

# Introduction to Intramuscular Injections Curriculum



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(1044270-01)

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## About the Author



Kasey Carlson has been a Registered Nurse for 17 years. She holds a Master's degree in Nursing Education from the University of Wisconsin – Eau Claire and has been teaching associate degree nursing for over 11 years. She also has a second Master's degree in Learning Design and Technology from San Diego State University. Ms. Carlson specializes in healthcare simulation curriculum design.

## Introduction to Intramuscular Injections

This curriculum and accompanying injection training tool will help students learn about medication administration through the intramuscular route.

### Curriculum Structure

The *Introduction to Intramuscular Injections* curriculum is composed of the following lessons. Approximate lesson times are included.

| Lesson | Title                                                              | Approximate Time    |
|--------|--------------------------------------------------------------------|---------------------|
| One    | FOCUS: Part 1 - Developing Awareness of Patient-Focused Care       | 10 minutes          |
| One    | FOCUS: Part 2 - Anatomy (Identifying Layers of Skin)               | 10 minutes          |
| One    | LEARN: Introduction to Intramuscular Injections Slide Presentation | 20 minutes          |
| One    | REVIEW: Practice and Assessment of Intramuscular Injections        | 30 minutes          |
|        | <b>Total</b>                                                       | <b>1 - 1½ hours</b> |

# 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.

### ***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 – Introduction to Intramuscular Injections

## Lesson Overview

*In this lesson, students will learn about medication administration through the intramuscular route.*

## Pre-Lesson Knowledge

- Integumentary anatomy
- Dosage calculation
- Safe medication administration practices

## Lesson Objectives

After completing this lesson, participants will be able to:

- Identify guidelines for safe medication administration
- Discussion indications for the intramuscular route
- Identify locations for intramuscular injections
- Demonstration intramuscular injection technique
- Explain how to document an intramuscular injection

## Lesson at a Glance

| Activity         | Materials                                                                                                                                                                                                                                                                                                                    | Preparation                                                                                                                                                                                                                                                                                    | Approximate class time |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| FOCUS:<br>Part 1 | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections (Focus on Empathy)</i> worksheet</li><li>• <i>Introduction to Intramuscular Injections (Focus on Empathy) Instructor Resource</i></li></ul>                                                                                              | 1. Print/photocopy <i>Introduction to Intramuscular Injections (Focus on Empathy)</i> worksheet (one per participant)                                                                                                                                                                          | 10 minutes             |
| FOCUS:<br>Part 2 | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections (Focus on Anatomy)</i> worksheet</li><li>• <i>Introduction to Intramuscular Injections (Focus on Anatomy) Instructor Resource</i></li></ul>                                                                                              | 1. Print/photocopy <i>Introduction to Intramuscular Injections (Focus on Anatomy)</i> worksheet (one per participant)                                                                                                                                                                          | 10 minutes             |
| LEARN            | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections</i> slide presentation</li><li>• <i>Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)</i></li><li>• Injection pad, model or simulator</li></ul>                                               | <ol style="list-style-type: none"><li>1. Prepare <i>Introduction to Intramuscular Injections</i> slide presentation for viewing</li><li>2. Print/photocopy <i>Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)</i> (one per participant)</li></ol> | 20 minutes             |
| REVIEW           | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections</i> slide presentation</li><li>• <i>Introduction to Intramuscular Injections Check-Off (Instructor Resource)</i></li><li>• <i>Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)</i></li></ul> | <ol style="list-style-type: none"><li>1. Prepare <i>Introduction to Intramuscular Injections</i> slide presentation for viewing</li><li>2. Print/photocopy (one per participant):</li></ol>                                                                                                    | 30 minutes             |

