

COMPARE 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, plus research time

OBJECTIVES

Students will:

- Define and understand the similarities and differences between OTC medicines and prescription medicines
- Identify responsible medicine use

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◊ [OTC Medicine Safety Pre-Assessment Quiz](#)
 - ◊ [Activity 1: Compare 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
- Computers with internet access for Extension Activity
- 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_7-8.

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 that research shows that kids in their age range are beginning to self-medicate (deciding when and how to take medicines on their own). Emphasize that students should *never* take medicine without the approval and supervision of a parent, caregiver, or other trusted adult. Stress 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 safe medicine use *before* they become more responsible for their own self-care.
3. Begin a class discussion by asking students to brainstorm what they do when they get sick. (Answers may include go to the doctor, take medicine, rest, etc.) Mention that there

are many ways that doctors treat sickness, one of which is by recommending medicine.

4. Tell students that medicine is considered a drug, and a drug is defined as "a substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease." (See *Drug* at www.fda.gov/drugs/drug-approvals-and-databases/drugsfda-glossary-terms#D.) Display this definition if possible and, as a class, use context clues and reference materials to decode these terms.
 - **Substance** an item
 - **Diagnosis** determining the cause of someone's illness
 - **Mitigation** making something less serious or unpleasant
5. Explain that medicines fall into two 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.

6. Ask students to brainstorm different medicines that belong in the OTC or Rx category. Then, using the FDA's definition of a drug, ask students to brainstorm OTC medicines that might be overlooked. (Possibilities include cough drops, eye drops, ointments, antiseptic spray, etc.) Ask students to explain how these items fit the definition of a drug.
7. Organize the class into groups of three or four. Distribute the [Compare Over-the-Counter vs. Prescription Medicines](#) reproducible activity sheet and have teams complete it. Discuss their answers as a class and invite any follow-up questions about the lesson. See the [Answer Key](#) for suggested responses.
8. **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, and only taking medicine with the approval and supervision of a parent or trusted adult.** 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

Provide students with the following prompt: *How does a medicine become approved for over-the-counter use?* Have students research the answer to this question and write a paragraph describing their findings.





OVER-THE-COUNTER MEDICINE SAFETY



GRADES 5-8
PRE-ASSESSMENT

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Pre-Assessment

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	
Over-the-counter (OTC) medicine	
Not sure	

Q2. This is medicine bought in a drugstore, pharmacy, or grocery store without having to get a doctor's permission.	
Prescription medicine	
Over-the-counter (OTC) medicine	
Not sure	

Medicine Safety

Q3. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE	NOT SURE
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 <i>Drug Facts</i> label tells you what symptoms the medicine treats.			
The <i>Drug Facts</i> 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	NOT SURE
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.)



OVER-THE-COUNTER MEDICINE SAFETY



GRADES 5-8
PRE-ASSESSMENT

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Pre-Assessment (continued)

Medicine Safety

Q5. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE	NOT SURE
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	NOT SURE
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.			



