



# OVER-THE-COUNTER MEDICINE SAFETY

## **LESSON 4:** Understanding the Dangers of Medicine Misuse

In this fourth lesson of the OTC Medicine Safety program, students will learn about the responsible medicine use, and the harm that could result from misuses of medicine.

Grades 7–8

Duration: 40 minutes

### **Pre-instructional Planning**

#### 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 when encountering an OTC medicine misuse situation.
- Note: This lesson is based on the foundational knowledge students will have gained about OTC medicines, the Drug Facts label, and dosing devices after completing Lessons 1–3.

#### MATERIALS

- Use vs. Misuse activity slides printable
- OTC Medicine Awareness in Your Community printable
- Culminating Student Activities printable
- Computer and projector
- Computer with Internet access for student use
- OTC Medicine Safety’s Family Newsletter printable

During Instruction

#### SET UP

1. Emphasize to students that they should never take medicine without the supervision of a parent or trusted adult.

2. Set up your computer and a screen to show students the Use vs. Misuse activity slides printable.
3. Make copies of the printables for each student. If you won't be showing the Use vs. Misuse activity slides, make copies of this as well.

## LESSON DIRECTIONS

### PART 1

**Step 1:** Begin this lesson by prompting an open class discussion:

- Do you think OTC medicines are dangerous if they are misused, or used in a manner 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. Inform students that by the end of this lesson, the class will revisit the question.

**Step 2:** Help illuminate how students' preconceived ideas can sometimes cloud the real facts about a topic. Reinforce this idea by showing (or distributing) the Use vs. Misuse activity slides (sun, potatoes, vitamins, ibuprofen). Do not reveal the "Answer" or "Now You Know" sections on each slide. At the end, ask students:

- How are these four items related?

Answer: All are okay when used or stored properly and used in moderation, but when they are not, all can have harmful health effects.

**Step 3:** Afterward, go back through the Use vs. Misuse activity slides printable and uncover the answers beneath each item.

### **SLIDE #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 even 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 15 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.

### **SLIDE #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.

### **SLIDE #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.

### **SLIDE #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.

## **PART 2**

**Step 1:** Discuss how the four items from the Use vs. Misuse activity slides 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 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, cleaning supplies, etc.

**Step 2:** Explain that students will look more closely at the effects of medicine misuse.

Have students work in pairs to brainstorm possible answers to these questions. If students have access to technology, have them quickly research the answers. What negative effects could result from:

- Not reading and following the Drug Facts label?
- Taking more than the recommended dose?
- Redosing more frequently than directed on the label?
- Using more than one medicine with the same kind of active ingredient at the same time?
- Taking medicines for longer than directed on the label?
- Taking medicines for reasons or symptoms other than what is directed on the label?

**Step 3:** Once students have completed the questions, ask them to share their answers with the class. During the discussion of students' responses, make sure that students understand that all of these scenarios are dangerous because there are very real and potentially dangerous consequences when someone misuses OTC medicines. For example, medicines can lead to nausea, diarrhea, irregular heartbeat, seizures, and even the potential for addiction). The Drug Facts label provides instructions for using the medicine safely.

**Step 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 while studying OTC Medicine Safety, who do you believe needs to be informed about the dangers of misusing OTC medicines?

Answers may include: parents and guardians so they can keep children safe; younger students so they can avoid dangerous situations; local officials so they develop programs and policies for safe medicine use and disposal

**Step 5:** Distribute OTC Medicine Awareness in Your Community printable. Review the two different audiences students can reach (younger students and local officials). Remind students that they need to keep their audience in mind when writing. Discuss these questions as a class:

- What information would be most persuasive for younger students? What is the best way to get their attention and help them remember this information?
- What information would be most persuasive for local officials? What is the best way to communicate this information and other suggestions?

**Step 6:** Invite students to conduct research for their writing externally. Then, have them complete the assignment.

**Step 7:** Explain to students that this activity sheet can be used to launch a larger community-wide campaign. A coalition of families, students, and community leaders can show collective support for making their communities and schools safer places for children and their families. A coalition will help to increase and disseminate information within the school and community about the safe use and storage of OTC medicines and the dangers of misuse. Students can work with their families and neighbors to submit a collection of letters to local town officials and leaders that encourage getting the word out about safe medicine use.

**Step 8:** Assess what students learned about OTC medicine safety. Have them complete the OTC Medicine Safety Post-Assessment Quiz printable. Compare the completed quizzes to students' assessments to measure the growth of their knowledge.

