

Medication Safety



Target Age:

Seniors

Goal:

To teach ways to prevent medicine problems from occurring and highlight poison prevention tips.

Learning Objectives:

Participants will be able to:

- Name 3 reliable sources of medication safety information.
- Recall at least 2 questions to ask the health care provider when beginning any new medicine or other health remedy.
- Name 1 way to track medicines.
- Recall 2 ways to keep themselves, and their loved ones safe from household poisonings.

Timeline:

This lesson is a 45-50 minute session. If the video and game are used the time increases accordingly.

Materials:

- Power Point or overhead projector for the Power Point slides. Slides can be found on the Utah Poison Control Center (UPCC) Website: www.utahpoisoncontrol.org
- UPCC magnets and telephone stickers available by calling 1-800-222-1222.
- Video *The Other Drug Problem* (optional) available for loan at the UPCC 1-800-222-1222 or by contacting NCPIC at www.talkaboutrx.org Run time 14:50.
- *Herbal Products and Prescription Medicine* handout included in appendix A. *Medicines and You: A Guide for Older Adults* booklet (optional). Available for download from the U.S. Department of Health and Human Services Food and Drug Administration at the following URL address: <http://www.fda.gov/downloads/Drugs/ResourcesForYou/UCM163961.pdf>
- Stories/Situations of possible medicine interactions included in appendix B.
- *6 Key Questions* handout included in appendix C.
- Chalkboard, whiteboard, or poster board and appropriate writing tool for the Tic Tac Toe game.
- Prizes for the Tic Tac Toe Game (optional)

Description:

Approximately 83% of older adults take at least one prescription drug and 50% take three or more medications. Older adults are a growing population in our society, so the potential for poisonings among this group will likely rise. Recent studies have shown that between 10 and 20 percent of all unintentional poisonings among young children in the US involve a grandparents' medication. Most of these poisonings occurred when medicine was left on a table or countertop, on low shelves, or in a purse/pocketbook. To combat the potential poisoning from prescriptions, and other health remedies, and household poisonings, it is important to educate older adults on ways to manage medications and prevent poisonings. Education is a key element in keeping themselves and their loved ones safe.

Content:

The lesson content is presented in a brief outline for easy reference. This is followed by detailed content which includes all learning activities, methods, material lists and information needed to facilitate the session.

Content Outline:**1. Introduction**

- a. Introduce yourself
- b. Utah Poison Control Center (UPCC)

2. What is a Poison Center

- a. UPCC Mission Statement
- b. UPCC Staff

3. Statistics and Definitions

- a. Statistics
- b. Health Remedies

4. Sources of Information

- a. Possible Sources
- b. Finding Good Sources

5. Poisonings

- a. Interactions
- b. Herbal Products and Prescription Medicine
- c. Stories/Situations

6. Questions are the Key

- a. 6 Key Questions
- b. Other Ways to get Answers

7. Tracking Medicines

- a. Tracking Methods
- b. Medicine Journal or Diary

c. *Medicines and You*

8. Household Poison Prevention

- a. What is a Poison?
- b. Unintentional Poisonings
- c. Prevention
- d. If a Poisoning Occurs

9. Video (optional)

- a. *The Other Drug Problem*

10. Testing Our Knowledge

- a. Tic Tac Toe Game

11. Conclusion

- a. UPCC Hotline Number
- b. Call First to Prevent a Poisoning

12. Appendices

- a. Herbal Products and Prescription Medicine
- b. Stories/Situations
- c. 6 Key Questions
- d. Tic Tac Toe Game

Medication Safety Lesson

1. Introduction

- a. Introduce yourself
- b. Explain that today's program about medicine safety and poison prevention was obtained from the Utah Poison Control Center.

2. What is a Poison Control Center?

Present the following information to the group.

- a. **UPCC mission statement:** "To prevent and minimize adverse effects from a poison exposure through education, service, and research".
- b. **UPCC staff consists of:** Registered nurses, pharmacists, medical doctors, and health educators.

3. Statistics and Definitions

Present the following information to the group.

