL = ½ standard teaspoon, 5mL = 1 standard teaspoon, and 10 mL = 2 standard teaspoons. However, kitchen teaspoons are not universal in size. Use colored water and a kitchen teaspoon to measure out the teaspoon conversions of liquid, then pour the measured liquid into the dosing cup that came with your sample bottle. Discuss how the dosing cup’s accurate measurement compares to the non-standardized kitchen spoon measurements. Follow the same steps with a plastic teaspoon and a teaspoon with a different design. Point to the message on the bottom of the poster for a reference. Explain that we should only use the dosing device that comes with a medicine because spoon measurements are not exact — household spoons come in various shapes and sizes, which means they hold different amounts of liquid.

(Continued on the next page.)



UNDERSTANDING MEDICINE MEASURING TOOLS, STORAGE, AND SAFE DISPOSAL (CONTINUED)

- Next, show students the pediatric and adult sample medicine bottles (filled with colored water) and their different measuring devices.
- Read the dosing information for the pediatric medicine. Have students measure out the correct dose using the non-standardized kitchen spoons — dosing devices that are **not** meant for the pediatric medicine. Discuss the results. Then measure out the dose using the correct dosing device. Discuss why using the correct device is important.
- Repeat the activity with the adult medicine. This time have students try measuring with kitchen spoons that are too small for the correct dose. Reiterate the potential dangers of using the wrong device and why using the correct one is important.
- Talk about how measuring doses incorrectly and using spoons instead of the dosing device that comes with the medicine can cause an overdose or underdose. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**
- Distribute the [Responsible Medicine Dosing](#) activity sheet. Have students complete the sheet individually or lead the class through it, discussing each example. Review the students' responses as a class. See the [Answer Key](#) for suggested responses.
- Next, remind students about the expiration dates they found on the OTC medicine samples they examined in Unit 2. Ask how their families get rid of unused or expired medicine. Common answers may include putting the medicine in the trash or flushing the medicine.
- Explain that safe disposal is just as important as safe storage for keeping medicines away from people who shouldn't have them. Before throwing away OTC medicines, families should mix them with an unappealing substance (such as kitty litter) and place them in a closed container (such as a sealed plastic bag).
- The FDA has additional [disposal guidelines](#) for certain prescription medicines (like disposal by flushing or using the National Take-Back Initiative). In addition, the Poison Help Line (1-800-222-1222) can answer any questions families may have about how to dispose of medicines safely. Ask students:
 - Why do you think that the FDA has these guidelines for safe disposal of medicines?
 - What could happen if a medicine is not disposed of properly?
- After reviewing storage and disposal information, ask students:
 - What did you learn about safe storage?
 - Is there anything from today's discussion that might be important to mention at home?

PART 2

- Introduce the importance of safe medicine storage, which, when ignored, may lead to accidental ingestion and medicine poisoning.
- Ask students to name the locations where medicines are stored in their households. Write answers on the board for students to refer to later. Common answers may include kitchen cabinet, bathroom cabinets, or parents' or trusted adult's bedroom. As students answer, ask for specifics:
 - Are the medicines in drawers or cabinets or on the countertop?
 - Why do you think medicines are often kept in medicine chests above sinks or high kitchen cabinets?
- Get students thinking about how easy it is for children to find medicine in a home. Explain that medicines need to be kept out of reach and sight of their naturally curious younger brothers and sisters, or young visitors to their home.
- If using a whiteboard, visit the [Up and Away website](#) to learn more about storing medicine safely.
- Distribute the [Safe Medicine Storage](#) activity sheet. Explain to students that they are looking at the inside of a home and it is their job to identify the medicine storage errors that could lead to accidental medicine poisoning. Review the answers as a class.

- Family/Home Connection:** If you have not already done so, distribute the [OTC Medicine Safety for Families](#) letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Ask students to come up with some ways to help people remember how to store and dispose of medicine safely. Some possibilities include:

- A jingle that describes the Poison Help Line's purpose and phone number
- A mnemonic device to remember the directions for safe medicine storage and disposal
- A survey to distribute to families to determine how medicine-safe their home is

Work with your students to check that their OTC medicine safety awareness materials are accurate before they share them with others.