OVER-THE-COUNTER MEDICINE SAFETY



GRADES 7-8
UNIT 1, ACTIVITY 1

SKILLS:
Compare/contrast
information,
critical thinking

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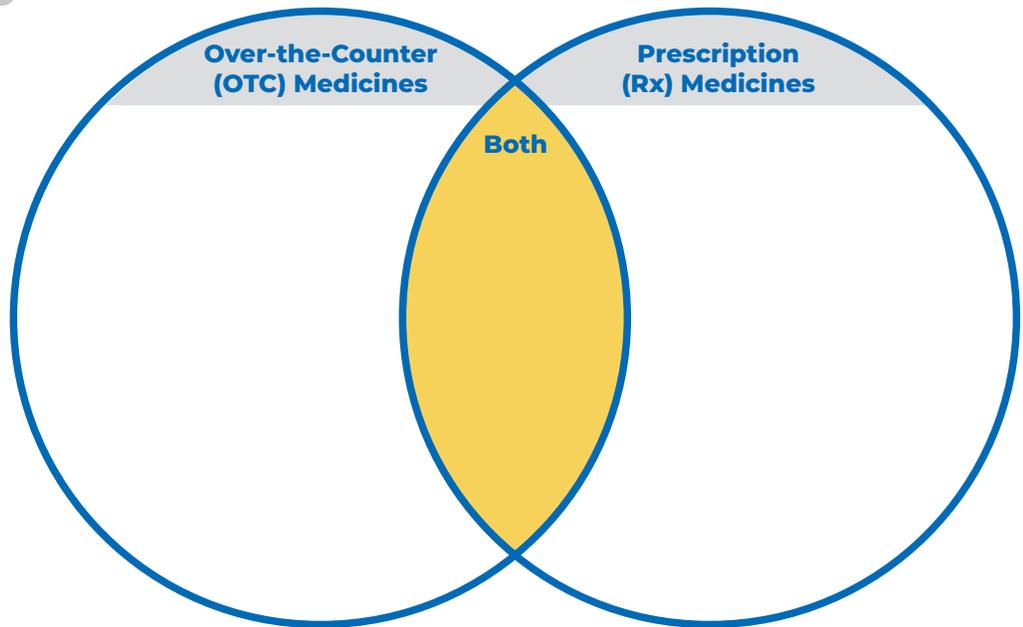
Compare Over-the-Counter vs. Prescription Medicines

About Medicines: Rx, OTC, or Both?

- Children should use only with the approval and supervision of a parent or trusted adult.
- Should only be used by the person for whom the medicine was ordered.
- Prescribed by a doctor or nurse practitioner for one person.
- The medicine label, including the directions, must be read and followed carefully before use.
- Can buy without a doctor's prescription.
- Dangerous to misuse or abuse.
- A health care professional or the Poison Help Line can answer questions about this medicine.

Part 1

Directions: Sort the statements by number in the correct place in the Venn diagram.



Did you know...

More than 85,000 children, ages 19 and under, require medical attention each year due to medicine mistakes or misuse.¹



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

Part 2

Directions: Check whether the following statements describe a prescription medicine or an over-the-counter medicine, or whether there is not enough information to decide (don't know).

STATEMENT	RX	OTC	DON'T KNOW
1. A pill for lowering cholesterol is in a bottle labeled with the names of the patient and the doctor.			
2. An antibiotic ointment is used to treat an infection in a wound.			
3. Several family members use a cough syrup purchased at the supermarket.			



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The *Drug Facts* label helps you understand how medicines can help you and how to take them safely.

Active Ingredients

Lists the ingredients in the medicine that make it work.

