

Medication Administration Curriculum



Every effort has been made to trace the ownership of copyrighted material and to make full acknowledgement of its use. If errors or omissions have occurred, they will be corrected in subsequent editions, provided that notification is submitted in writing to the publisher.



© 2023, Realityworks, Inc. All rights reserved.

2709 Mondovi Road
Eau Claire, WI 54701 USA
800.830.1416
+1.715.830.2040
www.realityworks.com

1073627-01

Table of Contents

Author	4
Curriculum Structure	4
Lesson Structure.....	5
Lesson One – Ophthalmic Medication Administration	6
FOCUS: Learn How to Administer Eye Drops.....	7
LEARN: Ophthalmic Medication Administration Slide Presentation.....	9
REVIEW: Ophthalmic Medication Administration Activity.....	18
Lesson Two – Otic Medication Administration	21
FOCUS: Learn How to Administer Ear Drops	22
LEARN: Otic Medication Administration Slide Presentation.....	24
REVIEW: Otic Medication Administration Activity	31
Lesson Three – Nasogastric/Nasal Medication Administration	35
FOCUS: Learn How to Administer Medications Down an NG Tube or By Nasal Spray	36
LEARN: Nasogastric/Nasal Medication Administration Slide Presentation	38
REVIEW: Nasogastric/Nasal Medication Administration Activity.....	46
Lesson Four – Vaginal Medication Administration	48
FOCUS: Learn How to Insert Vaginal Suppositories	50
LEARN: Vaginal Medication Administration Slide Presentation	52
REVIEW: Vaginal Medication Administration Activity	59
Lesson Five – Rectal Medication Administration	61
FOCUS: Learn How to Insert Rectal Suppositories.....	63
LEARN: Rectal Medication Administration Slide Presentation.....	65
REVIEW: Rectal Medication Administration Activity.....	72
Lesson Six – Oral Medication Administration	74
FOCUS: Learn How to Administer Oral Medications.....	76
LEARN: Oral Medication Administration Slide Presentation.....	78
REVIEW: Oral Medication Administration Activity.....	85
Sources	87

Medication Administration Curriculum

This curriculum and Medication Administration Trainer will help participants learn how to administer medications through six different routes on the human body: eye, ear, nasogastric/nasal, vaginal, rectal, and oral.

Author



Krista Wenz has been a licensed paramedic for 34 years. She holds a bachelor's degree in fire safety management and worked 23 years as a firefighter-paramedic for a large metropolitan fire department in California.

Krista has extensive knowledge in emergency medicine, including experience as an adjunct instructor at community and private colleges teaching EMT and paramedic students. She has additional experience working as a mental health technician in a psychiatric ward and emergency crises; drill instructor and field training officer for multiple agencies; CPR, first aid, PALS, BLS, and ALS instructor; and EMS captain for a rural fire department.

Now retired from the Fire Service, Krista is passionate about passing on knowledge and experience for those interested in entering the healthcare field.

Curriculum Structure

The *Medication Administration Curriculum* comprises the following lessons. Approximate lesson times are included.

Lesson	Title	Approximate Time
One	Ophthalmic Medication Administration	60 minutes
Two	Otic Medication Administration	60 minutes
Three	Nasogastric/Nasal Medication Administration	60 minutes
Four	Vaginal Medication Administration	60 minutes
Five	Rectal Medication Administration	60 minutes
Six	Oral Medication Administration	60 minutes
	Total	6 hours

Lesson Structure

Each lesson begins with a Lesson Overview, Lesson Objectives, and a Lesson at a Glance table, which lists the lesson activities, materials required, suggested preparation steps, and approximate class time.

Lesson Sections

The actual lesson follows the overview, which will contain some of the sections described below. Most lessons are designed to be completed within an hour.

FOCUS

Every lesson begins with a FOCUS activity intended to capture participants' attention. This may be in the form of a small or large class discussion, a game, a review of previous lesson information, or a demonstration. During this activity, participants are introduced to the topic of the lesson.

LEARN

The LEARN activity in each lesson varies in its presentation mode. It may be a slide presentation, group activity, or demonstration.

REVIEW

The majority of lessons end with a REVIEW activity intended to briefly review the lesson's key messages or main points.

Lesson One – Ophthalmic Medication Administration

Lesson Overview

In this lesson, participants will learn about the different types of eye medications and how to administer eye drops as a healthcare professional. At the end of the lesson, participants will complete an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Understand why people need eye medication
- Learn about different types of eye medicine
- Discover how to administer eye drops as a healthcare professional

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Ophthalmic Medication Administration Test</i>	1. Print/photocopy the <i>Ophthalmic Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Ophthalmic Medication Administration Student Notes</i> • <i>Ophthalmic Medication Administration Student Notes – Answer Key</i> • <i>Ophthalmic Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Ophthalmic Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Ophthalmic Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Ophthalmic Medication Administration Test</i> • <i>Ophthalmic Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Ophthalmic Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: Focus activities may also be completed prior to class.

Lesson One – *Ophthalmic* Medication Administration

FOCUS: Learn How to Administer Eye Drops

5-10 minutes

Purpose:

To help participants learn how to administer eye drops as a healthcare professional. Have participants take the *Ophthalmic Medication Administration Test*.

Materials:

- *Ophthalmic Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Ophthalmic Medication Administration Test* and explain that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lesson.
2. Have participants complete a copy of the test.

Note: Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge. Answers to the test will be given after the post-test.

Name: _____ Class: _____

Ophthalmic Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. Which of the following is **not** a type of eye drop?
 - a. Refresh
 - b. Systane
 - c. FreshKote
 - d. Ricola
2. The two types of eye medicine are ____ and _____.
 - a. Eye drops, eye ointment
 - b. Eye injections, eye cream
 - c. Eye drops, eye paste
 - d. Eye injections, eye droplets
3. What is the first right of the “Rights of Drug Administration”?
 - a. Right drug
 - b. Right dose
 - c. Right patient
 - d. Right route
4. As a healthcare professional, how long should you wash your hands before administering eye medication?
 - a. At least 60 seconds
 - b. At least 10 seconds
 - c. At least 30 seconds
 - d. At least 20 seconds
5. In the healthcare profession, what does it mean to “don” gloves?
 - a. To take off gloves
 - b. To put on gloves
 - c. To put dirty gloves in a biohazard waste receptacle
 - d. To put on an extra set of gloves for protection

Lesson One – Ophthalmic Medication Administration

LEARN: Ophthalmic Medication Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the reasons people may need eye medications, the different types of eye medicine, and how to administer eye drops as a healthcare professional.

Materials:

- *Ophthalmic Medication Administration* slide presentation
- *Ophthalmic Medication Administration Student Notes*
- *Ophthalmic Medication Administration Student Notes – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill out the page while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide.

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Understand why people need eye medication
- Learn about the different types of eye medicine
- Discover how to administer eye drops as a healthcare professional

Slide 3: Why Do People Need Eye Medication?

People are prescribed eye drops and ointment for various reasons, such as treating infections, reducing inflammation, and relieving dry eyes. Eye drops are often used to treat conditions like conjunctivitis, glaucoma, and allergies. Eye ointment is typically used for conditions like dry eye syndrome and corneal abrasions. These medications work by delivering active

ingredients directly to the affected area, helping to alleviate symptoms and promote healing.

Slide 4: Types of Eye Medicine

There are two main types of eye medication: eye drops and ointment. Eye drops are commonly used to treat conditions like bacterial infections, conjunctivitis, glaucoma, and allergies. They are designed to deliver active ingredients directly to the affected area. Eye ointment, on the other hand, is typically used for conditions like dry eye syndrome and corneal abrasions. It works similarly to eye drops by delivering active ingredients to the affected area. Both medications can be highly effective in alleviating symptoms and promoting healing.

Not all eye medication is available over the counter. Depending on the severity of the eye condition, some eye medications need to be prescribed by a healthcare provider. Some common names of over-the-counter eye drops include Refresh, Visine, Systane, FreshKote, and Soothe artificial tears. These eye drops can help relieve dryness, redness, itching, and other common eye irritations. The three major prescription eye drops are Restasis, Xiidra, and Cequa.

Some common names of prescribed or over-the-counter eye ointments include Tobramycin, Neomycin, Polymyxin B, Gentamicin, Bacitracin, and Erythromycin. These ointments are often used to treat eye infections or inflammation and should only be used as directed by a healthcare professional or pharmacist.

It's important to always read the label and follow the instructions carefully to ensure the best possible outcome for your patient's eye health. However, this lesson will only cover how to administer eye drops as they are the type of eye medication you will most commonly administer as a healthcare professional.

Slide 5: Before Administering Eye Medications
Before administering any medication to a patient, no matter the route of administration, you must first introduce yourself. Then, follow the "6 Rights of Drug Administration." Where you were taught about medications and pharmacology will determine if you were taught that there are 5, 6, 10, or 12 Rights of Drug Administration. For this lesson, we will cover the most widely used, 6 Rights of Drug Administration.

1. **Right Patient:** Ensure the medication is intended for the patient you are administering it to. Confirm it is the correct patient by looking at the patient's wristband, identification card, or other means outlined by your agency's policy. You must confirm that the patient's identification matches the patient's medication administration record (MAR) and medication label before administering.
2. **Right Drug:** Verify that it is the correct medication and matches the patient's MAR. Check that the medication has not expired and verify on the MAR that the patient has no documented allergy to the drug. Discuss with the patient the purpose of receiving the drug, the action of the medication, and possible side effects. Allow the patient the opportunity to ask questions.
3. **Right Dose:** Ensure it is the correct dose as prescribed by the physician.
4. **Right Route:** Verify the correct eye to which you will administer the medication.

5. **Right Time:** Make sure the patient is receiving the medication at the right time and frequency.
6. **Right Documentation:** Document medication administration in the patient's chart or electronic medical record immediately after administration.

Perform a pre-administration assessment if required, such as taking vital signs.

Slide 6: Wash Hands

It is essential to wash your hands before administering eye drops to a patient to prevent the spread of germs and bacteria that could potentially cause an infection. This is especially important if the patient has any existing eye conditions or injuries. Also, touching the eye or eyelashes with dirty hands could cause irritation or discomfort for the patient.

It is important to avoid touching the eye or eyelashes with the dropper to prevent contamination. By washing your hands thoroughly before administering eye drops, you can ensure the safety and comfort of the patient.

As a healthcare professional, it is important to wash your hands properly to prevent the spread of germs and keep your patients safe. Here are some steps to follow when washing your hands:

1. Wet your hands with warm water.
2. Apply soap and lather your hands for at least 20 seconds; scrub all surfaces, including your palms, backs of your hands, fingers, and under your nails.
3. Rinse your hands thoroughly with warm water.
4. Dry your hands with a clean towel or air dryer.

Remember to wash your hands before and after every patient contact, before and after using gloves, and after any potential exposure to bodily fluids. By following these steps, you can help prevent the spread of infections and keep both yourself and your patients safe.