- a. **Statistics:**
 - 83% of older adults take at least one prescription drug
 - 50% take 3 or more medications
- b. **Health remedies consist of:** Prescription drugs, over-the-counter medications, herbals, vitamins, supplements, certain foods and juices.

4. Sources of Information

Explain that the best way to take charge of our health is to gather the information we need. It's tempting to trust all the information we hear and read, but it is important to evaluate the source of our information.

- a. **Possible sources of information include:** doctor, nurse, pharmacist, Poison Control Center, ads (TV and magazines), friends and family, the internet. Discuss the pros and cons of each source.
- b. **Finding good internet sources:** Look for government, educational, or nonprofit websites (these sites usually end in gov, edu, or org). Also check that information is current and that the date the site was updated is not too long ago (this is usually noted at the bottom of the home page).

5. Preventing Poisonings

Explain that poisonings can occur at any age. It is not just a problem that affects children. Present the following information:

- a. **Interactions:** The combination of 2 or more things. In the case of medicines this could be something good or it could mean an unwanted effect or an unintentional poisoning. Combinations of certain medicines with other medicines, juice, herbals or vitamins may change the way the medicine works.
- b. **Herbal products and prescription medicine:** Explain that just because a product is natural, it doesn't mean it is always safe. It is important to tell your doctor what herbal products you are taking. Show the participants the *Herbal Products and*

Prescription Medicine handout. You may wish to read a few of the potential interactions. Note: Handout can be found in appendix A.

- c. **Stories/Situations:** Tell the three stories or situation and then ask the participants if there could be a potential problem. Discuss with the group the possible hazards. Note: Stories and instructions can be found in Appendix C.

6. Questions are the Key

Explain that there are 6 important questions to ask the health care provider before taking new medicine or starting any health remedy. This will help prevent an unintentional poisoning or unwanted effect. Review the handout with the group. Note: handout can be found in appendix C.

- a. **“6 Key Questions” handout:**
 1. What is the name of the medicine?
 2. Why am I taking this medicine?
 3. What side effects could I have?
 4. How much and how often do I take this?
 5. What should I do if I miss a dose or double the dose of my medicine?
 6. While taking this medicine, should I avoid alcohol, driving, certain foods, drinks, medicines, vitamins, or herbals?
- b. **Other ways to get answers to these questions:**
 1. Pharmacist
 2. *Patient Information Sheet* which is available at the pharmacy
 3. Call the Poison Control Center 1-800-222-1222

7. Tracking Medicines

Help participants realize that there are many ways to help a person remember to take their medicines at the correct time. They should choose one that works best for them. There may be others not mentioned here that work well for people. A good way to reduce the risk of unwanted interactions is to only use one pharmacy for filling prescriptions.

- a. **Tracking methods:**
 1. Calendars—write in the time you should take your medicine, and check it off after you take them.
 2. Talking medicine bottles or caps (can be expensive).
 3. Pill Reminder—a full weeks supply can be separated out according to time of day (locking pill reminders are available to help protect children).
 4. Ask your doctor or pharmacist to schedule your medicines so they are as simple as possible.
- b. **Medicine journal or diary:** The doctor needs to know if you are feeling any bad effects from your medicine. Explain the benefits of keeping a medicine journal or diary as follows:
 1. Keep track of questions or problems related to your medicine.
 2. Track test results such as blood pressure and blood sugar.
 3. Easy to take along with you to doctor visits and pharmacy trips.
- c. **Medicines and You booklet** (optional): This booklet is full of tips and information to help older adults manage their medicines. Pass the booklet out to

participants. Point out the tracking chart that can help them keep a record of medicines. You may wish to go over other material that is in the booklet. Note: Booklet can be downloaded from the U.S. Department of Health and Human Services Food and Drug Administration at the following URL address:
<http://www.fda.gov/downloads/Drugs/ResourcesForYou/UCM163961.pdf>

8. Household Poison Prevention

Present the following information to the group.