#### LESSON EXTENSIONS

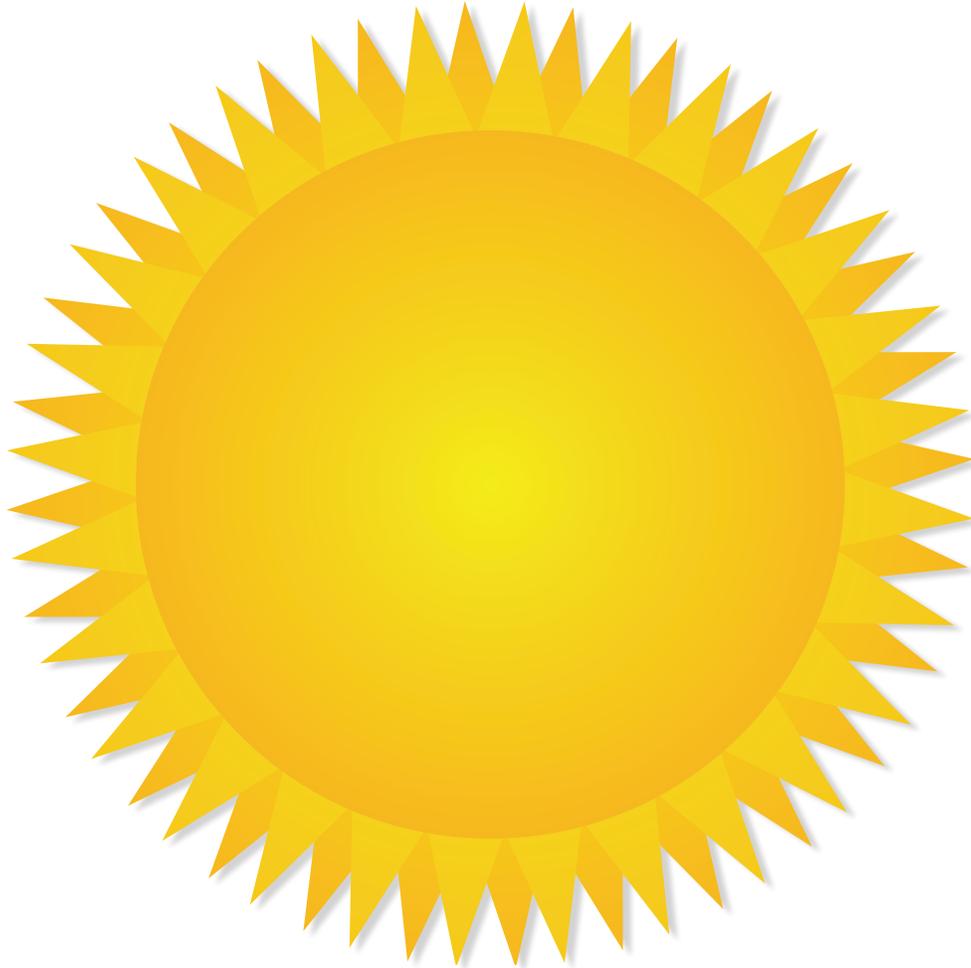
Now that students have learned about the misuse of OTC medicines, the importance of understanding the Drug Facts label, and the safety precautions for proper use and storage, allow them to apply what they've learned in a role-playing activity. Hand out the Culminating Student Activities printable and allow students time to work in groups to analyze a few scenes, then create skits that address specific scenarios.

#### HOME CONNECTIONS

Send home the OTC Medicine Safety's Family Newsletter printable so students may continue the discussion at home. Encourage students to discuss what they have learned about the Poison Help number, to post the number in a visible place in their home, and to get family members to save the number in their mobile phones.

## LESSON 4

# USE VS. MISUSE



**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 in strong teeth. Too much sun, however, may cause cancer and skin damage. To protect against damage from the sun's rays, it is important to avoid the sun between 10 a.m. and 4 p.m., when the sun's rays are strongest; wear protective clothing; and use a sunscreen with an SPF of 15 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.

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**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 the discoloration and bad taste.

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# USE VS. MISUSE



**ANSWER** Vitamins can be found on store shelves and are widely available. They're easy to access, but as they're considered over-the-counter medicines, 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.

## LESSON 4

# USE VS MISUSE



**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 also 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.



Student Name: \_\_\_\_\_

## CULMINATING STUDENT ACTIVITY 1

# WHAT'S THE SCENARIO?

**Directions:** Read the scenarios and answer the questions that follow on a separate sheet of paper.

### Monique

Monique's parents are heading out for the evening, so Lora, her regular sitter, comes over to watch her. But not long after her parents leave, Monique starts to feel really sick to her stomach. Lora remembers she has some medicine in her backpack that the doctor prescribed to help relieve her flu symptoms a few months ago. Lora gets it out and tells Monique it should be fine for her to take it since she's really not that much younger or smaller than Lora.