## Introduction to Intramuscular Injections

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections Check-Off (Sample Provider's Orders)</i></li><li>• <i>Introduction to Intramuscular Injections Check-Off</i> worksheet</li><li>• <i>Introduction to Intramuscular Injections Check-Off (Medication Administration Record)</i> worksheet</li><li>• Injection pad, model or simulator</li><li>• <i>Introduction to Intramuscular Injections Quiz</i></li><li>• <i>Introduction to Intramuscular Injections Quiz - Answer Key</i></li></ul> <p>Supplies:</p> <ul style="list-style-type: none"><li>• Med cart or mock med cart</li><li>• Mock/demo vial of ketorolac (Toradol) 15 mg/mL</li><li>• Intramuscular injection models, task trainer or simulator</li><li>• Intramuscular syringe/needle</li><li>• Alcohol swab</li><li>• Hand sanitizer or access to a sink</li><li>• Clean gloves</li></ul> | <ul style="list-style-type: none"><li>• <i>Introduction to Intramuscular Injections Check-Off (Sample Provider's Orders)</i></li><li>• <i>Introduction to Intramuscular Injections Check-Off</i> worksheet</li><li>• <i>Introduction to Intramuscular Injections Check-Off (Medical Administration Record)</i> worksheet</li><li>• <i>Introduction to Intramuscular Injections Quiz</i></li></ul> <p>3. Get the supplies ready for the lesson</p> |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

Instructor Note: For Focus and Review activities, the instructor may choose to have students complete both or one of the two activities. Focus activities may also be completed prior to class.

## Lesson One – Introduction to Intramuscular Injections

# FOCUS: Part 1 - Developing Awareness of Patient-Focused Care

**10 minutes**

**Purpose:**

To help students develop awareness of patient focused care.

**Materials:**

- *Introduction to Intramuscular Injections (Focus on Empathy)* worksheet
- *Introduction to Intramuscular Injections (Focus on Empathy) Instructor Resource* page

**Facilitation Steps:**

1. Distribute the *Introduction to Intramuscular Injections (Focus on Empathy)* worksheets prior to or at the start of the class.
2. Have the *Introduction to Intramuscular Injections (Focus on Empathy) Instructor Resource* page available.
3. Have students read through the information and complete the worksheet.
4. Have students pair up upon completion and share answers.

# Introduction to Intramuscular Injections (Focus on Empathy) Instructor Resource

**READ** the following:

Belonephobia (fear of injections) is a disorder that affects 3.5% to 10% of the population. The median age of onset is 5.5 years. Adults may have panic or anxiety attacks. Children may have similar symptoms in addition to crying, tantrums, agitation and clinging to a parent.

Many persons with belonephobia may also react to injections with a vasovagal reflex response. This response may include paleness, sweating, nausea, shortness of breath, loss of bladder and bowel control and various levels of unresponsiveness (light-headedness or fainting). The onset of the vasovagal response may be 2 to 3 seconds following the needle-stick or up to several hours later.

**REFLECT** on the situation

How would you know if your patient has a fear of needles?

*First ask your patient prior to the procedure. During the procedure make sure you are looking for symptoms of anxiety or vasovagal response.*

What could you do if your patient admits to a fear of needles?

*Check to see if the medication could be given via a different route. If it cannot, then make sure you discuss the procedure in detail to alleviate fear of the unknown and have patient ask questions. Encourage the patient to participate in the decision making and ask about ways to relieve anxiety. They may want a particular person (parent, friend) or distraction during the procedure. Gradually expose the patient to unopened supplies and observe their response. Numbing medication may be used if the fear is of pain.*

**SHARE** your thoughts with a peer

Name: \_\_\_\_\_ Class: \_\_\_\_\_

# Introduction to Intramuscular Injections (Focus on Empathy)

**READ** the following:

Belonephobia (fear of injections) is a disorder that affects 3.5% to 10% of the population. The median age of onset is 5.5 years. Adults may have panic or anxiety attacks. Children may have similar symptoms in addition to crying, tantrums, agitation and clinging to a parent.

Many persons with belonephobia may also react to injections with a vasovagal reflex response. This response may include paleness, sweating, nausea, shortness of breath, loss of bladder and bowel control and various levels of unresponsiveness (light-headedness or fainting). The onset of the vasovagal response may be 2 to 3 seconds following the needle-stick or up to several hours later.