- a. **What is a Poison?** Anything someone eats, breathes, gets in the eyes or on the skin that can hurt or even cause death if it gets into or on the body.
- b. **Unintentional Poisoning:** Poisonings occur in many ways. Some of the most common ways are:
 - Medication errors
 - Children gaining access to medicines in purses, cupboards, or when substances are left out within reach
 - Mixing household chemicals
 - Improper storage of chemicals
- c. **Prevention:**
 - Household chemicals and medications should be kept up high and locked up.
 - Do not mix cleaning products
 - Store household chemicals in the original containers
 - Handle household chemicals with caution
 - Recent studies have shown that between 10 and 20 percent of all unintentional poisonings among young children in the US involve a grandparents' medication. Most of these poisonings occurred when medicine was left on a table or countertop, on low shelves, or in a purse/pocketbook. Take precautions to keep medicines out of the reach of children.
- d. **Steps to follow if a poisoning occurs:**
 1. Remain Calm
 2. Have the product in hand and ready to read information from the label
 3. Call the Poison Control Center 1-800-222-1222

9. Video (Optional)

“The Other Drug Problem” Summary: The other drug problem in the United States occurs when individuals take medications incorrectly. The video discusses the importance of following through with taking an entire prescription and to continue the full term of the medication as indicated. It addresses different scenarios including: the adverse effects of mixing prescriptions and over the counter medications, and the hazards associated with taking too much of any one medication in order to try and become healthy faster. The video allows a series of health care providers including pharmacists, psychiatrists, and physicians to give advice to viewers on how to safely and effectively take medications. Viewers learn what questions to ask themselves and their health care providers and also learn the

overall effects that non-compliance can have when it comes to any medication.
Running time: 14:50 minutes

10. Testing Our Knowledge

- a. **Tic Tac Toe Game:** Explain to the group that we are going to test our poison knowledge by playing a game. If desired, prizes can be given out in conjunction with the game. Note: The instructions for implementing the game can be found in appendix D.

11. Conclusion

- a. **UPCC Hotline Number:** Hand out magnets and telephone stickers which list the Poison Control Center phone number. Note: Magnets, telephone stickers and other educational material can be acquired by contacting the UPCC at 1-800-222-1222.
- c. **Call first to prevent a poisoning—call if you suspect a poisoning**

Resources:

The Other Drug Problem A video produced by the National Council on Patient Information and Education (NCPPIE) www.talkaboutrx.org

Medicines and You Booklet by the U.S. Department of Health and Human Services Food and Drug Administration <http://www.fda.gov>

Appendix

Herbal Products & Prescription Medicine:

Potentially dangerous mixtures

Tips from your Poison Control Center

This is a list of only a few medication interactions.

Consult your pharmacist before taking over-the-counter products.



If you take these:

Aloe + digoxin heart medicine
Aloe + steroids or blood pressure meds
Beta-carotene + cigarette smoking
Beta-carotene + cigarette smoking
Capsicum + blood-thinners
Cat's Claw + blood pressure meds
Cat's Claw + immunosuppressants
Chondroitin + blood-thinners
Echinacea + immunosuppressants
Ephedra + digoxin heart medicine
Ephedra + diabetes meds
Fish oils + blood thinners
Garlic pills + blood-thinners, aspirin
Garlic pills + diabetes medicines
Garlic pills + cyclosporine
Ginkgo Biloba + blood-thinners
Ginkgo + diuretic blood pressure pills
Ginkgo + anticonvulsants
Ginseng + blood-thinners
Glucosamine + diabetes medicines
Glucosamine + cancer meds
Glucosamine + shellfish allergy

This could happen:

Lower potassium
Lower potassium
Higher cancer risk
High heart attack risk
Risk of bleeding
Low blood pressure
Reduced effectiveness
Risk of bleeding
Reduced effectiveness
Irregular heartbeat
Higher blood sugar
Risk of bleeding
Risk of bleeding
Very low blood sugar
Organ rejection
Risk of bleeding
Higher blood pressure
Risk of seizures
Risk of bleeding
May raise blood sugar
Cancer med won't work
Allergic reaction

If you take these:

Hawthorn + digoxin heart medicine
Kava-kava if you have liver problems
St. John's Wort + digoxin
St. John's Wort + psychiatric meds
St. John's Wort + cyclosporine
St. John's Wort + blood thinners

This could happen:

Irregular heartbeat
Severe liver damage
Digoxin won't work well
Toxic side effects
Organ rejection
Reduced effectiveness

For questions about medications,
call your pharmacist or physician.
Poison Centers can provide advice about
medication problems and are
open 24 hours. Call 1-800-222-1222.