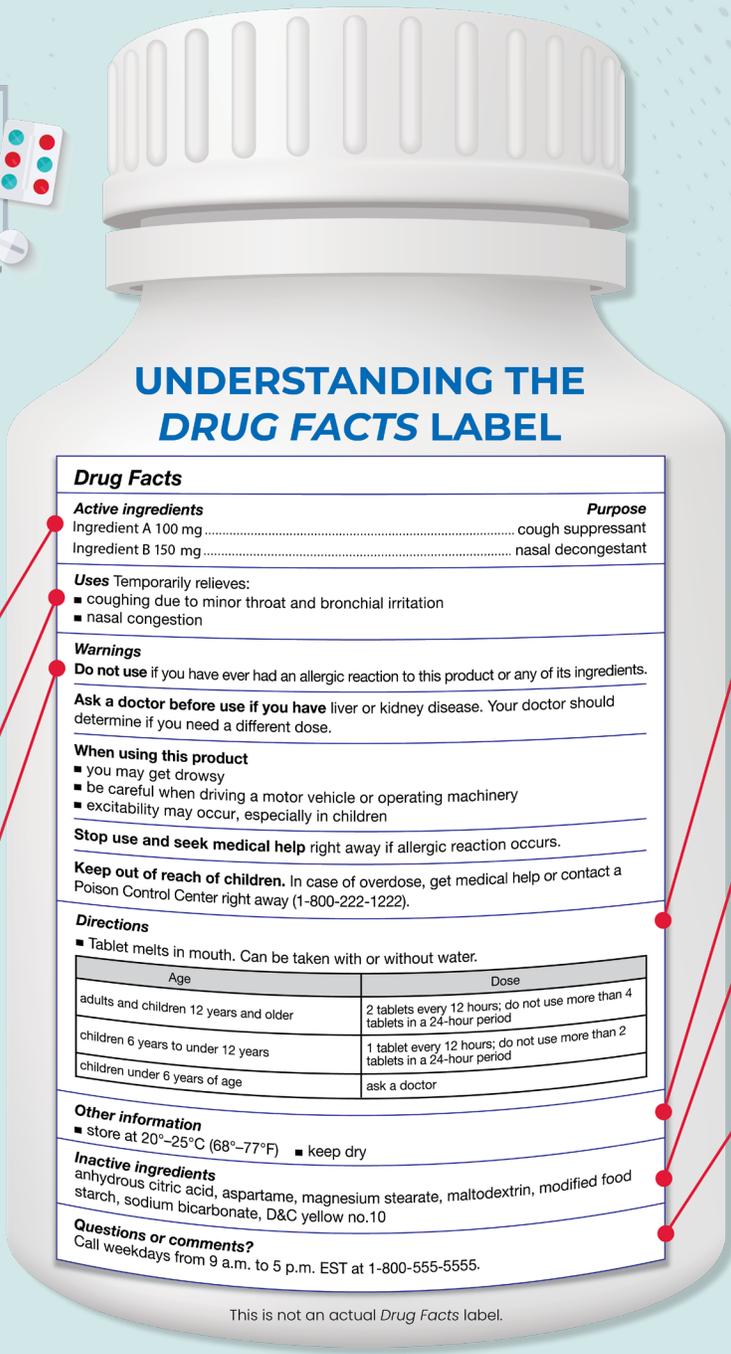
Uses

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.

UNDERSTANDING THE DRUG FACTS LABEL



Drug Facts

Active ingredients	Purpose
Ingredient A 100 mg.....	cough suppressant
Ingredient B 150 mg.....	nasal decongestant

Uses Temporarily relieves:

- coughing due to minor throat and bronchial irritation
- nasal congestion

Warnings

Do not use if you have ever had an allergic reaction to this product or any of its ingredients.

Ask a doctor before use if you have liver or kidney disease. Your doctor should determine if you need a different dose.

When using this product

- you may get drowsy
- be careful when driving a motor vehicle or operating machinery
- excitability may occur, especially in children

Stop use and seek medical help right away if allergic reaction occurs.

Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away (1-800-222-1222).

Directions

- Tablet melts in mouth. Can be taken with or without water.

Age	Dose
adults and children 12 years and older	2 tablets every 12 hours; do not use more than 4 tablets in a 24-hour period
children 6 years to under 12 years	1 tablet every 12 hours; do not use more than 2 tablets in a 24-hour period
children under 6 years of age	ask a doctor

Other information

- store at 20°–25°C (68°–77°F) ■ keep dry

Inactive ingredients
anhydrous citric acid, aspartame, magnesium stearate, maltodextrin, modified food starch, sodium bicarbonate, D&C yellow no.10

Questions or comments?
Call weekdays from 9 a.m. to 5 p.m. EST at 1-800-555-5555.

This is not an actual *Drug Facts* label.

All medicines — OTC medicines and prescriptions — should always be taken with the approval and supervision of a parent or trusted adult.

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.

MEASURE IT CORRECTLY

To get an exact measurement, it is important to only use the dosing device that is provided with the medicine. The *Drug Facts* label tells you how much medicine you should take based on your weight and/or age. Take only one medicine with the same kind of active ingredient at a time.

Fact: Household spoons come in various shapes and sizes, which means they hold different amounts of liquid.



SAFETY TIPS

- **Always** read the entire *Drug Facts* label before using an OTC medicine.
- **Never** take medicines with the same active ingredient at the same time!
- Call the **Poison Control Center** number (also called Poison Help Line) at **1-800-222-1222** if you have **any** medicine questions or concerns.