EXPLORING THE HARMS OF MEDICINE MISUSE

Students learn how to use medicine safely and that misusing medicine can be harmful.

Time: 40 minutes

OBJECTIVES

Students will:

- Define “misuse” as it relates to over-the-counter (OTC) medicines
- Understand why misusing OTC medicines can be harmful
- Identify the steps to take in an OTC medicine misuse situation

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ♦ **Activity 6: OTC Medicine Safety for the Community**
- **Activity 7: Use vs. Misuse Classroom Activity** (4 pages)
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Chart paper (six sheets) for a gallery walk activity
- Computer and whiteboard/digital display screen
- Optional: Computer with internet access for student use
- Optional: **OTC Medicine Safety Post-Assessment Quiz**

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_5-6/.

HOW TO USE THIS LESSON PART 1

1. Begin by prompting an open class discussion. Ask students:

- *Do you think OTC medicines are dangerous if they are misused or used in a way other than what is directed by the Drug Facts label or a doctor?*

Allow students to offer opinions. Through a show of hands, tally the “yes” versus “no” opinions on the board.

2. Use the **Use vs. Misuse Classroom Activity** to explore how students’ preconceived ideas can sometimes cloud less obvious facts about a topic. Show only the pictures on each page — sun, potatoes, vitamins, ibuprofen. Do not reveal the “Answer” or “Now You Know” sections. After showing the four pictures, ask students:

- *How are these four items related? Do they have anything in common?*
- *How do people benefit from these items?*

- *Is it possible that these items may be harmful?*

Explain that all four items are safe when used or stored properly, but they can all have detrimental health effects when used or stored improperly.

Go back through the pictures and uncover the answers beneath each one.

Page 1: Sun

Answer: Fifteen minutes of sun per day is essential for maintaining a healthy level of vitamin D, which promotes the retention of calcium, mostly in your bones. Calcium is very important in the development of your bones and teeth. Too much sun, however, may cause skin damage or skin cancer. To protect against damage from the sun’s rays, avoid the sun between 10 a.m. and 4 p.m., when its rays are strongest; wear protective clothing; and use a sunscreen with an SPF of 30 or higher, according to the American Skin Association.

Now you know: Use a good sunscreen when outdoors for more than 15 minutes and avoid prolonged sun exposure.

Page 2: Potatoes

Answer: Potatoes are an excellent source of carbohydrates, which your body needs for energy. But potatoes naturally contain solanine, a toxic ingredient that can cause a number of health problems. Solanine thrives in well-lit environments and is present when you see a green tinge under the potato’s skin and experience a bitter taste.

Now you know: Store potatoes in a cool, dark place and be on the lookout for discoloration and bad taste.

Page 3: Vitamins

Answer: Vitamins can be purchased over-the-counter and are widely available. They’re easy to access but can have risks if not used appropriately. They should be taken under the guidance of a parent or trusted adult. Vitamins can be dangerous if they’re misused or if a person isn’t using them in accordance with the *Supplement Facts* label on the bottle.

Now you know: Read the label and talk to a trusted adult before taking vitamins.

Page 4: Ibuprofen

Answer: Ibuprofen has been used for decades for pain relief and is available over-the-counter. When ibuprofen is used as directed, it reduces inflammation (swelling) and can reduce fevers. However, large doses of ibuprofen can cause damage to the stomach or intestines.

Now you know: Follow directions on the *Drug Facts* label and talk to a trusted adult before taking an anti-inflammatory medicine.

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EXPLORING THE HARMS OF MEDICINE MISUSE (CONTINUED)

PART 2

1. Discuss how the four items on the **Use vs. Misuse Classroom Activity** pages are common in our lives and appear safe, but there are specific guidelines for using or consuming them. If you do not follow the safety precautions for proper use and storage, there could be harmful consequences. Explain that when you dig a little deeper, you often discover new, important information that you might ordinarily overlook. Ask students:

- *Can you think of other items you come in contact with regularly that are safe when used properly, but dangerous when misused?*

Answers may include appliances, cars, medicines, cleaning supplies, etc.