**REFLECT** on the situation

How would you know if your patient has a fear of needles?

What could you do if your patient admits to a fear of needles?

**SHARE** your thoughts with a peer

## Lesson One - Introduction to Intramuscular Injections

# FOCUS: Part 2 - Anatomy (Identifying Layers of Skin)

**10 minutes**

**Purpose:**

To help students learn to identify layers of the skin.

**Materials:**

- *Introduction to Intramuscular Injections (Focus on Anatomy) Instructor Resource*
- *Introduction to Intramuscular Injections (Focus on Anatomy) worksheet*

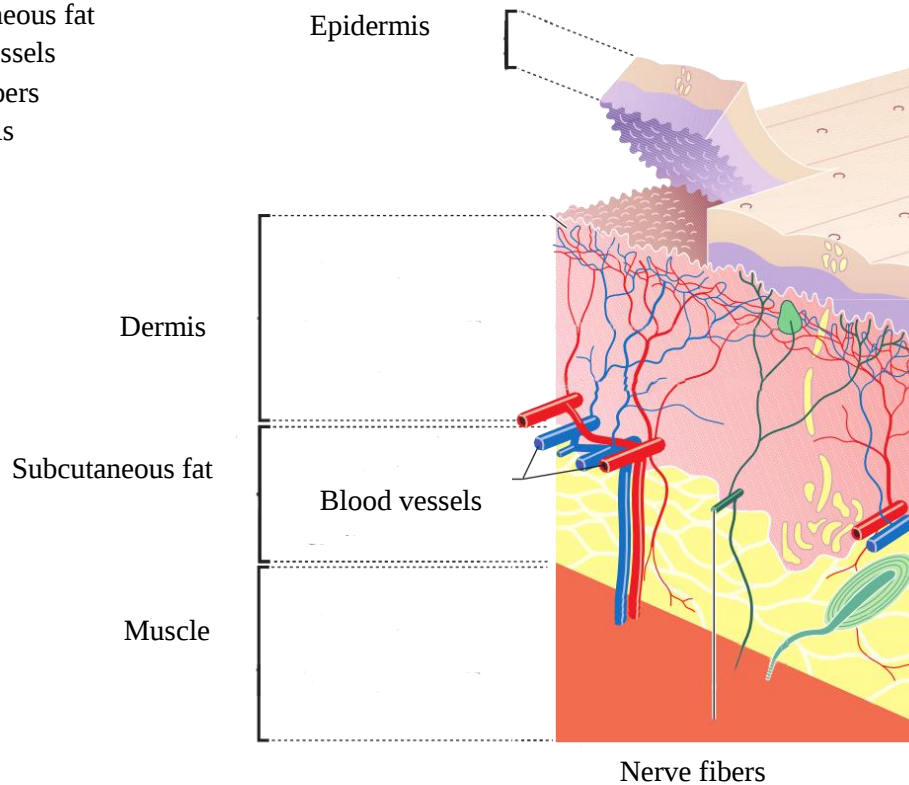
**Facilitation Steps:**

1. Distribute the *Introduction to Intramuscular Injections (Focus on Anatomy) worksheets* prior to or at the start of the class.
2. Have the *Introduction to Intramuscular Injections (Focus on Anatomy) Instructor Resource* page available.
3. Have students read through the information and complete the worksheet.
4. Have students pair up upon completion and share answers.

# Introduction to Intramuscular Injections (Focus on Anatomy) Instructor Resource

Intramuscular is defined as “situated within, occurring within, or administered by entering a muscle” (Merriam-Webster). Below is a diagram of the layers of the skin. Label the diagram with the words listed and answer the questions below.

1. Subcutaneous fat
2. Blood vessels
3. Nerve fibers
4. Epidermis
5. Dermis
6. Muscle



1. Can intramuscular injections bleed? Why or why not?

*Yes. The vessels are larger in the muscle. We want to make sure that the medication is being placed in the muscle and not the blood vessels.*

2. Do intramuscular injections hurt? Why or why not?

*Yes. As you can see, the nerve fibers do go throughout the dermis, subcutaneous fat and muscle so intramuscular injections are the most painful injections.*

Modified work.