Unit 1, Activity 1:

COMPARE OVER-THE-COUNTER VS. PRESCRIPTION (RX) MEDICINES

Part 1

1. Both
2. Prescription (Rx) medicine
3. Prescription (Rx) medicine
4. Both
5. Over-the-Counter (OTC) medicine
6. Both
7. Both

Part 2

1. Prescription (Rx)
2. Don't know (not enough information)
3. OTC

Unit 2, Activity 2:

USING THE DRUG FACTS LABEL

1. Side effects may include drowsiness and/or excitability, especially in children
2. 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 an allergic reaction or overdose occurs.
3. The **Directions** section.
4. Answers could include that the *Drug Facts* label appears in a standardized format for consumers' ease of use and understanding in what a medicine does and how to use it safely. The label allows consumers to know where to look for information to make informed choices relevant to their health situation. Most serious warnings are presented first as it is helpful to convey these important safety messages to consumers.¹
5. Answers might include: Uniform formatting on the label: Use of bolded and italicized headers and bulleted information within sections increases readability; use of bolded font emphasizes important safety information, such as "Keep out of reach of children," "Stop use and seek medical help right away."
6. 1-800-222-1222

Unit 2, Activity 3:

FIND A DRUG FACTS LABEL SCAVENGER HUNT

Answers will vary.

Unit 3, Activity 4:

ACCURATE MEDICINE DOSING

1. Olivia is 13 years old. The proper dose for adults and children 12 years of age and older is 5 ml two times per day. The dose may be repeated every 12 hours while symptoms last. Olivia's reasoning might be that since it is a new day that she can take another dose of medicine. This is an error as no more doses should be given until 9 am. The label directs that it is not safe to take more than 10 ml in 24 hours.
2. Miguel is 11 years old. The proper dose for children under 12 years of age is 2.5 ml two times per day. Taking 5 ml once a day can result in an overdose and potential side effects.
3. Using anything other than the dosing device that is packaged with the medicine can result in an inaccurate dose.

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 AWARENESS IN YOUR COMMUNITY

Answers will vary.

Unit 5, Activity 8:

OTC MEDICINE SAFETY ARTICLE

Answers will vary.



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1. <https://www.fda.gov/media/150098/download>;

2. <https://www.fda.gov/drugs/information-consumers-and-patients-drugs/otc-drug-facts-label>

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.	✓	



OVER-THE-COUNTER MEDICINE SAFETY

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REPRODUCIBLE LETTER
FOR FAMILIES

Dear Parents and Caregivers,

Did you know that more than 85,000 children, ages 19 and under, require medical attention each year due to medicine mistakes or misuse?

As kids get older, they 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 kids learn how to make safe choices *before* they take on a more active role in their self-care, including medicine use.

Since over-the-counter (OTC) medicines can be bought from a store without a doctor's prescription, young people often falsely assume that they don't need to be careful with them. However, OTC medicines can cause harm if they are not used correctly. To prevent medicine mistakes or misuse, make sure all members of your household know to read and follow the *Drug Facts* label.

Your child has already started to learn about the importance of medicine safety at school. Now is the perfect time to build on that knowledge to make sure everyone in your home feels ready to handle medicines responsibly. When families work together to create a medicine action plan, they help to keep everyone safe and healthy.

Use the checklist below to ensure that you keep your family "OTC Ready."



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Developed with support of the National Association of School Nurses.

Medicine Safety Practices

- Make sure all OTC medicines are properly labeled and stored in their original packaging.
- Never mix medicines — keep them in separate labeled containers.
- Teach your children that they should never take any medicine without adult approval and supervision — children should always ask a parent, caregiver, or other trusted adult for help before taking medicines.
- Read and follow the *Drug Facts* label every time you or your children use a medicine.
- Carefully follow the dosage directions on the *Drug Facts* label to avoid an overdose.
- Never use household spoons to measure medicine — only use the dosing device packaged with an OTC medicine.
- Never take medicines with the same active ingredient at the same time to avoid an overdose of that ingredient.
- Communicate with other caregivers in your home to prevent double-dosing errors.
- Call the **Poison Control Center** (also called the **Poison Help Line**) at **1-800-222-1222** if you have any questions or if a medicine mistake occurs.

Safe Medicine Storage and Disposal

- Store all medicines up, away, and out of sight of young children.
- Make sure that child safety caps are locked on all medicines after use.
- Keep the medicine and the dosing device it came with together.
- Remind visitors to keep luggage, purses, or anything else that might have medicines in it, out of children's reach and sight.
- Check the use-by and expiration dates on OTC medicines and safely dispose of any that are outdated.
- Mix leftover or expired OTC medicines with coffee grounds or kitty litter for safe disposal.



Here's to keeping families safe!



Please visit
www.ymiclassroom.com/otcmedsafety-families
for more *OTC Medicine Safety* information, including games, quizzes, and a storybook.