Slide 7: “Don” Gloves

When healthcare professionals “don” gloves, it means they are putting on a pair of disposable gloves to prevent the spread of germs and bacteria. When removing the gloves, it is called “doffing.” It is important for healthcare professionals to wear gloves before administering eye drops to a patient because it helps to prevent the spread of infection. The patient’s eye can be contaminated with bacteria and viruses, and wearing gloves helps to prevent the transfer of these pathogens from the patient to the caregiver or provider. By wearing gloves, healthcare professionals can provide safe and effective care to their patients while protecting themselves from potential harm.

Instructor’s Note: If you wish to use the Medication Administration Trainer as the “patient” for the rest of the slide presentation, now is an excellent time to introduce the trainer to the class. It is also suggested to enlist a participant to assist you while you present the rest of the presentation. The participant can use the trainer to demonstrate what is taught on each slide, giving hands-on experience at the same time.

Slide 8: Clean the Eye

Sometimes, you must clean the patient's eye before administering eye drops if there is any discharge or debris present on the eye, which could potentially interfere with the effectiveness of the medication. If the eye is clean, you can skip this step.

To clean the eye, use a clean, damp cloth or sterile saline solution to gently wipe away any debris or discharge present on the eye. Be sure to wipe from the inner corner of the eye to the outer corner. This will prevent any debris from being pushed into the tear ducts. After the eye is cleaned, dispose of your gloves and replace them with a fresh pair before administering the medication to avoid cross-contamination.

Cross-contamination is the process by which bacteria or other microorganisms are unintentionally transferred from one object or surface to another. This can occur when an infected person touches a surface or object and then someone else touches that same surface or

object, spreading the bacteria or microorganisms. It can also occur when contaminated equipment or tools are not properly cleaned and used on another person or surface.

Cross-contamination can lead to the spread of infections and illnesses, so it is essential to take steps to prevent it. This includes proper hand hygiene, cleaning and disinfecting surfaces and equipment, and using protective barriers, such as gloves or masks.

Slide 9: Position Patient

When administering eye drops to a patient, it's important to position them correctly to ensure they are administered properly. If the patient is sitting, have them tilt their head back slightly and look up towards the ceiling. Then, gently pull down on their lower eyelid to create a small pocket for the drops to go into. When it is time, you will administer the drops into this pocket and have the patient close their eyes for a few moments to allow the drops to fully absorb. If the patient is lying down, have them tilt their head back over the edge of the bed, pillow, or couch and follow the same steps as if they were sitting.

Slide 10: Ensure It Is the Correct Medication
Going back to the 6 Rights of Drug

Administration, it is always best to double- and triple-check that you administer the correct medication by matching it with the patient’s MAR. Ensure the medication has not expired.

Slide 11: Warn Patient

Ask the patient if they have any known drug allergies. If they are allergic to the drug you are about to administer, consult with the patient’s physician before administering the medication. If they are not allergic to the drops, explain to the patient what you are giving them and what they can expect. You can warn them that the drops may feel cool at first, and then may slightly burn, which shows the medication is working. Additionally, you can describe the procedure for administering the drops so there are no surprises.

Slide 12: Administer Medication

Gently shake the bottle before administering the drops to ensure the drug is properly mixed. After gently pulling down the lower lid, administer the prescribed number of drops into the pocket of the lower eyelid. Do not touch the eye, eyelid, or lashes with the bottle or eye dropper.

Slide 13: Release Eyelid and Close Eyes

Release the eyelid, then ask the patient to gently close their eyes while moving them to distribute the medication. Advise the patient not to squeeze their eyes closed tightly or rub their eyes. Instruct them to keep their eyes closed for 1-2 minutes. If needed, use a tissue to absorb medication that may have leaked out of the eye.

Slide 14: Press the Corner of The Eye Gently

With the patient's eyes closed, press gently in the corner of the medicated eye with one finger. This gentle pressure prevents the medication from draining away from the eye. If the patient requires drops in the other eye, repeat the process.

Slide 15: Observe for Adverse Reactions

Some common mild adverse reactions include:

- Stinging/redness in the eye
- Widened pupils
- Blurred vision

These mild adverse reactions will usually subside quickly. If the following adverse reactions happen and do not go away in a short amount of time, the patient should see a physician:

- Eye pain
- Tremors (shakiness)
- Fast heartbeat
- Headache
- Sweating
- Nervousness

Slide 16: Safety Considerations

If medicated drops were administered, the patient's vision may become temporarily blurred. They should be advised of the following:

- Do not drive
- Do not operate heavy machinery
- Do not participate in any activity that requires clear vision until their vision is restored

Slide 17: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation. After administering the eye drops, document the time, number of drops given, strength, and name of the drops. You should also document adverse reactions, vital signs, and other pertinent information in the patient's medical record or chart.

Slide 18: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on eye medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____ Class: _____

Ophthalmic Medication

Administration Student Notes Page

Instructions: Fill in the answers as you view the slide presentation.

Name three reasons people need eye medication.

- 1.
- 2.
- 3.

What are the two types of eye medications mentioned in the lesson?

- 1.
- 2.

Name the 6 Rights of Drug Administration.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

What is the **minimum** amount of time you should wash your hands?

What does it mean to “don” gloves?

Medication Administration Curriculum

What is the best way to clean a patient's eye, if needed?

What are two ways you can position a patient before administering eye drops?

- 1.
- 2.

What would you warn a patient about before administering eye drops?

In which part of the eye do you administer eye drops?

After administering eye drops, how long should the patient close their eyes?

Why do you press gently in the corner of the patient's eye after administering eye drops?

List five possible adverse reactions to eye drops:

- 1.
- 2.
- 3.
- 4.
- 5.

Name three safety considerations if medicated eye drops were administered:

- 1.
- 2.
- 3.

What information should be documented in the patient's chart or medical record after medications are administered in the patient's eye?

Ophthalmic Medication Administration Student Notes Page – Answer Key

Name three reasons people need eye medication.

Any of these answers are correct:

- **To treat infections**
- **Reduce inflammation**
- **Relieve dry eyes**
- **Treat an injury**
- **Promote healing**

What are the two types of eye medications mentioned in the lesson?

1. Eye drops

2. Eye ointments

Name the 6 Rights of Drug Administration.

1. Right Patient

2. Right Drug

3. Right Dose

4. Right Route

5. Right Time

6. Right Documentation

What is the **minimum** amount of time you should wash your hands?

20 seconds

What does it mean to “don” gloves?

To put on gloves

What is the best way to clean a patient’s eye, if needed?

Use a clean, damp cloth or sterile saline solution to gently wipe away any debris or discharge, wiping from the inner corner of the eye to the outer corner.

What are two ways you can position a patient before administering eye drops?

1. Seated

2. Lying down

What would you warn a patient about before administering eye drops?

Before administering the medication, you should explain to the patient what you are giving them and what they can expect.

You can warn them that the drops may feel cool at first, and then may slightly burn, which shows the medication is working.

Additionally, you can describe the procedure for administering the drops so there are no surprises.

In which part of the eye do you administer eye drops?

In the pocket that is created after pulling down the eyelid

After administering eye drops, how long should the patient close their eyes?

1-2 minutes

Why do you press gently in the corner of the patient’s eye after administering eye drops?

This gentle pressure prevents the medication from draining away from the eye.

List five possible adverse reactions to eye drops:

Any of these answers are correct:

- Stinging/redness
- Widened pupils
- Blurred vision
- Eye pain
- Tremors (shakiness)
- Fast heartbeat
- Headache
- Sweating
- Nervousness

Name three safety considerations if medicated eye drops were administered:

- Do not drive
- Do not operate heavy machinery
- Do not participate in any activity that requires clear vision until their vision is restored

What information should be documented in the patient's chart or medical record after medications are administered in the patient's eye?

After administering the eye drops, document the time, the number of drops given, the strength, and the name of the drops. You would also document any adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Lesson One – Ophthalmic Medication Administration

REVIEW: Ophthalmic Medication Administration Activity

30 minutes

Purpose:

Participants will simulate administering eye drops to a patient using the Medication Administration Trainer. Once the activity is completed, a post-test will be given.

Materials:

- Medication Administration Trainer
- *Ophthalmic Medication Administration Test*

Facilitation Steps:

1. Instruct participants to administer eye drops using the Medication Administration Trainer, following the steps they learned in the slide presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the trainer, decide how to split participants up into teams.

2. When participants are finished with the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
3. Have participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Ophthalmic Medication

Administration Test – Answer Key

Instructions: Select the best answer to the following multiple-choice questions:

1. Which of the following is **not** a type of eye drop?
 - a. Refresh
 - b. Systane
 - c. FreshKote
 - d. Ricola**
2. The two types of eye medicine are ____ and ____.
 - a. Eye drops, eye ointment**
 - b. Eye injections, eye cream
 - c. Eye drops, eye paste
 - d. Eye injections, eye droplets
3. What is the first right of the “Rights of Drug Administration”?
 - a. Right drug
 - b. Right dose
 - c. Right patient**
 - d. Right route
4. As a healthcare professional, how long should you wash your hands before administering eye medication?
 - a. At least 60 seconds
 - b. At least 10 seconds
 - c. At least 30 seconds
 - d. At least 20 seconds**
5. In the healthcare profession, what does it mean to “don” gloves?
 - a. To take off gloves
 - b. To put on gloves**
 - c. To put dirty gloves in a biohazard waste receptacle
 - d. To put on an extra set of gloves for protection

Sources

1. Peace Health Website. (2022, October 12). *Eye Problems: Using Eyedrops and Eye Ointment*. Retrieved from <https://www.peacehealth.org/medical-topics/id/za1098>
2. Nursing Times Website. (2014, September 26). *How to Administer Eye Drops and Ointments*. Retrieved from <https://www.nursingtimes.net/archive/how-to-administer-eye-drops-and-ointments-26-09-2014/>
3. Web MD Website. (2023). *Eye Drops Regular—Uses, Side Effects, and More*. Retrieved from <https://www.webmd.com/drugs/2/drug-20720/eye-drops-regular/details#:~:text=Tell%20your%20doctor%20right%20away,%2C%20sweating%2C%20weakness%2C%20nervousness.>
4. Thomas, Liji, MD. (2023, July 18). *Health Risks and Benefits of Eye Drops*. Retrieved from <https://www.news-medical.net/health/Health-Risks-and-Benefits-of-Eye-Drops.aspx#:~:text=They%20relieve%20dryness%20and%20irritation,by%20keeping%20the%20eye%20lubricated.>

Lesson Two – Otic Medication Administration

Lesson Overview

In this lesson, participants will learn about the different types of ear medications and how to administer ear drops as a healthcare professional. At the end of the lesson, participants will participate in an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Identify why patients need ear medication
- Learn about ear drops
- Discover how to administer ear drops

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Otic Medication Administration Test</i>	1. Print/photocopy the <i>Otic Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Otic Medication Administration Student Notes</i> • <i>Otic Medication Administration Student Notes – Answer Key</i> • <i>Otic Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Otic Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Otic Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Otic Medication Administration Test</i> • <i>Otic Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Otic Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: FOCUS activities may be completed prior to class.

Lesson Two – Otic Medication Administration

FOCUS: Learn How to Administer Ear Drops

5-10 minutes

Purpose:

Help participants learn how to administer ear drops as a healthcare professional. Have participants take a pre-test.

Materials:

- *Otic Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Otic Medication Administration Test* and explain to the students that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lesson.
2. Have participants complete the pre-test. Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge.