These are some of the types of drugs that have interactions with whole grapefruit or grapefruit juice: drugs used to treat high blood pressure, "statin" drugs used to lower cholesterol, some anti-anxiety and antihistamine medications, protease inhibitors used to treat HIV/AIDS and immunosuppressant drugs used after transplant surgery. If you are on medications, ask a pharmacist for the latest information before taking grapefruit or grapefruit juice.



**Grapefruit &
Medication
Interactions**

Websites to search for medication interactions:

www.druginteractioncenter.org (grapefruit interactions)

<http://www.mskcc.org/about/herbs>

<http://www.webmd.com/diet/tc/dietary-supplements-topic-overview>

<http://nccam.nih.gov/health/supplement-safety>

Reference List for interaction information:

Thomson Micromedex Alternative Medicine Database:9/2005 edition

Lexi-Interact:2004 , <http://edis.ifas.ufl.edu/FS088>

Natural Medicines Comprehensive Database 2003, Edited by *Pharmacist's Letter*

Stories/Situations Script

I want to take you through 3 different stories. Then we can talk about what the potential problems are, if any. These are only examples. Every person and situation is different.

Story #1

Joe has been taking warfarin (Coumadin), a blood thinner, once a day for the past year. One day while watching television, Joe sees a commercial promoting a children's aspirin for heart conditions. Joe's father died of a heart attack at a young age, so he figures it would be a good idea to start taking aspirin himself.

[What do you think about Joe's situation? Why or why not? (Let the group give answers)]

OK let's talk about the problem. Basically, the medicine he is already taking, warfarin, is a blood thinner. Taking aspirin with it might be a problem, because aspirin can also thin the blood causing symptoms such as easy bruising or abnormal bleeding.

Let's look at the second story.

Story #2

Ellen rides her bike daily and drinks grapefruit juice every day at breakfast. She feels healthy with lots of energy. After her annual checkup, Ellen's doctor said her cholesterol was too high and prescribed a cholesterol-lowering medicine. To keep healthy, Ellen decides to keep drinking the grapefruit juice every morning and added a glass at lunch.

[Is this a good idea or not? (Let the group answer)]

Let's discuss the potential problem. Grapefruit juice competes with the way some medicines are handled by the body resulting in a build up of some medicines. This could lead to significant muscle problems in the case of the cholesterol medicine.

Story #3

Sara recently retired from her job with the city government after 30 years. She is enjoying her free time, going on hikes, boating, and visiting her grandchildren. Sara takes a common pain reliever, acetaminophen, often for mild aches and pains. When Sara develops a cold, she begins taking a multi-symptom cough and cold medicine.

[Is this a problem? (Let the group answer)]

The problem in this story is that Sara was already taking acetaminophen for aches and pains and added the cold medicine, which may also contain acetaminophen. Even a few days of too much acetaminophen could potentially cause liver damage.

These stories demonstrate examples of potential problems from medicine interactions. There are many common medicines that can interact and result in serious health issues. Always speak with the doctor, pharmacist or poison control center when making changes with the medicines or health remedies you are taking. As we saw, something as innocent as grapefruit juice can affect our medicines.



6 Key Questions



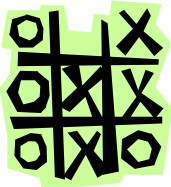
It is important to ask your health care provider certain questions about your medicine. You should ask these questions any time you begin to take something new for you health; including over-the-counter medicine, vitamins, supplements or even new “miracle” foods that you read about.