1. Should Monique take Lora's medicine? Why or why not?
2. Outline the steps that Lora should have taken in order to handle this situation responsibly.

### Kyron

Kyron's family is heading out on a weeklong trip to visit his grandmother Jada, who lives hours away. Because they will be gone for several days, Kyron's mom makes sure to pack a bag with many of the medicines the family uses regularly. When they get to his Grandma Jada's house, however, Kyron notices that his mom sets the bag on a shelf in a lower-level kitchen cabinet. Kyron is concerned because he knows this isn't safe, especially because his younger cousin Maya, who is only three years old, is also visiting Grandma Jada that week.

1. Who should Kyron talk to about his concerns? Why?
2. Brainstorm some ways that Kyron and his parents could address the medicine storage situation at his grandmother's house. What are some of the things they should talk to her about?

### Sophie

Sophie has talked to her parents about what she learned in *OTC Medicine Safety* and they've decided as a family to take steps to solve some of the problems with medicines in their household. Help Sophie's family come up with solutions to the following problems:

1. Sophie's mom has always used a kitchen spoon to measure medicine.
2. Sophie's dad goes to the drugstore to buy medicine to help Sophie's sore throat and cough. He remembers that Sophie also takes allergy medicine and wonders if it is okay to mix different medicines. Who can Sophie's dad talk with to get answers to his questions?

### Jason

Jason is an adult who has been dealing with a headache for the past couple of hours, and is trying hard to meet a deadline at work. Obviously his ailment is making it difficult to do his work. He used the bottle of headache medicine in his bag before, and the medicine worked pretty well. This time, however, Jason's headache seems to be extra annoying. He's thinking about taking more than the dose he took before because his headache seems worse this time around. He's already taken cold medicine today for an ongoing bout with stuffiness, so maybe a couple of these headache pain reliever pills will do the trick.

1. Should Jason take more than the recommended dose of headache pain reliever medicine? Why or why not?
2. Why is it important for Jason to read the *Drug Facts* label on the headache medicine? Hint: Remember that he has also taken cold medicine today.

**Follow-up:** Create your own scenario or pair up with another student to produce a joint scenario.

Student Name: \_\_\_\_\_

## CULMINATING STUDENT ACTIVITY 2

# ROLE-PLAYING

**Directions:** Select one or more of these situations to act out with your group. Review the characters, situations, and tasks as you prepare to present to your classmates. Your teacher will quiz your classmates with the follow-up questions about each situation.

### The Unwell Friend

#### CHARACTERS

- **Sarah:** A student who lives in the house where the scene is set
- **Emma:** A friend who doesn't live in the house and isn't feeling well
- **Mrs. Moore:** Parent who lives in the house
- **Mrs. Watson:** Parent of friend who doesn't feel well

#### SITUATION

- Your friend is visiting you and develops a bad headache, so she asks for some medicine she usually takes at home.

#### TASK(S)

- Act this scene out twice: once, showing the wrong or unsafe way to handle this situation, then showing the safe and responsible way to address the problem.
- Include discussion about whether the medicine she takes is prescription (Rx) or over-the-counter (OTC), and how to tell the difference.
- Decide how to handle the situation with the adults.

#### QUESTIONS

1. Did you think the way your classmates acted this scene out seemed believable? Why or why not?
2. Name one thing you remember about the differences/similarities between prescription and OTC medicines that your classmates didn't address in the skit.
3. Do you have any other suggestions for safe ways to deal with this situation?

### The Right Dose

#### CHARACTERS

- A student who lives in the house where the scene is set
- Two or three friends who are visiting to study for a test
- An older sibling who lives in the house
- A parent

#### SITUATION

- You and your friends are studying in a room where medicine is kept.
- An older sibling comes in and begins rifling through the medicine drawer.
- The older sibling chooses a medicine without consulting an adult and doesn't choose the dosage device that comes with the medicine.

#### TASK(S)

- You and your friends must convince the older sibling he or she is being unsafe by explaining what you have learned about medicine safety and *Drug Facts*.
- You also should explain that when it comes to taking medicine, more doesn't necessarily mean better.
- The parent must be consulted about taking the medicine.

#### QUESTIONS

1. What else should the younger siblings inform their older sibling about?
2. Did the students in this skit address where the medicine was stored in the house? Was it stored in a smart place? Why or why not?
3. Do you have any other suggestions for safe and responsible ways to deal with this situation?