2. Select medicine as a topic for further discussion. Post the six questions below on chart paper around the room. Have students rotate through the six stations and write their responses to each question on their own sheets of paper. Begin the activity with this prompt:

- *Are the actions described at each station safe or dangerous? If dangerous, what negative effects could result from the action?*
 - a. *Not reading and following the Drug Facts label*
 - b. *Taking more than the recommended dose*
 - c. *Redosing more frequently than directed on the label*
 - d. *Using different medicines with the same active ingredient at the same time*
 - e. *Taking medicines for longer than directed on the label*
 - f. *Taking medicines for reasons or symptoms other than what is directed on the label*

If students have internet access, they might research the negative effects as they rotate through the stations. Alternatively, students can brainstorm ideas with a partner, then share their answers with the entire class.

3. Discuss the students' responses. See the **Answer Key** for suggested responses. Emphasize that all the scenarios are dangerous because there are potentially harmful consequences when someone misuses OTC medicines. The *Drug Facts* label provides instructions for using the medicine safely. OTC medicines can be harmful if misused or if not used as directed by the *Drug Facts* label.

4. Ask students:

- *What is the perception among your friends about misusing prescription or OTC medicines?*

Answers may include: Misusing prescription drugs is dangerous and can be deadly; no one really gets hurt from misusing OTC medicines.

- *Based on the information you've learned in OTC Medicine Safety, do you believe that there is a need to inform people about the dangers of misusing OTC medicines?*

Answers may include: Parents and guardians should be informed so they can keep children safe; younger children should be informed so they can avoid dangerous situations.

5. Distribute the **OTC Medicine Safety for the Community** activity sheet and explain that it can be used to launch a community-wide safety campaign. For example, a coalition (or group) of families, students, and community leaders might use the activity sheet to submit a collection of letters to local town officials that encourages getting the word out about safe medicine use. Working together in this way, they would show collective support for making their communities and schools safer places for children and their families, and could help disseminate information about the safe use and storage of OTC medicines and the dangers of misuse. Invite students to get the ball rolling by writing their own persuasive letters, based on what they have learned about OTC medicine safety or what they might discover on the internet.
6. **Optional:** Assess what students have learned about OTC medicine safety by having them complete the **OTC Medicine Safety Post-Assessment Quiz**. Compare the completed quizzes to students' pre-assessments to measure the growth of their knowledge.
7. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Discuss the impact of visuals or videos in helping to increase the safe use and storage of OTC medicines and have students research photos or videos that deal with taking medicine safety precautions at home. They might start their research at the **FDA Medicines in My Home Video Room**.

OTC MEDICINE SAFETY REVIEW: INFORMATIONAL TEXT ANALYSIS

Students read informational texts and strengthen their analysis skills while learning about a critical topic — medicine safety.

TIME: 45 minutes

OBJECTIVES

Students will:

- Identify the central idea and key details of an informational text
- Create text features to enhance an informational text

5. Distribute the **Editing an OTC Medicine Safety Article** activity sheet and point out the blank spaces where students will insert helpful text features. Students should imagine that they are editors who are preparing the article to be published, and they want to make sure that all text features used will help readers understand the key ideas in the article.
6. For students who need additional support, distribute copies of the **Text Feature Options** handout.
7. After students have finished editing the article, ask them to complete the “Think It Through” section of the activity. Students will need to explain their choices for the text features they filled in, as well as answer a series of critical-thinking questions on the content of the article. Discuss students’ answers as a group. See the **Answer Key** for suggested responses.
8. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ♦ **Activity 8: Editing an OTC Medicine Safety Article** (3 pages)
 - ♦ **Handout A: Informational Text Features**
 - ♦ **Handout B: Text Feature Options**
 - ♦ **Over-the-Counter Medicine Safety Mini Poster**
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Pens/pencils
- Whiteboard/digital display screen

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_5-6/.