Answers to the test will be given after the post-test.

Name: _____ Class: _____

Otic Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. Healthcare professionals administer ear drops to patients for various reasons. Which of the following is **not** a reason they would administer ear drops?
 - a. To lower the patient's core temperature
 - b. To promote ear drainage
 - c. To decrease earwax
 - d. To treat ear fullness
2. What is the medical term for earwax?
 - a. Curcumin
 - b. Cerumen
 - c. Collagen
 - d. Cartilage
3. What is otitis externa commonly known as?
 - a. Ruptured eardrum
 - b. Inner ear infection
 - c. Swimmer's ear
 - d. Cauliflower ear
4. At what temperature should ear drops be before administering them?
 - a. A cold temperature
 - b. A warm temperature
 - c. The patient's core temperature
 - d. At room temperature
5. What is the name of the outer earlobe that is gently pulled before administering ear drops?
 - a. Cochlea
 - b. Eustachian tube
 - c. Pinna
 - d. Tragus

Lesson Two – Otic Medication Administration

LEARN: Otic Medication Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the reasons patients may need ear medications, the different types of ear medicine, and how to administer ear drops as a healthcare professional.

Materials:

- *Otic Medication Administration* slide presentation
- *Otic Medication Administration Student Notes Page*
- *Otic Medication Administration Student Notes Page – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill it out while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Identify why patients need ear medication
- Learn about ear drops
- Discover how to administer ear drops as a healthcare professional

Slide 3: Why Do Patients Need Ear Medication?

Patients are prescribed ear drops for various reasons, such as treating infections, reducing ear pain, decreasing earwax buildup, promoting ear drainage, and for feelings of fullness in the ear. Ear drops are often used to treat conditions like swimmer's ear, itchy ears, and other inner and outer ear infections. Ear drops are available by prescription and over the counter (OTC) and work by delivering active ingredients directly to the affected area, helping to alleviate symptoms and promote healing.

Slide 4: Types of Ear Drops

There are several types of ear drops:

1. To break up earwax (cerumen): Some patients have active glands that produce excess earwax. Ear drops can safely dissolve the cerumen, while some physicians will simply prescribe body-temperature water aimed into the ear using a syringe.
2. To prevent or treat otitis externa (swimmer's ear): An inflammation of the external auditory canal. Ear drops prescribed for otitis externa help dry the ear canal, treat infection, and control pain.
3. Antibiotics to treat bacterial ear infections are more effective when administered directly into the ear versus taking oral antibiotics. However, some physicians may opt to treat a bacterial ear infection with oral antibiotics and prescribe ear drops if the infection does not go away. Every physician is different in how they practice medicine.

4. Analgesics and anesthetics to relieve ear pain are designed to alleviate swelling, pain, and congestion caused by middle ear inflammation. However, these ear drops do not contain antibiotic properties, so they do not treat ear infections. If a physician opts to prescribe ear drops to treat a middle ear infection, they typically prescribe two types of ear drops.

Slide 5: Before Administering Ear Drops

- Follow the 6 Rights of Drug Administration.
- Wash your hands thoroughly with soap and water before handling the ear drops. This helps minimize the risk of introducing any additional bacteria or contaminants into the ear.
- Don disposable gloves.
- Shake the ear drop bottle gently to ensure the solution is mixed properly unless instructed otherwise or mentioned on the packaging.
- Ensure the drops are at room temperature. If the drops are too cold or too hot, they can make the patient feel dizzy and disoriented.
- Ask the patient if they have any known drug allergies. If so, withhold the ear drops until you can consult with the patient's physician.
- Explain the procedure to the patient.

Slide 6: Position Patient

When administering ear drops to a patient, it's important to position them correctly to ensure they are administered properly. The correct position is to have the patient lie down on their side with the affected ear facing upward. Alternatively, you can have them tilt their head to the side if lying down is not possible. If the patient has bilateral ear pain (ear pain to both ears), lying on their side may be too painful.

Slide 7: Clean the Ear

If the ear is occluded with cerumen or draining, gently clean the ear with a cotton swab. Be careful not to push the cerumen deeper into the ear canal. If the ear is clean, you can skip this step.

Slide 8: Ensure It Is the Correct Medication
Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication by matching it with the patient's MAR. Ensure the medication has not expired.

Slide 9: Pull the Pinna

For patients three and older, gently pull the pinna (outer earlobe) upward and backward to straighten the ear canal. This helps create a clear path for the ear drops to reach the affected area. If the patient is under three years old, pull the pinna down, as the child's ear is not fully developed.

Slide 10: Administer Medication

Gently shake the bottle before administering the drops to ensure the drug is properly mixed.

Hold the dropper bottle close to the ear canal but avoid touching it with your fingers to prevent contamination. Advise the patient that you will administer the drops.

Squeeze the prescribed number of drops into the ear canal. Be sure to follow the specific instructions provided by the physician, pharmacist, or manufacturer. You may place a clean cotton ball at the ear opening to prevent the drops from leaking out.

Slide 11: Massage Tragus

The tragus is a small piece of thick cartilage outside of the ear, as noted on the diagram. If they do not have ear pain, gently massage the patient's tragus for 5-10 seconds. Massaging the tragus helps to open and close the ear canal, which distributes the medication into the ear canal more effectively. If the patient has a tragus piercing, they may want to remove it first.

Slide 12: Rest for 2-3 Minutes

Keep the patient's head tilted to the side for a few minutes to allow the drops to flow deeply into the ear. After a few minutes, gently wipe away any excess drops that may have leaked out with a clean tissue. Avoid touching the ear canal or inserting cotton swabs or any other objects into the ear, as this may push the drops further in or cause damage to the ear. It's important to note that specific instructions may vary depending on the type of ear drops and the condition being treated.

Always consult your superior or a physician if you have any questions or carefully read and follow the instructions provided with the medication. If the patient requires drops in the other ear, repeat the process.

Instructor Note: As a recap of what participants have just learned, play this short, two-minute video on administering ear drops as a healthcare professional.

<https://www.youtube.com/watch?v=T7hS-HGuBgc>

Slide 13: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation. After administering the ear drops, document the time, number of drops given, strength, and name of the drops. You should also document any adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Slide 14: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on ear medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____ Class: _____

Otic Medication Administration

Student Notes Page

Instructions: Answer the questions as you watch the slide presentation.

Name three reasons patients need ear medication.

- 1.
- 2.
- 3.

What are the four types of ear drops mentioned in the lesson?

- 1.
- 2.
- 3.
- 4.

What is the medical term for earwax?

Before administering ear drops, what temperature should the drops be?

What two ways can you position a patient to administer ear drops?

- 1.
- 2.

Medication Administration Curriculum

What is the best way to clean a patient's ear, if needed?

For patients older than three, in which direction do you pull the pinna?

After administering ear drops, what can you place at the opening of the ear, if needed?

Why would you gently massage the tragus if ear pain is not present?

How long should the patient rest after administering ear drops?

What information should be documented in the patient's chart or medical record after drops are administered in the patient's ear?

Otic Medication Administration

Student Notes Page – Answer Key

Name three reasons patients need ear medication. **(Any of the following three are correct.)**

- **To treat ear infections**
- **For ear pain**
- **To decrease earwax**
- **To promote ear drainage**
- **For ear fullness**

What are the four types of ear drops mentioned in the lesson?

- 1. To break up earwax (cerumen)**
- 2. To prevent or treat otitis externa (swimmer's ear)**
- 3. Antibiotics to treat bacterial infections**
- 4. Analgesics and anesthetics to relieve ear pain**

What is the medical term for earwax?

Cerumen

Before administering ear drops, what temperature should the drops be?

Room temperature

What two ways can you position a patient to administer ear drops?

- 1. Lying down on their side**
- 2. Head tilted to the side**

What is the best way to clean a patient's ear, if needed?

If the ear is occluded with cerumen or draining, gently clean the ear with a cotton swab. Be careful not to push the cerumen deeper into the ear canal.

For patients older than three, in which direction do you pull the pinna?

Upward and backward

After administering ear drops, what can you place at the opening of the ear, if needed?

A cotton ball

Why would you gently massage the tragus if ear pain is not present?

Massaging the tragus helps to open and close the ear canal, which distributes the medication into the ear canal more effectively.

How long should the patient rest after administering ear drops?

2-3 minutes

What information should be documented in the patient's chart or medical record after drops are administered in the patient's ear?

After administering the ear drops, document the time, number of drops given, strength, and name of the drops. You would also document any adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Lesson Two – Otic Medication Administration

REVIEW: Otic Medication Administration Activity

30 minutes

Purpose:

Participants will simulate administering ear drops to a patient using the Medication Administration Trainer. Once the activity is completed, a post-test will be given.

Materials:

- Medication Administration Trainer
- *Ear Medication Administration Test*
- *Ear Medication Administration Test – Answer Key*

Facilitation Steps:

1. Instruct participants to administer ear drops using the Medication Administration Trainer, following the steps they learned in the slide presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the manikin, decide how to split participants up into teams.

2. When the participants finish the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
3. Have the participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Name: _____ Class: _____

Otic Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. Healthcare professionals administer ear drops to patients for various reasons. Which of the following is **not** a reason they would administer ear drops?
 - a. To lower the patient's core temperature
 - b. To promote ear drainage
 - c. To decrease earwax
 - d. To treat ear fullness
2. What is the medical term for earwax?
 - a. Curcumin
 - b. Cerumen
 - c. Collagen
 - d. Cartilage
3. What is otitis externa commonly known as?
 - a. Ruptured eardrum
 - b. Inner ear infection
 - c. Swimmer's ear
 - d. Cauliflower ear
4. At what temperature should ear drops be before administering them?
 - a. A cold temperature
 - b. A warm temperature
 - c. The patient's core temperature
 - d. At room temperature
5. What is the name of the outer earlobe that is gently pulled before administering ear drops?
 - a. Cochlea
 - b. Eustachian tube
 - c. Pinna
 - d. Tragus

Otic Medication Administration

Test – Answer Key

Select the best answer to the following multiple-choice questions:

1. Healthcare professionals will administer ear drops to patients for various reasons. Which of the following is **not** a reason they would administer ear drops?
a. To lower the patient's core temperature
b. To promote ear drainage
c. To decrease earwax
d. To treat ear fullness
2. What is the medical term for earwax?
a. Curcumin
b. Cerumen
c. Collagen
d. Cartilage
3. What is otitis externa commonly known as?
a. Ruptured eardrum
b. Inner ear infection
c. Swimmer's ear
d. Cauliflower ear
4. At what temperature should ear drops be before administering them?
a. A cold temperature
b. A warm temperature
c. The patient's core temperature
d. At room temperature
5. What is the name of the outer earlobe that is gently pulled before administering ear drops?
a. Cochlea
b. Eustachian tube
c. Pinna
d. Tragus

Sources

1. Cleveland Clinic Website. (2023, January 29). *Ear Drops*. Retrieved from <https://my.clevelandclinic.org/health/treatments/24654-ear-drops#:~:text=Ear%20drops%20are%20a%20type,Others%20require%20a%20prescription.>
2. Web MD Website. (2023). *Ear Drops Solution—Uses, Side Effects, and More*. Retrieved from <https://www.webmd.com/drugs/2/drug-805-7171/ear-drops/acetic-acid-otic/details#:~:text=Many%20people%20using%20this%20medication,to%20this%20drug%20is%20rare.>
3. TCC AND RN Program: Nursing Skills. (2015). Administering Ear Drops. Retrieved from <https://www.youtube.com/watch?v=T7hS-HGuBgc>

Lesson Three – Nasogastric/Nasal Medication Administration

Lesson Overview

In this lesson, participants will learn about nasogastric (NG) tubes, how to administer medications down an NG tube, and how to administer nasal spray to a patient as a healthcare professional. At the end of the lesson, the students will participate in an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Learn about nasogastric tubes and nasal sprays
- Discover why patients need medications administered nasally
- Identify types of nasal medication
- Learn how to administer medications down a nasogastric tube or by nasal spray

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Nasogastric/Nasal Medication Administration Test</i>	1. Print/photocopy the <i>Nasogastric/Nasal Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Nasogastric/Nasal Medication Administration Student Notes</i> • <i>Nasogastric/Nasal Medication Administration Student Notes – Answer Key</i> • <i>Nasogastric/Nasal Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Nasogastric/Nasal Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Nasogastric/Nasal Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Nasogastric/Nasal Medication Administration Test</i> • <i>Nasogastric/Nasal Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Nasogastric/Nasal Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: FOCUS activities may be completed prior to class.