SEGURIDAD DE LOS OTC MEDICAMENTOS DE VENTA LIBRE

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CARTA REPRODUCIBLE
**PARA LAS
FAMILIAS**

Estimados padres y cuidadores:

¿Sabían que más de 85,000 niños, de 19 años o menos, requieren atención médica cada año debido a errores o al mal uso de los medicamentos?¹

A medida que los niños crecen, comienzan a asumir más responsabilidades: en casa, en la escuela e incluso con su salud. Por eso es tan importante que las familias ayuden a los niños a aprender cómo tomar decisiones seguras antes de asumir un papel más activo en su cuidado personal, incluido el uso de medicamentos.

Dado que los medicamentos de venta libre (OTC) pueden comprarse en una tienda sin receta médica, los jóvenes suelen suponer erróneamente que no necesitan tener cuidado con ellos. Sin embargo, los medicamentos OTC pueden causar daños si no se utilizan de forma correcta. Para evitar errores o usos indebidos de medicamentos, asegúrense de que todos los miembros de su hogar sepan leer y seguir la etiqueta *Drug Facts* (Información del medicamento).

Sus hijos ya han comenzado a aprender sobre la importancia de la seguridad de los medicamentos en la escuela. Este es el momento perfecto para aprovechar ese conocimiento y asegurarse de que todos en su hogar se sientan listos para manejar los medicamentos de manera responsable. Cuando las familias trabajan juntas para crear un plan de acción de medicamentos, ayudan a mantener a todos seguros y saludables.

Utilicen la lista de verificación a continuación para asegurarse de que su familia esté "lista para los medicamentos OTC".



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Desarrollado con el apoyo de la Asociación Nacional de Enfermería

Medidas de seguridad para medicamentos

- Asegúrense de que todos los medicamentos OTC estén debidamente etiquetados y almacenados en su envase original.
- Nunca mezclen medicamentos: consérvenlos en recipientes separados y etiquetados.
- Enséñenles a sus hijos que nunca deben tomar ningún medicamento sin la aprobación y supervisión de un adulto; los niños siempre deben pedir ayuda a un padre, cuidador u otro adulto de confianza antes de tomar medicamentos.
- Lean y sigan la etiqueta *Drug Facts* cada vez que ustedes o sus hijos utilicen un medicamento.
- Sigán con atención las instrucciones de dosificación en la etiqueta *Drug Facts* para evitar una sobredosis.
- Nunca utilicen cucharas domésticas para medir el medicamento, solo utilicen el dosificador que viene con un medicamento OTC.
- Nunca tomen medicamentos con los mismos ingredientes activos al mismo tiempo para evitar una sobredosis de ese ingrediente.
- Comuníquense con otros cuidadores en su hogar para evitar errores de dosis doble.
- Llamen al **Centro de control de envenenamiento** (también llamado **Línea de ayuda por envenenamiento**) al **1-800-222-1222** si tienen alguna pregunta o si se produce un error con un medicamento.

Almacenamiento y eliminación seguros de medicamentos

- Guarden todos los medicamentos en un lugar alto, lejos y fuera de la vista de los niños pequeños.
- Asegúrense de que los tapones de seguridad para niños estén bloqueados en todos los medicamentos después de usarlos.
- Conserve juntos el medicamento y el dosificador con el que vino.
- Recuérdenles a los visitantes que guarden el equipaje, las carteras o cualquier otro elemento que pueda contener medicamentos fuera del alcance y la vista de los niños.
- Comprueben las fechas de caducidad de los medicamentos OTC y desechen de forma segura los que estén caducados.
- Mezclen los medicamentos OTC sobrantes o caducados con granos de café o arena para gatos para desecharlos de manera segura.

¡Por la seguridad de las familias!



Visiten

[www.ymiclassroom.com/
otcmedsafety-families](http://www.ymiclassroom.com/otcmedsafety-families)

para obtener más información sobre la Seguridad de los medicamentos OTC, incluidos juegos, cuestionarios y un libro de cuentos.



1. Sistema Nacional de Datos Toxicológicos de la Asociación Americana de Centros de Control de Envenenamientos. Los datos cubren el promedio anual entre 2011 y 2021, edades de 0 a 19.