## CULMINATING STUDENT ACTIVITY 2

# ROLE-PLAYING

## CONTINUED

### The Drug Facts Detectives

#### CHARACTERS

- A student
- A parent of the student
- A pharmacist
- A shopper (or a pair of shoppers) who needs information about OTC medicine directions for a baby
- A shopper who needs information on the drug interactions of an OTC medicine

#### SITUATION

- A student and his or her parent are at the pharmacy looking for a medicine for the student's allergy symptoms.
- The student and the parent have some questions about the information on the *Drug Facts* label.
- Other shoppers learn from what the student and parent are doing and become more informed about the *Drug Facts* label.

#### TASK(S)

- The student and the parent must ask the pharmacist some questions about the *Drug Facts* label; in the skit, the student and the parent should mention that the student sometimes takes medicine that contains a pain reliever for headaches.

- The pharmacist should help the parent and student understand how to choose the right allergy medicine by comparing active ingredients on the *Drug Facts* label with the pain reliever medicine they have at home.
- Other shoppers should hear this and realize they can ask the pharmacist questions about OTC medications.
- The pharmacist should answer other shoppers' questions and help them learn where else they can get more information.

#### QUESTIONS

1. What else do you remember about the Active Ingredients section on the *Drug Facts* label that this skit didn't mention?
2. Are there any other sections of the *Drug Facts* label the pharmacist should have or could have mentioned when talking to customers? Which sections and why?
3. Did the shoppers and pharmacist remember all the places or sources to look for more information? If not, what did they leave out?

## KNOW THE FACTS

# OVER-THE-COUNTER MEDICINE SAFETY

Read the following passage and answer the questions.

Your friend Brian is sleeping over tonight, and you plan to watch movies at home with snacks. Brian's stomachache might put a kink in the plans, however. Ever since dinner he's been feeling a bit uncomfortable, so you decide to share some medicine your parents bought last year for your little sister Kim's stomach pain. It's an over-the-counter medicine (not a prescription), and you know that Brian is allergic to certain medicines and you should always talk to a trusted adult before using medicine. There is an expiration date on the bottle, and on the back panel there is a *Drug Facts* label, which lists information like uses (what symptoms the medicine treats), directions (the amount or dose of medicine to take, who should take it, how often it should be taken), active and inactive ingredients, and more. Your parents have gone to bed and you're thinking about handling this situation yourself.

Should you give the medicine to Brian without talking to your parents first? Why or why not?

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Describe the difference(s) between OTC medicines and prescription medicines:

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Why is it important to read the *Drug Facts* label when planning to take OTC medicines?

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Should your parent give Kim's stomach pain reliever to Brian if he has the same symptoms as Kim? What part of the *Drug Facts* label will indicate that?

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## KNOW THE FACTS

# OVER-THE-COUNTER MEDICINE SAFETY FOR ADOLESCENTS

Tell your family about over-the-counter (OTC) medicine safety. Create a two- to three-minute public service announcement (PSA) about OTC medicine targeted at your family. Use any data or statistics from the infographic or the resources on the next page that you think might strengthen the message of your PSA. Think about younger siblings, grandparents, or someone in your home recovering from an operation or injury who needs to take medicine.

Use this outline to start planning the content for your PSA, and when you've organized your thoughts, draft your message on a separate sheet of paper. Remember: Your message should be informative and interesting!

### **PSA MESSAGE: USING AND STORING OTC MEDICINES SAFELY**

**Audience:** Your family members *(What are their ages? How many people are in your family?)*

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**Scenario** *(Where does this PSA take place?)*

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**Character Names** *(Who's involved in this PSA?)*

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**Action** *(What happens during your PSA?)*

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**Solution/Facts** *(How does your PSA address usage and storage of OTC medicines?)*

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**For More Information** *(Here is your opportunity to offer viewers a phone number or website for more information!)*

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# OVER-THE-COUNTER MEDICINE SAFETY FOR FAMILIES

Over 20,000 kids per year need medical help  
due to medicine mistakes or misuse.\*

Download more **FREE** resources:  
[ymiclassroom.com/otcmedsafety-families](http://ymiclassroom.com/otcmedsafety-families)



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\*AAPCC National Poison Data System query parameters: 2011–2016 annual average, ages 0-19, all unintentional and intentional misuse reasons for pharmaceutical exposure, cases en route to a healthcare facility or treatment recommended by a specialist in poison information, all outcomes.

All program materials  
are FREE.



# Keeping Your Children Medicine-Safe

As children get older, they often start to take on more responsibility—at home, at school, and even with their health. That is why it's so important for families to help children learn how to make safe choices.

Over-the-counter (OTC) medicines can be purchased from a store without a doctor's prescription, but they still need to be treated with the same amount of care! It is important to read and follow the *Drug Facts* label every time.