Lesson Three – Nasogastric/Nasal Medication Administration

FOCUS: Learn How to Administer Medications Down an NG Tube or By Nasal Spray

5-10 minutes

Purpose:

Help participants learn how to administer medications down a nasogastric (NG) tube or by nasal spray as a healthcare professional.

Materials:

- *Nasogastric/Nasal Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Nasogastric/Nasal Medication Administration Test* and explain to participants that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lesson.
2. Have participants complete the pre-test. Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge.

Answers to the test will be given after the post-test.

Name: _____ Class: _____

Nasogastric/Nasal Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. What does “nasogastric” mean in medical terms?
 - a. Nose to gastritis
 - b. Nostrils to stomach
 - c. Nares to gastric
 - d. Nose to stomach
2. Why should some medications not be crushed or dissolved for nasogastric administration?
 - a. They will harm the patient’s stomach
 - b. They will not dissolve properly
 - c. They will clog the nasogastric tube
 - d. They will not absorb correctly
3. At what angle should a patient be seated when in Fowler’s position to administer medications down an NG tube?
 - a. 15-degree angle
 - b. 30-degree angle
 - c. 45-degree angle
 - d. 90-degree angle
4. How many mL of water is used to flush an NG tube before administering medications?
 - a. 20
 - b. 15
 - c. 5
 - d. 30
5. What method is most used when administering medications down an NG tube?
 - a. Gastric
 - b. Push
 - c. Gravity
 - d. Pull

Lesson Three – Nasogastric/Nasal Medication Administration

LEARN: Nasogastric/Nasal Medication

Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the reasons patients may require medications to be administered down a nasogastric (NG) tube, the different types of nasal medications, and how to administer medications down an NG tube or by nasal spray as a healthcare professional.

Materials:

- *Nasogastric/Nasal Medication Administration* slide presentation
- *Nasogastric/Nasal Medication Administration Student Notes Page*
- *Nasogastric/Nasal Medication Administration Student Notes Page – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill out the page while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Learn about nasogastric tubes and nasal sprays
- Discover why patients need medications administered nasally
- Identify types of nasal medication
- Learn how to administer medications down a nasogastric tube or by nasal spray

Slide 3: What Is a Nasogastric (NG) Tube?

A nasogastric (NG) tube is a thin, flexible plastic tube that's used for short-term medical purposes. The NG tube is only designed for use up to six weeks. Nasogastric means “nose to stomach” in medical terms. The tube passes through a patient's nasal cavity into their throat and down through their esophagus into the stomach. Healthcare professionals use different types of NG tubes to deliver substances to a patient's stomach or draw substances out. The substances delivered to the stomach include medications and nutrition for short-term feeding when a patient is unable to take food or liquids orally (by mouth).

Slide 4: Why Do Patients Need Medications Administered Down an NG Tube?

When patients require medications to be administered through an NG tube, it is due to the following reasons:

- Difficulty swallowing (dysphagia)
- Neck, throat, or head cancers
- Altered mental status
- Malnutrition
- Inflammatory bowel disease (IBD)
- Endotracheal intubation (a tube that is inserted into the trachea to assist with the patient's breathing)
- Esophageal trauma (trauma to the esophagus)

Slide 5: Medications That Can Be Administered Down an NG Tube

There are several types of medications that can be given down an NG tube:

- Liquid solution
- Medications that can be crushed and diluted with water

Any medication administered down an NG tube must be in liquid form.

Slide 6: Medications That Cannot Be Crushed or Dissolved

Certain medications cannot be crushed or dissolved to be administered down an NG tube as they will harm the patient's stomach or cause increased toxicity. These include:

- Enteric-coated tablets
- Sustained release tablets
- Antineoplastic agents (drugs to treat cancer)
- Buccal (drugs placed between the cheek and gums) or sublingual (under the tongue) preparations

Slide 7: Before Administering Nasal Medication

These steps are to be followed for NG tube medication administration and administering medication by nasal spray:

- Follow the 6 Rights of Drug Administration.
- Wash your hands thoroughly with soap and water before handling medication to be administered down an NG tube or using a nasal spray. This helps minimize the risk of introducing any additional bacteria or contaminants into the patient's nose.
- Don disposable gloves.
- Ask the patient if they have any known drug allergies. If they are allergic to the drug you are about to administer, consult with the patient's physician before administering the medication.
- Explain the procedure to the patient.

Slide 8: Position Patient

When administering medication down a patient's NG tube, it's essential to position them correctly to ensure the drug is administered properly. Place the patient in Fowler's (seated) position at a 30-degree angle, as shown in the photo.

Slide 9: Ensure Proper Tube Placement

Ensure proper tube placement by using a syringe and aspirating a small amount of stomach content and checking the pH of the aspirate or by auscultating the epigastric area with the stethoscope to hear air sounds when about 30 mL of air is injected into the feeding tube. A pH > 6 indicates that the tube is improperly placed in the respiratory tract rather than the gastrointestinal tract. If this is the case, the NG tube needs to be removed and replaced before administering medications down the NG tube. Consult with your facility's policy on ensuring proper tube placement.

Instructor Note: Play this short video on checking tube placement using the aspiration and pH testing method. While the video is almost 2 minutes long, it is only necessary to watch the first minute. The rest of the video does not apply to this lesson.

<https://www.youtube.com/watch?v=6L0eqPgMIUQ>

Slide 10: Prepare the Medication

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication and that it is not expired.

- If the medication needs to be crushed and diluted, place the powder in a small medication cup after crushing. Most healthcare facilities have a pill crusher designed for this procedure. If more than one medication needs to be administered, use a separate medication cup for each prescription. Do not mix more than one medication together.
- Draw up 1-10 mL of warm diluent into a syringe as ordered. Add it to the powder and mix it until dissolved.

Slide 11: Insert Syringe and Flush Tube

Before administering the medication, insert a large syringe into the NG tube. Hold the syringe above the patient's head while adding approximately 30 mL of water into the syringe. Let gravity flush the tube.

Slide 12: Insert Medication, Flush with Water

There are two methods for administering medications down an NG tube:

1. The **gravity method** is most used. This entails holding the syringe higher than the patient's head and letting gravity flush the medication down the tube.
2. The **push method** entails holding the syringe below the patient's head and pushing the medication down the tube with the syringe and plunger.

After administering the medication using either method, flush the tube with another 30 mL of water. If additional medications need to be given, repeat the procedure, but only flush the tube with 10 mL of water between medications.

Slide 13: Clamp Tube and Have Patient Rest
After your final flush of the NG tube, you will clamp and secure the tube (as shown in the video you are about to watch.) Have the patient rest in Fowler's position for 30 minutes to ensure they do not aspirate if they vomit after receiving the medications.

Instructor Note: Play the video below to recap what participants have just learned about administering medications down an NG tube. At the end of this short, four-minute video, ask participants what the healthcare professional failed to do in the video. The provider did not check for tube placement before flushing the tube and administering medications.

<https://www.youtube.com/watch?v=8tsYWoHS hgY>

Slide 14: What Are Nasal Sprays?

Nasal sprays are used to target inflammation in the nasal passages due to allergies, colds, and the flu. They reduce swelling and help clear up stuffiness. Nasal sprays can be over the counter (OTC) or prescribed by a physician. The different types include steroidal nasal sprays, antihistamine sprays, and decongestant sprays.

Slide 15: How to Administer Nasal Spray

- Have the patient blow their nose.
- Read the product directions. If the spray requires agitation, gently shake the bottle. If directed, squirt out a small amount, called "priming" the inhaler.
- Position the bottle under one nostril. Point the spray toward the back of the patient's nose. Advise them to close their mouth.
- Gently squeeze or pump the bottle while the patient inhales slightly.
- Repeat on the other side if needed.

Slide 16: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation. After administering medication down an NG tube or by nasal spray, document the time, name of the medication, and dose given. You should also document any adverse reactions, vital signs, and other pertinent information in the patient's medical record or chart.

Slide 17: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on nasogastric/nasal medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____ Class: _____

Nasogastric/Nasal Medication Administration Student Notes Page

Instructions: Answer the questions as you go through the slide presentation.

What is a nasogastric (NG) tube used for?

What are four reasons a patient would need medication administered down an NG tube?

- 1.
- 2.
- 3.
- 4.

What two types of medications can be administered down an NG tube?

- 1.
- 2.

Name four classes of medications that cannot be crushed or dissolved.

- 1.
- 2.
- 3.
- 4.

What three things should be done before administering nasal medication?

- 1.

Medication Administration Curriculum

2.

3.

What is the best way to position a patient before administering medications down an NG tube?

Name two ways to ensure proper tube placement.

1.

2.

How do you mix medication after it is crushed?

How many mL of water do you use to flush an NG tube before administering medication?

Name the two methods for administering medications down an NG tube.

1.

2.

After clamping the NG tube, how long should you let the patient rest?

What are the two actions of nasal sprays that were mentioned in the presentation?

1.

2.

What is the first thing you should have the patient do before administering nasal spray?

Medication Administration Curriculum

What should you include in your documentation after administering medications down an NG tube or by nasal spray?

Nasogastric/Nasal Medication Administration Student Notes Page –Answer Key

What is a nasogastric (NG) tube used for?

A nasogastric (NG) tube is a thin, flexible plastic tube that's used for short-term medical purposes. Healthcare professionals use different types of nasogastric tubes to deliver substances to a patient's stomach or draw substances out.

What are four reasons a patient would need medication administered down an NG tube?

Any of the following are correct:

- Difficulty swallowing (dysphagia)
- Neck, throat, or head cancers
- Altered mental status
- Malnutrition
- Inflammatory bowel disease (IBD)
- Endotracheal intubation
- Esophageal trauma

What two types of medications can be administered down an NG tube?