- 1. What is the name of my medicine?**
- 2. Why am I taking this medicine?**
- 3. What side effects could I have?**
- 4. How much and how often do I take this?**
- 5. What should I do if I miss a dose or double the dose of my medicine?**
- 6. While taking this medicine, should I avoid alcohol, driving, certain foods, drinks, medicines, vitamins, or herbals?**

You may also get answers to these questions from a pharmacist, the patient information sheet included with prescription medicines, or by contacting the Poison Control Center at **1-800-222-1222**.



Utah Poison Control Center



Tic-Tac-Toe Game



Procedure: Break the participants into 2 groups—one will be X and other one O. When the team answers the question correctly, they win that spot and can place an X or O on the grid. Questions could be written on pieces of paper and placed in a Tic-Tac-Toe grid on the board or a wall. Turn papers so the questions do not show. When a team chooses a square, turn the paper around and ask the question. If the answer is correct, draw the teams' symbol on the paper or board, If incorrect turn the paper back around. Turn then goes to the other team.

Questions

1. Give an example of a medicine interaction we discussed today.
2. True or false? Poisonings only happen to children.
3. True or false? Your medicines can be affected by grapefruit juice.
4. Name one way to help keep you and your loved ones safe from household poisonings.
5. True or false? It is important to discuss over-the-counter medicines you take with the pharmacist or doctor if you start taking another over-the-counter medicine.
6. True or false? All information on the internet is trustworthy.
7. True or false? Herbals and other supplements can interact with medicines.
8. Name one way to keep track of medicine.
9. Name two questions you should ask your health care provider when beginning a new medicine or health remedy.

Answers

1. The participants should mention one of the stories presented.
2. False
3. True
4. Anything similar to the following:
 - Household chemicals and medications should be kept up high and locked up
 - Do not mix cleaning products
 - Store household chemicals in the original containers
 - Handle household chemicals with caution
 - Secure medicine out of the reach of children
5. True
6. False
7. True
8. Anything similar to the following:
 - Calendars
 - Talking medicine bottles or caps
 - Pill reminder
 - Ask your doctor or pharmacist to schedule your medicines so they are as simple as possible.
9. Any of the 6 Key Questions:
 - What is the name of the medicine?
 - Why am I taking this medicine?
 - What side effects could I have?
 - How much and how often do I take this?
 - What should I do if I miss a dose or double the dose of my medicine?
 - While taking this medicine, should I avoid alcohol, driving, certain foods, drinks, medicines, vitamins, or herbals?

Tic-Tac-Toe Questions

<p>Give an example of a medicine interaction we discussed today.</p>	<p>True or false? Poisonings only happen to children.</p>	<p>True or false? Your medicines can be affected by grapefruit juice.</p>
<p>Name one way to help keep you and your loved ones safe from household poisonings.</p>	<p>True or false? It is important to discuss over-the-counter medicines you take with the pharmacist or doctor if you start taking another over-the-counter medicine.</p>	<p>True or false? All information on the internet is trustworthy.</p>
<p>True or false? Herbals and other supplements can interact with medicines.</p>	<p>Name one way to keep track of medicine.</p>	<p>Name two questions you should ask your health care provider when beginning a new medicine or health remedy.</p>

Tic-Tac-Toe Answers

<p>The Participants should mention one of the stories presented.</p>	<p style="text-align: center;">False</p>	<p style="text-align: center;">True</p>
<p>Anything similar to the following:</p> <ul style="list-style-type: none"> • Household chemicals and medications should be kept up high and locked up • Do not mix cleaning products • Store household chemicals in the original containers • Handle household chemicals with caution • Secure medicine out of the reach of children 	<p style="text-align: center;">True</p>	<p style="text-align: center;">False</p>
<p style="text-align: center;">True</p>	<p>Anything similar to the following:</p> <ul style="list-style-type: none"> • Calendars • Talking medicine bottles or caps • Pill reminder • Ask your doctor or pharmacist to schedule your medicines so they are as simple as possible. 	<p style="text-align: center;">Any of the 6 Key Questions</p>