## Medicine Action Plan

**Create a medicine action plan to help keep everyone safe and healthy! Have your child check off each item as you complete it together.**

- Which adults should your child talk to if he or she is sick and may need medicine? Provide options if a primary caregiver is unavailable.
- Where will medicines be stored in your home? Remember that they should be up, away, and out of sight!
- How will you make sure that each medicine and the dosing device it comes with are kept together?
- How will your family make sure that the child safety caps are locked on all medicines?
- How will you make sure that visitors keep all of their medicines out of children's reach and sight?
- Program the Poison Help number into your phone: **1-800-222-1222**. Bookmark the Interactive Poison Help Website: **poisonhelp.org**.

## Get to Know Your Medicine Label

**Work as a family to learn more about the children's OTC medicines that you have in your home. Answer these questions together:**

- ▶ What are the active ingredients?
- ▶ Are any side effects listed (under "Warnings")?
- ▶ Where is the poison control number on this label?
- ▶ What is the correct dose for your child to take if he or she is sick?
- ▶ How frequently should your child take the medicine if he or she is sick?
- ▶ Is the dose or frequency different for a younger sibling?
- ▶ What type of medicine dosing device came with the medicine? (Make sure it is stored with the medicine!)



**Get free, confidential answers to your medicine questions by calling**



# Medicine Storage and Disposal, Safe Use, and Misuse

Using the correct dose of medicine is a science—too little won't be effective, and too much could be harmful. It's also important to make sure that medicines are stored up, away, and out of sight, as well as disposed of properly (see [bit.ly/fda-disposal](http://bit.ly/fda-disposal)).

Play the **Hidden Home Hazards** game as a family to learn about safe storage.

## Medicine Safety Hunt

**How safe is each room in your home? Work together as a family to make sure that all types of health-related items are up and away in a safe location. Look for all of the following:**

- ▶ Liquid medicines
- ▶ Pills
- ▶ Medicated creams
- ▶ Cough drops
- ▶ Eye drops
- ▶ Vitamins
- ▶ Supplements
- ▶ Prescription medicines
- ▶ Other healthcare products or potentially dangerous products, such as detergent pods

1. Are all medicines up, away, and out of sight?
2. Is the medicine dosing device stored with the medicine?
3. When disposing of a medicine, do you follow the U.S. Food and Drug Administration's guidelines?
4. Is any medicine past its expiration date?

## What Should You Do?

**As a family, read each of the following scenarios about OTC medicines. Is this situation safe? Is this misuse? How should the characters handle the situation?**

- ▶ Nikita has a headache. Last time she had a headache, her dad gave her some ibuprofen. He isn't home from work yet, so Nikita goes to the medicine cabinet and takes a couple of the pills without talking to her dad.
- ▶ Ruben is taking a dose of cough syrup under his mom's supervision. He forgot the dosing device in the cabinet, so he

grabs a spoon from the kitchen drawer to measure his dose of medicine.

- ▶ Every day, Angelica takes a once-a-day allergy medicine. Her mom always reminds her at breakfast. Today, though, it doesn't seem to be working. At lunchtime, Angelica takes another dose of the medicine so she will feel better faster.



Dosage Cup

**the Poison Help number, 1-800-222-1222, or visit [poisonhelp.org](http://poisonhelp.org).**



## Our OTC Medicine Safety Checklist

- Read and follow the *Drug Facts* label every time.
- Measure carefully. Keep the medicine and the dosing device it comes with together. Never use household spoons to measure medicine.
- Check that all medicines, vitamins, and supplements are stored up, away, and out of sight of young children. Keep prescription medicines locked away.
- Ensure that the child safety caps are locked on all medicines.
- Remind visitors to keep luggage, purses, or anything else that might have medicines in it out of children's reach and sight.
- Medicines should only be taken with the supervision of an adult or trusted guardian. Communicate with other caregivers to prevent double-dosing errors.
- Make sure your children know that using OTC and prescription medicines incorrectly can cause harm.
- Program the Poison Help number into your phone: **1-800-222-1222**.
- Bookmark the Interactive Poison Help Website: **poisonhelp.org**.

### Emergency Contacts

Post these numbers in a prominent place in your home. Remember to save them into your cell phone in case of emergency.

Family Doctor Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Pharmacy Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_



Poison Help Number: **1-800-222-1222**

Open 24 hours a day *every day of the year*. Calls are fast, free, and confidential.

Interactive Poison Help Website: **poisonhelp.org**

All of these resources and more are available for FREE:  
[ymiclassroom.com/otcmedsafety-families](http://ymiclassroom.com/otcmedsafety-families)