1. Liquid solution
2. Medications that can be crushed and diluted with water

Name four classes of medications that cannot be crushed or dissolved.

1. Enteric-coated tablets
2. Sustained release tablets
3. Antineoplastic agents
4. Buccal or sublingual preparations

What three things should be done before administering nasal medication?

1. Follow the 6 Rights of Drug Administration
2. Wash your hands
3. Don disposable gloves

What is the best way to position a patient before administering medications down an NG tube?

When administering medication down a patient's NG tube, it's essential to position them correctly to ensure the drug is administered properly. Place the patient in Fowler's (seated) position at a 30-degree angle.

Name two ways to ensure proper tube placement.

1. **Aspirate stomach contents and check the pH levels.**
2. **Auscultate the epigastric area and listen for air sounds when 30 mL of air is injected into the tube.**

How do you mix medication after it is crushed?

If the medication needs to be crushed and diluted, place the powder in a small medication cup after crushing. Draw up 1-10 mL of warm diluent into a syringe as ordered. Add it to the powder and mix it until dissolved.

How many mL of water do you use to flush an NG tube before administering medication?

30 mL

Name the two methods for administering medications down an NG tube.

1. **Gravity method**
2. **Push method**

After clamping the NG tube, how long should you let the patient rest?

30 minutes

What are the two actions of nasal sprays that were mentioned in the lesson?

1. **Reduce inflammation**
2. **Clear up stuffiness**

What is the first thing you should have the patient do before administering nasal spray?

Blow their nose.

What should you include in your documentation after administering medications down an NG tube or by nasal spray?

After administering medication down an NG tube or by nasal spray, document the time, name of the medication, and dose given. You would also document any adverse reactions, vital signs, and other pertinent information in the patient's medical record or chart.

Lesson Three – Nasogastric/Nasal Medication Administration

REVIEW: Nasogastric/Nasal Medication Administration Activity

30 minutes

Purpose:

Participants will simulate administering medications down an NG tube and by nasal spray to a patient using the Medication Administration Trainer. Once they complete the activity, they will take a post-test.

Materials:

- Medication Administration Trainer
- *Nasogastric/Nasal Medication Administration Test*
- *Nasogastric/Nasal Medication Administration Test – Answer Key*

Facilitation Steps:

1. Instruct participants to administer medications down the NG tube using the Medication Administration Trainer and the steps they learned in the slide presentation.
2. Have participants simulate administering nasal spray using the Medication Administration Trainer and the steps in the presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the trainer, decide how to split participants up into teams.

3. When participants are finished with the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
4. Have participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Nasogastric/Nasal Medication Administration Test – Answer Key

Instructions: Select the best answer to the following multiple-choice questions:

1. What does “nasogastric” mean in medical terms?
 - a. nose to gastritis
 - b. nostrils to stomach
 - c. nares to gastric
 - d. nose to stomach**
2. Why should some medications not be crushed or dissolved for nasogastric administration?
 - a. They will harm the patient's stomach**
 - b. They will not dissolve properly
 - c. They will clog the nasogastric tube
 - d. They will not absorb correctly
3. At what angle should a patient be seated when in Fowler's position to administer medications down an NG tube?
 - a. 15-degree angle
 - b. 30-degree angle**
 - c. 45-degree angle
 - d. 90-degree angle
4. How many mL of water are used to flush an NG tube before administering medications?
 - a. 20
 - b. 15
 - c. 5
 - d. 30**
5. What method is most used when administering medications down an NG tube?
 - a. Gastric
 - b. Push
 - c. Gravity**
 - d. Pull

Sources

1. Burke, RN, MSN, Alene. (2023). *Medication Administration: NCLEX-RN*. Retrieved from <https://www.registerednursing.org/nclex/medication-administration/>
2. Cleveland Clinic Website. (2022, October 20). *Nasogastric Tube (NG)*. Retrieved from <https://my.clevelandclinic.org/health/treatments/24313-nasogastric-tube>
3. Cleveland Clinic Website. (2022, August 17). *Nasal Sprays Work Best When You Use Them Correctly—Here's How*. Retrieved from <https://health.clevelandclinic.org/how-to-use-nasal-spray/>
4. NURSINGcom w/Jon Haws, RN. (2022). *NG (Nasogastric) Tube Med Administration (Nursing Skills)*. Retrieved from <https://www.youtube.com/watch?v=8tsYWoHShgY>
5. Children's Hospital Colorado. (2022). *NG Tube Education: How to Check Placement of an NG Tube*. Retrieved from <https://www.youtube.com/watch?v=6L0eqPgMIUQ>

Lesson Four – Vaginal Medication Administration

Lesson Overview

In this lesson, participants will learn about the different types of vaginal medications, why they are used, and how to insert vaginal suppositories as a healthcare professional. At the end of the lesson, the students will participate in an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Learn about the different types of vaginal medications
- Understand why vaginal medications are used
- Discover how to insert vaginal suppositories

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Vaginal Medication Administration Test</i>	1. Print/photocopy the <i>Vaginal Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Vaginal Medication Administration Student Notes</i> • <i>Vaginal Medication Administration Student Notes – Answer Key</i> • <i>Vaginal Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Vaginal Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Vaginal Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Vaginal Medication Administration Test</i> • <i>Vaginal Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Vaginal Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: FOCUS activities may be completed prior to class.

Lesson Four – Vaginal Medication Administration

FOCUS: Learn How to Insert Vaginal Suppositories

5-10 minutes

Purpose:

Help participants learn how to insert vaginal suppositories as a healthcare professional. Have participants take the *Lesson 4—Medication Administration—Vaginal* pre-test.

Materials:

- *Vaginal Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Vaginal Medication Administration Test* and explain to participants that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lesson.
2. Have participants complete the pre-test. Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge.

Answers to the test will be given after the post-test.

Name: _____ Class: _____

Vaginal Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. What is a yeast infection called in medical terms?
 - a. Bacterial vaginosis
 - b. Bacterial vaginitis
 - c. Vaginal candidiasis
 - d. Vaginal bacterium
2. Which of the following vaginal medications does **not** help prevent pregnancy?
 - a. Spermicidal foam
 - b. Vaginal ring
 - c. Vaginal suppository
 - d. Vaginal tablets
3. What is the purpose of having a patient void before inserting a vaginal suppository?
 - a. To allow the patient to clean themselves before the procedure
 - b. To warm up the vaginal wall
 - c. To prevent the passing of urine during the procedure
 - d. To make insertion of the suppository go faster
4. What type of lubricant is used when inserting vaginal suppositories?
 - a. Oil soluble
 - b. Water soluble
 - c. Silicone
 - d. Moisturizing
5. How far is a vaginal suppository inserted into the vagina?
 - a. 3-4 inches
 - b. 1-2 inches
 - c. 3-5 inches
 - d. 4-6 inches

Lesson Four – Vaginal Medication Administration

LEARN: Vaginal Medication Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the different types of vaginal medications, why they are used, and how to insert a vaginal suppository as a healthcare professional.

Materials:

- *Vaginal Medication Administration* slide presentation
- *Vaginal Medication Administration Student Notes Page*
- *Vaginal Medication Administration Student Notes Page – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill out the page while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Learn about the types of vaginal medications
- Understand why vaginal medications are used
- Discover how to insert vaginal suppositories as a healthcare professional

Slide 3: Why Are Vaginal Medications Used?

Vaginal medications deliver medications into the vagina and nearby structures, such as the cervix. These medications are inserted into the vagina and have fewer systemic adverse effects compared to other routes of medication administration.

- Treat yeast infections: Caused by a fungal infection that causes discharge, irritation,

and intense itchiness of the vagina and the tissues at the vaginal opening, called the vulva. Also called vaginal candidiasis, this infection affects up to three out of four women during their lifetimes. Often, many women experience at least two episodes.

- Prevent pregnancy: Spermicides are a type of birth control with chemicals that stop sperm from reaching an egg. Spermicide is inserted into the vagina before sexual activity to help prevent pregnancy. A vaginal ring is another type of birth control that is inserted into the vagina for three weeks, then removed for one week. The vaginal ring has the hormones estrogen and progestin that are released through the vaginal lining to prevent pregnancy.
- Treat bacterial vaginosis: Most common during reproductive years, bacterial vaginosis occurs when the natural bacteria levels are out of balance. When too much of a certain bacterium grows, it leads to bacterial vaginosis, causing pain and discomfort in the vagina.
- Deliver female hormones: Typically, estrogen and progesterone that are prescribed when a female is going through menopause or naturally has lower levels of these types of hormones.
- Relieve nausea or other digestive issues: If the patient cannot tolerate oral medications for nausea and digestive issues, some physicians may prescribe vaginal medications as an alternative.

Slide 4: Types of Vaginal Medications

- **Tablets:** Treat infections or introduce probiotics into the vagina
- **Cream:** Relieve itchiness, treat yeast infections, and hormone replacement
- **Foam:** Prevent pregnancy
- **Gel:** Treat bacterial infections
- **Vaginal Ring:** Prevent pregnancy
- **Suppositories:** Used for all the above

For this lesson and the activity with the Medication Administration Trainer following this lesson, you will learn how to insert vaginal suppositories. Since vaginal suppositories can be prescribed for many reasons, this will be the most administered vaginal medication you might see as a healthcare professional.

Slide 5: Before Administering Suppositories

- Follow the 6 Rights of Drug Administration
- Wash your hands
- Don disposable gloves
- Ensure the suppository is at room temperature
- Ask the patient if they have any known drug allergies
- Explain the procedure to the patient
- If the patient wishes to insert the suppository, give specific instructions on the correct procedure

Slide 6: Have the Patient Void

Ask the patient to use the restroom and relieve themselves (void) before the procedure. Voiding prevents the passing of urine during the procedure.

Slide 7: Position Patient

Have the patient lie down on their back with legs slightly bent and feet flat on the bed. Adjust the bed to a working height that is comfortable for you. Provide privacy by draping a sheet over the patient with the vaginal area exposed.

Slide 8: Ensure It Is the Correct Medication

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication and that it has not expired. Read the label on the packaging before inserting a suppository. If you are unsure of the procedure, read the manufacturer's instructions. Remove the suppository from the wrapper.

Slide 9: Apply Water-Soluble Lubricant

The lubricant should be stored at room temperature for patient comfort. However, advise the patient it will still feel cool when you insert the suppository. Apply a liberal amount of lubricant to the suppository and the index finger of your dominant hand.

Slide 10: Insert Medication

Before inserting the medication, advise the patient that you will insert the suppository and that it might feel cool. It is always best to talk the patient through the procedure so there are no surprises. Then, with your non-dominant hand, gently separate the folds of the labia. There are two folds of skin called the labia majora (outer folds) and the labia minora (inner folds). These skin folds protect the opening of the urethra and vagina.

Place the flat part of the suppository on your dominant index finger and insert the suppository about three to four inches along the posterior vaginal wall. Withdraw your finger and wipe away excess lubricant. Alternatively, some suppositories come with an applicator. If so, use the applicator following the manufacturer's instructions.

Instructor Note: Have participants watch this short, two-minute video that shows a vaginal suppository, an applicator, and the index finger method of inserting a vaginal suppository. It is not the best quality video, but it describes the technique well. Also, it is not graphic and is appropriate for participants.