HOW TO USE THIS LESSON

1. Review what students know and have learned about medicine, such as the purposes of medicines, types of medicines, medicine safety, etc. Create a word splash on the board to record students’ ideas.
2. After students brainstorm ideas, remind them that they should *only* take medicine with the approval and supervision of a parent or trusted adult.
3. Explain that students are going to read an article that includes a lot of information about medicine safety, but that the article is missing many text features that would help the reader understand the central ideas of the text.
4. Use the **Informational Text Features** handout to review the relevant text features: title, section heading, pull-out quote, diagram, and glossary. Prompt students to suggest why a writer would use each feature and how it can help a reader before revealing those columns. Use the **Over-the-Counter Medicine Safety Mini Poster** to point out topic-specific examples of some of the text features while also previewing the content of the article.



SPREAD THE WORD ABOUT OTC MEDICINE SAFETY!

Students learn how to create a public service announcement (PSA) to communicate important medicine safety information to a targeted audience, while practicing skills that support writing and speaking and listening.

TIME: 30 minutes, plus time to create PSAs

OBJECTIVES

Students will:

- Identify a central idea and supporting details regarding safe medicine use
- Develop a persuasive text to teach others why medicine safety is important

MATERIALS NEEDED

- Copies of the [Inspire Others to Stay Medicine-Safe!](#) reproducible activity sheet for each student in your class
- Optional: computer with internet access and whiteboard or projector
- Sample PSAs to share with students, such as poster and video examples from the [Ad Council](#) on emergency preparedness and texting and driving; audio examples from the [CDC on flu vaccines](#)



HOW TO USE THIS LESSON

1. Ask students to imagine they have an urgent message to communicate to their community. What tools could they use to help them reach the most people?
2. Explain to students that a public service announcement (PSA) is a message to raise awareness about an important issue.
3. Emphasize that the purpose of a PSA is to educate people about an issue and encourage them to take action to change a certain behavior.
4. Inform students that PSAs are usually created in the form of commercials on television or streaming services, social media campaigns, radio, billboard, or print ads, or text messages. If possible, show a few examples of PSA campaigns that are suitable for your group and will resonate with them (see sample links under Materials Needed). Have students brainstorm other PSA campaigns they know.
5. Distribute the activity sheet. Explain to students that they will be creating a PSA focused on OTC medicine safety. Emphasize that their target audience is anyone unfamiliar with the topic, for example younger students, their peers, family members, or people within their community who may not know about how to use medicines safely and may not realize that OTC medicines can cause harm if not used properly.
6. Guide students through the planning and drafting process. Encourage them to use the sidebar on the activity sheet to select key points that will best support their message and to include a call to action.
7. Review all PSAs for appropriateness and safe, correct messaging. Then assist students in distributing, displaying, or presenting their PSAs in the school or community (class website, gallery walk, school assembly, etc.).
8. At the conclusion of the lesson, remind students that they should *never* take medicine without the approval and supervision of a parent or trusted adult. Ask them whether they think their PSAs communicated this message to others.



Unit 1, Activity 1:

OVER-THE-COUNTER VS. PRESCRIPTION MEDICINES

1. Both
2. Prescription
3. Prescription
4. OTC [remind students that prescription labels and directions must be read carefully as well.]
5. OTC
6. Both
7. Both

Unit 2, Activity 2:

UNDERSTANDING THE DRUG FACTS LABEL

1. Answers might include warnings that the medicine might cause an allergic reaction, that it should not be used when taking certain other medicines, and other reasons why a person should not take the medicine. It's important that a person read this information before taking medicine because it can help avoid preventable side effects.
2. Side effects may include drowsiness and/or excitability, particularly for children.
3. Answers may include: A doctor should be consulted before taking this medicine if you have liver or kidney disease, and before giving the medicine to children under 6 years of age. A doctor should also be consulted if allergic reaction or overdose occurs.
4. The "Directions" section.
5. 1-800-222-1222

Unit 2, Activity 3:

FIND A DRUG FACTS LABEL SCAVENGER HUNT

Answers will vary.