[Vaginal Applications: Inserting a Medication Vaginally \(youtube.com\)](https://www.youtube.com/watch?v=VaginalApplications)

Slide 11: Rest For 10-20 Minutes

- After inserting the suppository, remove your gloves and dispose of them and any used supplies per your agency protocol.
- Advise the patient to rest for 10-20 minutes to allow the suppository time to dissolve.
- The suppository is designed to dissolve with the patient's body heat.

Slide 12: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation. After inserting a vaginal suppository, document the time, name of the suppository, and dose. You should also document any adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Slide 13: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on vaginal medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____

Class: _____

Vaginal Medication Administration

Student Notes Page

Instructions: Fill out the notes pages as you watch the slide presentation

Name five reasons why vaginal medications are used.

- 1.
- 2.
- 3.
- 4.
- 5.

What are the six types of vaginal medications?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

If the patient wishes to insert the suppository, you may allow them to do so after giving them specific instructions. Choose true or false.

True False

Why do you ask the patient to void before inserting a vaginal suppository?

Medication Administration Curriculum

How do you position a patient before inserting a vaginal suppository?

How do you ensure you are giving the correct medication to a patient?

What type of lubricant is used when inserting a vaginal suppository?

How far do you insert a vaginal suppository along the posterior vaginal wall?

How long should the patient rest after receiving a vaginal suppository, and why?

What should you include in your documentation after inserting a vaginal suppository?

Vaginal Medication Administration

Student Notes Page – Answer Key

Name five reasons why vaginal medications are used.

- Treat yeast infections (vaginal candidiasis)
- Prevent pregnancy
- Treat bacterial vaginosis
- Deliver female hormones
- Relieve nausea or other digestive issues

What are the six types of vaginal medications?

- Tablets: Treat infections or introduce probiotics into the vagina
- Cream: Relieve itchiness, treat yeast infections, and hormone replacement
- Foam: Prevent pregnancy
- Gel: Treat bacterial infections
- Vaginal Ring: Prevent pregnancy
- Suppositories: Used for all the above

If the patient wishes to insert the suppository, you may allow them to do so after giving them specific instructions. Choose true or false.

True False

Why do you ask the patient to void before inserting a vaginal suppository?

Voiding prevents the passing of urine during the procedure.

How do you position a patient before inserting a vaginal suppository?

Have the patient lie down on their back with legs slightly bent and feet flat on the bed. Adjust the bed to a working height that is comfortable for you. Provide privacy by draping a sheet over the patient with the vaginal area exposed.

How do you ensure you are giving the correct medication to a patient?

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication and that it has not expired.

What type of lubricant is used when inserting a vaginal suppository?

Water soluble

How far do you insert a vaginal suppository along the posterior vaginal wall?

3-4 inches

How long should the patient rest after receiving a vaginal suppository, and why?

Advise the patient to rest for 10-20 minutes to allow the suppository time to dissolve.

What should you include in your documentation after inserting a vaginal suppository?

After inserting a vaginal suppository, document the time, name of the suppository, and dose. You would also document any adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Lesson Four – Vaginal Medication Administration

REVIEW: Vaginal Medication Administration Activity

30 minutes

Purpose:

Participants will simulate inserting a vaginal suppository into a patient using the Medication Administration Trainer. Once they complete the activity, they will take a post-test.

Materials:

- Medication Administration Trainer
- *Vaginal Medication Administration Test*
- *Vaginal Medication Administration Test*
– Answer Key

Facilitation Steps:

1. Instruct participants to practice inserting a vaginal suppository using the Medication Administration Trainer and the steps they learned in the slide presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the manikin, decide how to split the participants up into teams.

2. When participants finish the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
3. Have the participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Vaginal Medication Administration

Test – Answer Key

Instructions: Select the best answer to the following multiple-choice questions:

1. What is a yeast infection called in medical terms?
 - a. Bacterial vaginosis
 - b. Bacterial vaginitis
 - c. Vaginal candidiasis**
 - d. Vaginal bacterium
2. Which of the following vaginal medications does **not** help prevent pregnancy?
 - a. Spermicidal foam
 - b. Vaginal ring
 - c. Vaginal suppository
 - d. Vaginal tablets**
3. What is the purpose of having a patient void before inserting a vaginal suppository?
 - a. To allow the patient to clean themselves before the procedure
 - b. To warm up the vaginal wall
 - c. To prevent the passing of urine during the procedure**
 - d. To make insertion of the suppository go faster
4. What type of lubricant is used when inserting vaginal suppositories?
 - a. Oil soluble
 - b. Water soluble**
 - c. Silicone
 - d. Moisturizing
5. How far is a vaginal suppository inserted into the vagina?
 - a. 3-4 inches**
 - b. 1-2 inches
 - c. 3-5 inches
 - d. 4-6 inches

Sources

1. Watson, Stephanie. (2021, December 12). *Suppositories: What They Treat and How to Use Them*. Retrieved from <https://www.webmd.com/digestive-disorders/suppositories-how-to-use#:~:text=A%20suppository%20is%20another%20way,dissolves%20and%20releases%20its%20medication.>
2. Wikipedia Website. (2023, January 28). *Intravaginal Administration*. Retrieved from https://en.wikipedia.org/wiki/Intravaginal_administration
3. Mayo Clinic Website. (2023, January 11). *Yeast Infection (Vaginal)*. Retrieved from <https://www.mayoclinic.org/diseases-conditions/yeast-infection/symptoms-causes/syc-20378999>
4. Mayo Clinic Website. (2023, June 10). *Bacterial Vaginosis*. Retrieved from <https://www.mayoclinic.org/diseases-conditions/bacterial-vaginosis/symptoms-causes/syc-20352279>
5. Mayo Clinic Website. (2022, September 14). *Vaginal Ring*. Retrieved from <https://my.clevelandclinic.org/health/articles/24157-vaginal-ring>
6. Planned Parenthood Website. (2023). *Spermicide and Contraceptive Gel*. Retrieved from <https://www.plannedparenthood.org/learn/birth-control/spermicide>
7. Open Text Website. (2023). *Administering Medications Rectally and Vaginally*. Retrieved from <https://opentextbc.ca/clinicalskills/chapter/6-4-rectal-and-vaginal-medications/>
8. CareFirst Specialty Pharmacy. (2020). *How to Use Vaginal Suppository*. Retrieved from <https://www.youtube.com/watch?v=dqghJxsPY0Q>

Lesson Five – Rectal Medication Administration

Lesson Overview

In this lesson, participants will learn about the different types of rectal medications, why they are used, and how to insert rectal suppositories as a healthcare professional. At the end of the lesson, participants will complete an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Identify the types of rectal medications
- Learn why rectal medications are used
- Discover how to insert rectal suppositories as a healthcare professional

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Rectal Medication Administration Test</i>	1. Print/photocopy the <i>Rectal Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Rectal Medication Administration Student Notes</i> • <i>Rectal Medication Administration Student Notes – Answer Key</i> • <i>Rectal Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Rectal Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Rectal Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Rectal Medication Administration Test</i> • <i>Rectal Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Rectal Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: FOCUS activities may also be completed prior to class.

Lesson Five – Rectal Medication Administration

FOCUS: Learn How to Insert Rectal Suppositories

5-10 minutes

Purpose:

Help participants learn how to insert rectal suppositories as a healthcare professional. Have participants take the pre-test.

Materials:

- *Rectal Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Rectal Medication Administration Test* and explain to participants that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lesson.
2. Have participants complete the pre-test. Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge.

Answers to the test will be given after the post-test.

Name: _____ Class: _____

Rectal Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. What is the best definition of a suppository?
 - a. A solid drug delivery system that dissolves in the rectum
 - b. A small amount of liquid drug solution that is injected into the rectum
 - c. A liquid or drug solution injected into the colon
 - d. A catheter inserted into the rectum for repeated drug administration
2. Which of the following is **not** a reason why rectal medications are used?
 - a. Relieve constipation
 - b. Treat pain
 - c. Prevent pregnancy
 - d. Treat allergy symptoms
3. What is the purpose of having a patient defecate before inserting a rectal suppository?
 - a. To allow the patient to clean themselves before the procedure
 - b. To warm up the rectum
 - c. To prevent the suppository from being inserted into feces
 - d. To make the insertion of the suppository go faster
4. How would you position a patient before inserting a rectal suppository?
 - a. On their knees
 - b. On their stomach
 - c. On their back
 - d. On their side
5. How far is a rectal suppository inserted into the rectum of an adult patient?
 - a. 4 inches
 - b. 2 inches
 - c. 1/2 inch
 - d. 3 inches

Lesson Five – Rectal Medication Administration

LEARN: Rectal Medication Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the different types of rectal medications, why they are used, and how to insert rectal suppositories as a healthcare professional.

Materials:

- *Rectal Medication Administration* slide presentation
- *Rectal Medication Administration Student Notes Page*
- *Rectal Medication Administration Student Notes Page – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill out the page while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Identify the types of rectal medications
- Learn why rectal medications are used
- Discover how to insert rectal suppositories as a healthcare professional

Slide 3: Types of Rectal Medications

- **Suppositories:** Solid drug delivery system that dissolves in the rectum
- **Micro-enema:** Small amount of a liquid drug solution injected into the rectum
- **Large Volume Enema:** Liquid or a drug solution injected into the colon to cleanse the colon of feces or to deliver medications
- **Specialized Catheter:** Inserted into the rectum for repeated use of drug and liquid administration, such as a cancer patient who will require repeated medication administration and cannot tolerate oral medications

Instructor Note: For this lesson and the activity that follows the presentation, participants will be taught how to administer rectal suppositories.

Slide 4: Why Are Rectal Medications Used?

Drugs that are administered rectally generally have a faster onset, higher bioavailability, and a shorter duration than drugs administered orally. Rectal medications are also given when a patient has difficulty swallowing, digestive issues, or a bowel obstruction that would interfere with absorption if the drug was given by mouth. Rectal medications are used for the following reasons:

- Treat pain and inflammation
- Relieve constipation
- Treat nausea and vomiting
- Reduce fever and migraines
- Treat allergy symptoms
- Induce sedation

Slide 5: Before Administering Rectal Suppositories

- Follow the 6 Rights of Drug Administration
- Wash your hands
- Don disposable gloves
- Ensure the suppository is at room temperature
- Ask the patient if they have any known drug allergies
- Explain the procedure to the patient
- If the patient wishes to insert the suppository, give specific instructions on the correct procedure

Slide 6: Have the Patient Defecate

Ask the patient to use the restroom and attempt to defecate (have a bowel movement). Rectal medication should not be inserted into feces. If the patient is constipated and unable to have a bowel movement, their physician may prescribe an enema before a rectal suppository. If the patient reports rectal bleeding or diarrhea, notify the physician before inserting a rectal suppository, as they are contraindicated in these situations.

Slide 7: Position Patient

Have the patient lie down on their side with their upper leg flexed over their lower leg toward the waist (Sim's position). Adjust the bed to a working height that is comfortable for you. Provide privacy by draping the patient with a blanket or sheet, keeping the buttocks and anal area exposed. You can also place a towel or sheet under the patient's buttocks to protect the linens from potential fecal drainage.