Unit 3, Activity 4:

RESPONSIBLE MEDICINE DOSING

1. At 8 a.m. the next day. After that, no more doses should be given until 8 p.m.
2. a. 2.5 mL
b. 2.5 mL
3. Using anything other than the dosing device that is packaged with the medicine can result in an inaccurate dose.
4. A *Drug Facts* label might suggest that people contact a doctor before use for a variety of reasons. These reasons may include factors such as age, health conditions, or other medicines they are taking that may require special instruction or may make the medicine inappropriate for certain people.
5. Answers could include talking with family members about the information provided on the *Drug Facts* label; use of proper dosing devices; the consequences of not using proper dosing devices; the importance of understanding dosing information.

Unit 3, Activity 5:

SAFE MEDICINE STORAGE

Any response that identifies medication stored in a location that is not up, away, and out of sight would be acceptable. The medication storage errors shown in the picture are as follows:

1. Open purse with pain relief bottle sticking out of the top
2. Medicine left out on the nightstand with dosage cup
3. Toiletry bag hanging low from doorknob inside closet with vitamin bottle showing
4. Medicine bottles visible and accessible inside cabinet below kitchen sink
5. Bottle of cough medicine on the counter and a teaspoon with a trace of medicine visible on spoon (should be using the dosing device and stored up and away)
6. Allergy medicine on the table next to vase

Unit 4, Activity 6:

OTC MEDICINE SAFETY FOR THE COMMUNITY

Answers will vary.

Unit 5, Activity 8:

EDITING AN OTC MEDICINE SAFETY ARTICLE

Answers will vary.

Pre/Post-Assessment Quiz

Types of Medicine What type of medicine is best described by each statement below? Check only one.

Q1. This is medicine a doctor orders for you, and is available only from a pharmacist.

Prescription medicine

✓

Q2. This is medicine bought in a drugstore, pharmacy, or grocery store without having to get a doctor's permission.

Over-the-counter (OTC) medicine

✓

Medicine Safety

Q3. Are the following statements True or False? Check one answer for each row.

TRUE

FALSE

If you use a household or kitchen spoon to measure liquid medicines, you can be sure you will get the right dose.

✓

You can't be harmed by over-the-counter medicines.

✓

It's okay to take two medicines with the same active ingredient at the same time.

✓

It's okay to use someone else's prescription medicine if you have the same symptoms they had when they got it.

✓

It's okay to take your leftover prescription medicine later if you get sick again.

✓

It's okay to take more medicine than what is directed on the label if you are very sick.

✓

In a medicine, an active ingredient is what relieves a person's symptoms.

✓

The *Drug Facts* label tells you what symptoms the medicine treats.

✓

The *Drug Facts* label gives you the dosage information (how much medicine to take).

✓

Q4. Are the following statements True or False? Check one answer for each row.

TRUE

FALSE

A pharmacist can answer questions about over-the-counter medicines.

✓

All medicines have an expiration date.

✓

Children should not use prescription medicine without the permission of their parent or a trusted adult.

✓

Medicine should be kept in a place where children can't reach it.

✓

If you and your friend are the same age, it will be safe for you to take the same dose of an over-the-counter medicine.

✓

Prescription medicine cannot be bought without a doctor's permission.

✓

(Continued on the next page.)

Pre/Post-Assessment Quiz (continued)

Medicine Safety		
Q5. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
Children over 12 can take over-the-counter medicine without a parent's permission if they carefully read the label.		✓
Medicine should be stored in the container it came in.	✓	
One gulp from a bottle of liquid medicine is exactly one tablespoon of medicine.		✓
Over-the-counter medicines can be dangerous when misused.	✓	
Prescription medicine can be found on the shelves in some stores.		✓
Prescription medicine is meant to be used by one person.	✓	
Q6. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
The Poison Help Line is a good place to call if someone has taken too much medicine.	✓	
Medicine should be kept on the kitchen counter so you remember to take it.		✓
Taking more medicine than directed will help you feel better faster.		✓
Taking more than one medicine with the same active ingredient will help you feel better faster.		✓
If you have questions about an over-the-counter medicine you have not taken before, you should ask a friend who has taken it before.		✓
You can call the Poison Help Line even if it isn't an emergency.	✓	