Slide 8: Ensure It Is the Correct Medication
Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication and that it has not expired. Read the label on the packaging before inserting a suppository. If you are unsure of the procedure, read the manufacturer's instructions. Remove the suppository from the wrapper.

Slide 9: Apply Water-Soluble Lubricant
The lubricant should be stored at room temperature for patient comfort. However,

advise the patient it will still feel cool when you insert the suppository. Apply a liberal amount of lubricant to the suppository and the index finger of your dominant hand.

Slide 10: Insert Medication

Before inserting the medication, advise the patient that you will be inserting the suppository and that it might feel cool. It is always best to talk the patient through the procedure so there are no surprises. Have the patient take slow, deep breaths and ask them to visualize relaxing their sphincter. Then, with your non-dominant hand, gently separate the buttocks. Using the lubed index finger of your dominant hand, insert the suppository with the rounded tip towards the patient. Insert into the rectum approximately four inches for adults and half an inch to two inches for infants and children. Withdraw your finger and wipe away excess lubricant. Gently wipe the patient's anal area.

Alternatively, some suppositories come with an applicator. If so, use the applicator following the manufacturer's instructions.

Instructor Note: To recap what participants have just learned, play this short, four-minute video designed for participants and educators on the clinical skills required when administering rectal medication.

<https://www.youtube.com/watch?v=dqghJxsPY0Q>

Slide 11: Rest For 5-10 Minutes

After inserting the suppository, remove your gloves and dispose of them and any used supplies per your agency protocol. Advise the patient to rest for 5-10 minutes on their side to allow the suppository time to dissolve. The suppository is designed to dissolve with the patient's body temperature.

Slide 12: Place A Bedpan Near the Patient

Make sure a call bell and a bedpan are close to the patient. If a laxative or stool softener was given, the patient will require close proximity to a bedpan, portable commode, or toilet.

Slide 13: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation.

After inserting a rectal suppository, document the time, name of the suppository, and dose. You should also document adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Slide 14: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on rectal medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____ Class: _____

Rectal Medication Administration

Student Notes Page

Instructions: Fill out the notes page as you watch the slide presentation.

What are the four types of rectal medications?

- 1.
- 2.
- 3.
- 4.

What are three reasons why rectal medications are used?

- 1.
- 2.
- 3.

If the patient wishes to insert the suppository, you may allow them to do so after giving them specific instructions on the correct procedure. Choose true or false.

True False

Why do you ask the patient to defecate before inserting a rectal suppository?

How do you position a patient before inserting a rectal suppository?

How do you ensure you are giving the correct medication to a patient?

Medication Administration Curriculum

How should water-soluble lubricant be stored?

How far do you insert a rectal suppository into the rectum of an adult, infant, or child?

How long should the patient rest after receiving a rectal suppository, and why?

What should you place next to the patient if a laxative or stool softener was given?

What should you include in your documentation after inserting a rectal suppository?

Rectal Medication Administration

Student Notes Page – Answer Key

What are the four types of rectal medications?

1. Suppositories
2. Micro-enema
3. Large volume enema
4. Specialized catheter

What are three reasons why rectal medications are used?

Any three of the following are correct:

- Treat pain and inflammation
- Relieve constipation
- Treat nausea and vomiting
- Reduce fever and migraines
- Treat allergy symptoms
- Induce sedation

If the patient wishes to insert the suppository, you may allow them to do so after giving them specific instructions on the correct procedure. Choose true or false.

True False

Why do you ask the patient to defecate before inserting a rectal suppository?

Because rectal medication should not be inserted into feces.

How do you position a patient before inserting a rectal suppository?

Have the patient lie down on their left side with their upper leg flexed over their lower leg toward the waist (Sims' position).

How do you ensure you are giving the correct medication to a patient?

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication and that it has not expired. Read the label on the packaging before inserting a suppository.

How should water-soluble lubricant be stored?

Room temperature

How far do you insert a rectal suppository into the rectum of an adult, infant, or child?

4 inches for an adult and ½ to 2 inches for an infant or child

How long should the patient rest after receiving a rectal suppository, and why?

Advise the patient to rest for 5-10 minutes on their side to allow the suppository time to dissolve.

What should you place next to the patient if a laxative or stool softener was given?

Make sure a call bell and a bedpan are close to the patient. If a laxative or stool softener was given, the patient will require close proximity to a bedpan, portable commode, or toilet.

What should you include in your documentation after inserting a rectal suppository?

After inserting a rectal suppository, document the time, name of the suppository, and dose. You would also document adverse reactions, vital signs, and any other pertinent information in the patient's medical record or chart.

Lesson Five – Rectal Medication Administration

REVIEW: Rectal Medication Administration Activity

30 minutes

Purpose:

Participants will simulate inserting a rectal suppository into a patient using the Medication Administration Trainer. Once they complete the activity, they will take a post-test.

Materials:

- Medication Administration Trainer
- *Rectal Medication Administration Test*
- *Rectal Medical Administration Test – Answer Key*

Facilitation Steps:

1. Instruct participants to practice inserting a rectal suppository using the Medication Administration Trainer and the steps they learned in the slide presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the trainer, decide how to split the participants up into teams.

2. When the participants are finished with the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
3. Have the participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Rectal Medication Administration

Test – Answer Key

Instructions: Select the best answer to the following multiple-choice questions:

1. What is the best definition of a suppository?
 - a. **A solid drug delivery system that dissolves in the rectum**
 - b. A small amount of liquid drug solution that is injected into the rectum
 - c. A liquid or drug solution injected into the colon
 - d. A catheter inserted into the rectum for repeated drug administration
2. Which of the following is **not** a reason why rectal medications are used?
 - a. To relieve constipation
 - b. To treat pain
 - c. **To prevent pregnancy**
 - d. To treat allergy symptoms
3. What is the purpose of having a patient defecate before inserting a rectal suppository?
 - a. To allow the patient to clean themselves before the procedure
 - b. To warm up the rectum
 - c. **To prevent the suppository from being inserted into feces**
 - d. To make the insertion of the suppository go faster
4. How would you position a patient before inserting a rectal suppository?
 - a. On their knees
 - b. On their stomach
 - c. On their back
 - d. **On their side**
5. How far is a rectal suppository inserted into the rectum of an adult patient?
 - a. **4 inches**
 - b. 2 inches
 - c. 1/2 inch
 - d. 3 inches

Sources

1. Wikipedia Website (2023, May 23). *Suppository*. Retrieved from <https://en.wikipedia.org/wiki/Suppository#:~:text=Rectal%20suppositories%20are%20intended%20for,migraines%2C%20allergies%2C%20and%20sedation.>
2. Wikipedia Website. (2023, May 26). *Rectal Administration*. Retrieved from https://en.wikipedia.org/wiki/Rectal_administration
3. Open Text Website. (2023). *Administering Medications Rectally and Vaginally*. Retrieved from <https://opentextbc.ca/clinicalskills/chapter/6-4-rectal-and-vaginal-medications/>
4. Osmosis from Elsevier. (2022). *Giving Rectal Medication—Clinical Skills*. Retrieved from <https://www.youtube.com/watch?v=dqghJxsPY0Q>

Lesson Six – Oral Medication Administration

Lesson Overview

In this lesson, participants will learn about the different routes of oral medication, the different types of medications, why oral administration is the preferred route, and how to administer oral medications as a healthcare professional. At the end of the lesson, participants will complete an activity using the Medication Administration Trainer and take a brief post-test. Prior knowledge of medications/pharmacology is required.

Lesson Objectives

At the end of this lesson, participants should:

- Identify several oral routes of administration
- Learn about the different types of oral medications
- Discover why oral administration is the preferred route
- Learn how to administer oral medications as a healthcare professional

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• <i>Oral Medication Administration Test</i>	1. Print/photocopy the <i>Oral Medication Administration Test</i> (two per participant).	5-10 minutes
LEARN	• <i>Oral Medication Administration Student Notes</i> • <i>Oral Medication Administration Student Notes – Answer Key</i> • <i>Oral Medication Administration</i> slide presentation • Medication Administration Trainer	1. Prepare the <i>Oral Medication Administration</i> slide presentation for viewing. 2. Print/photocopy the <i>Oral Medication Administration Student Notes</i> (one per participant).	20 minutes
REVIEW	• <i>Oral Medication Administration Test</i> • <i>Oral Medication Administration Test – Answer Key</i> • Medication Administration Trainer	1. Make sure participants have the second copy of the <i>Oral Medication Administration Test</i> from the FOCUS part of the lesson.	30 minutes

Instructor Note: FOCUS activities may be completed prior to class.

Lesson Six – Oral Medication Administration

FOCUS: Learn How to Administer Oral Medications

5-10 minutes

Purpose:

Help participants learn how to administer oral medications as a healthcare professional. Have participants take the pre-test.

Materials:

- *Oral Medication Administration Test*

Facilitation Steps:

1. Distribute two copies of the *Oral Medication Administration Test* and explain to participants that upon your instruction, one is to be taken at the start of the lesson and one at the end of the lessons.
2. Have participants complete the pre-test. Information from the pre-test can be compared with information from the post-test, which participants will take upon completion of the lesson to measure changes in their knowledge.

Answers to the test will be given after the post-test.

Name: _____

Class: _____

Oral Medication Administration Test

Instructions: Select the best answer to the following multiple-choice questions:

1. Where are sublingual medications administered?
 - a. Under the tongue
 - b. Between the gums and cheek wall
 - c. By intravenous line
 - d. Swallowed into the stomach
2. What is the main reason liquid medications are used?
 - a. For patients who do not have a gag reflex
 - b. To treat pain
 - c. For faster absorption
 - d. For patients who cannot swallow a tablet or capsule
3. Which of the following is **not** a reason the oral route of medication administration is preferred?
 - a. Convenience
 - b. Less expensive
 - c. More expensive
 - d. High patient compliance
4. As a healthcare professional, how would you ensure you are administering the correct medication?
 - a. Ask the patient
 - b. Match it with the patient's MAR
 - c. Call the pharmacist
 - d. Call the physician
5. How long should you have a patient rest after administering medications that are swallowed?
 - a. 10 minutes
 - b. 60 minutes
 - c. 5 minutes
 - d. 30 minutes

Lesson Six – Oral Medication Administration

LEARN: Oral Medication Administration Slide Presentation

20 minutes

Purpose:

Participants will receive a thorough introduction to the different routes of oral administration, types of oral medications, why they are preferred, and how to administer oral medications as a healthcare professional.

Materials:

- *Oral Medication Administration* slide presentation
- *Oral Medication Administration Student Notes Page*
- *Oral Medication Administration Student Notes Page – Answer Key*
- Medication Administration Trainer

Facilitation Steps:

1. Distribute the student notes page and instruct participants to fill out the page while following along with the presentation. Share the following information as you show the slide presentation.

Slide 1: Introduction slide

Slide 2: Goals and Objectives

The goals and objectives of this lesson are to:

- Identify several oral routes of administration
- Learn about the different types of oral medications
- Discover why oral administration is the preferred route
- Learn how to administer oral medications as a healthcare professional

Slide 3: Routes of Oral Administration

- **Oral:** Medications are administered **by mouth (PO)**, swallowed, and end up in the stomach
- **Sublingual:** Drugs placed or sprayed **under the tongue** where they dissolve and are absorbed into the small blood vessels under the tongue
- **Buccal:** Medications placed **between the gums and cheek wall**, where they are absorbed through the tissues that line the mouth and enter the bloodstream

Slide 4: Different Types of Oral Medications

- **Capsules:** Medication enclosed in a hard or soft shell that breaks down in the digestive tract
- **Tablets:** Drugs mixed with a binder powder and then pressed into a tablet that dissolves in the digestive tract
- **Liquids:** For those who have trouble swallowing a tablet or capsule
- **Sprays:** A medication designed to be sprayed under the tongue (sublingual)
- **Powders:** Drugs dissolved in water for those who cannot swallow pills
- **Lozenges:** Designed to dissolve slowly in the mouth to treat sore throats, coughs, and throat irritations

Slide 5: Why Is the Oral Route Preferred?

The oral route is preferred over other routes of administration for these reasons:

- Convenience: The oral route is more convenient than starting an intravenous (IV) line, inserting a nasogastric tube to administer medications, or inserting vaginal or rectal suppositories. The patient simply opens their mouth and takes the drug with water or has a spray or tablet administered under their tongue.
- Often less expensive: Oral medications are usually more cost-effective than other routes of medication as there is high competition by pharmaceutical companies. Often, a patient can find a generic brand of the same medication at a lower cost, or physicians can offer free samples.
- Non-invasive: Compared to intravenous, nasal, vaginal, and rectal routes of medication administration, the oral route is the least invasive.
- High patient compliance: Patients who are prescribed oral medications are often more compliant with taking their meds.

Slide 6: Before Administering Oral Medications

- Follow the 6 Rights of Drug Administration
- Wash your hands
- Don disposable gloves
- Ask the patient if they have any known drug allergies
- If the medication was ordered to be given with a snack, ask the patient if they received and ate their snack

Slide 7: Ensure It Is the Correct Medication

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication by matching it with the patient's MAR. Ensure the medication has not expired.

Slide 8: How to Administer Oral Medications That Are to Be Swallowed

- Sit the patient in the upright or side-lying position. The upright position is preferred unless the patient has an injury that prohibits them from sitting upright. If that is the case, you will have them take the medications while lying on their side to prevent aspiration. Never administer oral medications to be swallowed to a patient lying on their back.
- Supply the patient with a cup of water or juice (if not contraindicated). Generally, you will ask the patient if they prefer juice or water. However, some medications are not compatible with juice and will be contraindicated.
- Give the patient the cup of medication while explaining what the medication is used for. You will have explained the medication's actions, purpose, and side effects during the 6 Rights of Medication Administration. If more than one medication is to be administered, provide each drug in a separate cup and describe to the patient what they are being given. However, some facilities allow all medications to be given in one cup. Follow your local agency's protocol regarding this step.
- Instruct them to take the medication and swallow it. If they need assistance placing the medication in their mouth, have them stick out their tongue, place the medication on their tongue, and assist them by holding the cup of water or juice.
- Stay with the patient until all medication is swallowed.

Instructor Note: To review what the participants have just learned, play this short, two-minute video on administering oral medications. This video does not include administering sublingual or buccal (following on the next two slides), but the slides should be self-explanatory.

<https://www.youtube.com/watch?v=8pKp9dnRX7c>

Slide 9: How to Administer Sublingual Medications

Sublingual medications are placed or sprayed under the patient's tongue. A common sublingual medication is nitroglycerin, which is administered for chest pain. The sublingual route is preferred for chest pain as the medication is rapidly absorbed into the bloodstream without passing through the intestinal wall and liver.

Have the patient lift their tongue toward the roof of their mouth and place the tablet or prescribed number of sprays under the patient's tongue. If you have administered a tablet, advise the patient to let it dissolve. Sublingual medications cannot be chewed or swallowed.

Slide 10: Administering Buccal Medications
Buccal and sublingual medications are used due to the rapid action to relax the blood vessels while bypassing the digestive system. These forms of medicine are highly effective, but not all medications can be prepared for sublingual or buccal administration. The administration of buccal medications is similar to sublingual medications. Have the patient open their mouth and place the tablet or spray between their gum and the cheek wall.

Slide 11: Have the Patient Rest

After administering oral medications that are swallowed, have the patient rest for approximately 30 minutes to observe for adverse reactions. After administering sublingual and buccal medications, have the patient rest for 5-10 minutes or until the drug dissolves. Advise the patient not to eat, drink, smoke, or vape until the medication is absorbed. Depending on the medication, most oral medications act within 30 minutes, and sublingual and buccal within 15 minutes. Always follow the instructions provided by the pharmacist, physician, or medicine insert.

Slide 12: Post-Medication Safety Check

- Perform post-assessments and/or vital signs if applicable
- Sign the MAR and place it in the appropriate chart
- Dispose of trash and used gloves
- Wash your hands
- Return to the patient's side at the allotted time to observe for adverse reactions

Slide 13: Documentation

The last component of the 6 Rights of Drug Administration is Right Documentation.

After administering oral medications, document the time, name of the drug(s), and dose. You should also document adverse reactions, vital signs, and other pertinent information in the patient's medical record or chart.

Slide 14: Review

- Participate in activities using the Medication Administration Trainer
- Take a short test on oral medication administration

Instructor Note: Before moving on to the review portion of the class, ask participants if they have any questions about the presentation. Additionally, ask if there are any questions about the student notes page and supply answers from the answer key, if needed.

Name: _____ Class: _____

Oral Medication Administration

Student Notes Page

Instructions: Fill out the notes as you watch the slide presentation.

What are the three routes of oral administration?

- 1.
- 2.
- 3.

What are the six types of oral medications?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Name the four reasons the oral route is preferred.

- 1.
- 2.
- 3.
- 4.

What five steps should you take before administering oral medications?

- 1.
- 2.
- 3.
- 4.
- 5.

Medication Administration Curriculum

How do you ensure you give the correct medication to a patient?

How should you position a patient before administering oral medications that are to be swallowed?

Where do you place sublingual medications?

Where do you place buccal medications?

How long should the patient rest after receiving oral medications that are swallowed and why?

What five steps are involved with the post-medication safety check?

- 1.
- 2.
- 3.
- 4.
- 5.

What should you include in your documentation after administering oral medications?

Oral Medication Administration

Student Notes Page – Answer Key

What are the three routes of oral administration?

1. Oral
2. Sublingual
3. Buccal

What are the six types of oral medications?

1. Capsules
2. Tablets
3. Liquids
4. Sprays
5. Powders
6. Lozenges

Name the four reasons the oral route is preferred.

- Convenience
- Often less expensive
- Non-invasive
- High patient compliance

What five steps should you take before administering oral medications?

- Follow the 6 Rights of Drug Administration
- Wash your hands
- Don disposable gloves
- Ask the patient if they have any known drug allergies
- If the medication was ordered to be given with a snack, ask the patient if they received and ate their snack

How do you ensure you give the correct medication to a patient?

Going back to the 6 Rights of Drug Administration, it is always best to triple-check that you are administering the correct medication by matching it with the patient's MAR.

How should you position a patient before administering oral medications that are to be swallowed?

Upright or side-lying position

Where do you place sublingual medications?

Under the tongue

Where do you place buccal medications?

Between the gum and cheek wall

How long should the patient rest after receiving oral medications that are swallowed and why?

After administering oral medications that are swallowed, have the patient rest for approximately 30 minutes to observe for adverse reactions.

What five steps are involved with the post-medication safety check?

- **Perform post-assessments and/or vital signs if applicable**
- **Sign the MAR and place it in the appropriate chart**
- **Dispose of trash and used gloves**
- **Wash your hands**
- **Return to the patient's side at the allotted time to observe for adverse reactions**

What should you include in your documentation after administering oral medications?

After administering oral medications, document the time, name of the drug(s), and dose. You should also document adverse reactions, vital signs, and other pertinent information in the patient's medical record or chart.

Lesson Six – Oral Medication Administration

REVIEW: Oral Medication Administration Activity

30 minutes

Purpose:

Participants will simulate administering oral medications to a patient using the Medication Administration Trainer. Once they complete the activity, they will take a post-test.

Materials:

- Medication Administration Trainer
- *Oral Medication Administration Test*
- *Oral Medication Administration Test – Answer Key*

Facilitation Steps:

1. Instruct participants to practice administering oral medications to be swallowed, sublingual medications, and buccal medications using the Medication Administration Trainer and the steps they learned in the slide presentation.

If time permits, allow each participant to practice this skill. If time does not permit each participant to have hands-on time with the trainer, decide how to split participants up into teams.

2. When participants finish the activity, instruct them to take a few minutes to complete the post-test. Have participants self-check their answers from the post-test as you share from the answer key.
3. Have the participants review their pre-test and post-test to see the knowledge they gained from the lesson.

Oral Medication Administration Test

– Answer Key

Instructions: Select the best answer to the following multiple-choice questions:

1. Where are sublingual medications administered?
 - a. **Under the tongue**
 - b. Between the gums and cheek wall
 - c. By the intravenous line
 - d. Swallowed into the stomach
2. What is the main reason liquid medications are used?
 - a. For patients who do not have a gag reflex
 - b. To treat pain
 - c. For faster absorption
 - d. **For patients who cannot swallow a tablet or capsule**
3. Which of the following is **not** a reason the oral route of medication administration is preferred?
 - a. Convenience
 - b. Less expensive
 - c. **More expensive**
 - d. High patient compliance
4. As a healthcare professional, how do you ensure you administer the correct medication?
 - a. Ask the patient
 - b. **Match it with the patient's MAR**
 - c. Call the pharmacist
 - d. Call the physician
5. How long should you have a patient rest after administering medications that are swallowed?
 - a. 10 minutes
 - b. 60 minutes
 - c. 5 minutes
 - d. **30 minutes**

Sources

1. Encyclopedia.Com Website (2023). *Sublingual And Buccal Medication Administration*. Retrieved from <https://www.encyclopedia.com/medicine/encyclopedias-almanacs-transcripts-and-maps/sublingual-and-buccal-medication-administration>
2. Wisconsin Technical College System Website. (2021). *15.2 Basic Concepts Of Administering Medications*. Retrieved from <https://wtcs.pressbooks.pub/nursingskills/chapter/15-2-basic-concepts-of-administering-medications/#:~:text=After%20administering%20medication%2C%20it%20is,from%20an%20unintended%20repeat%20dose.>
3. Healthline Website. (2020, February 20). *Tablets vs. Capsules: Pros, Cons, and How They Differ*. Retrieved from <https://www.healthline.com/health/capsule-vs-tablet#safety>
4. TCC ADN RN Program: Nursing Skills. (2015). *Administering Oral Medications*. Retrieved from <https://www.youtube.com/watch?v=8pKp9dnRX7c>
5. Open Text Website. (2023). *6.3 Administering Medications by Mouth and Gastric Tube*. Retrieved from <https://opentextbc.ca/clinicalskills/chapter/6-2-oral-and-gastric-medication/>