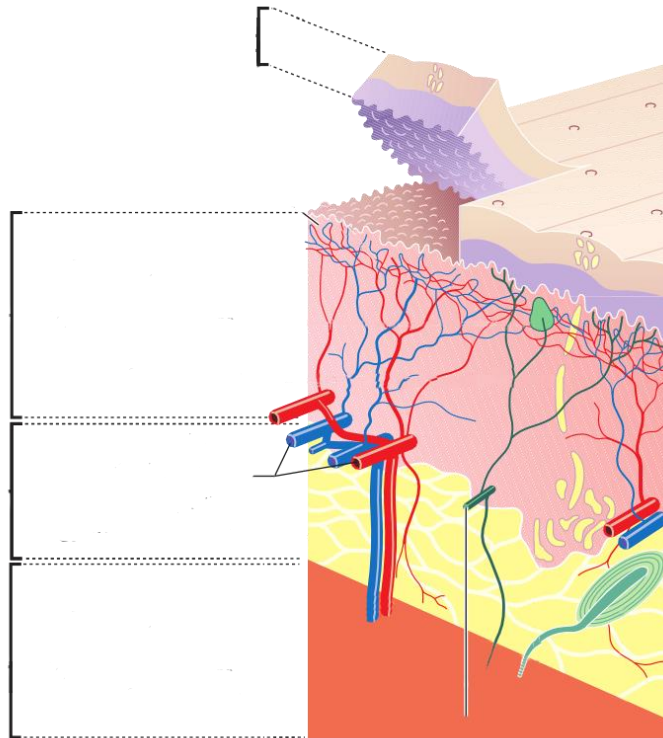
By Madhero88 (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons([https://commons.wikimedia.org/wiki/File%3ASkin\\_layers.png](https://commons.wikimedia.org/wiki/File%3ASkin_layers.png))

Merriam-Webster (2016). Dictionary. Retrieved from <https://www.merriam-webster.com/>

# Introduction to Intramuscular Injections (Focus on Anatomy)

Intramuscular is defined as “situated within, occurring within, or administered by entering a muscle” (Merriam-Webster). Below is a diagram of the layers of the skin. Label the diagram with the words listed and answer the questions below.

1. Subcutaneous fat
2. Blood vessels
3. Nerve fibers
4. Epidermis
5. Dermis
6. Muscle



1. Can intramuscular injections bleed? Why or why not?
2. Do intramuscular injections hurt? Why or why not?

Modified work.

By Madhero88 (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons([https://commons.wikimedia.org/wiki/File%3ASkin\\_layers.png](https://commons.wikimedia.org/wiki/File%3ASkin_layers.png))

Merriam-Webster (2016). Dictionary. Retrieved from <https://www.merriam-webster.com/>

## Lesson One - Introduction to Intramuscular Injections

# LEARN: Intramuscular Injections Slide Presentation

20 minutes

### Purpose:

Participants will receive a thorough introduction to intramuscular injections and the proper procedure and documentation surrounding it.

### Materials:

- *Introduction to Intramuscular Injections* slide presentation
- *Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)*
- *Introduction to Intramuscular Injections (Focus on Empathy)* worksheet (completed)
- Injection pad, model or simulator

### Facilitation Steps:

1. Share the following information as you show the slide presentation:

**Slide 1:** Introduction Slide (Source: Perry, A., Potter, P., & Ostendorf, W. (2014). *Clinical Nursing Skills and Techniques*. 8<sup>th</sup> Edition. Publisher: Mosby, Inc.)

**Slide 2:** Parenteral means administered in a manner other than through the digestive tract (in this case, by intramuscular injection)

See *Introduction to Intramuscular Injections (Focus on Anatomy)* worksheet. Discuss location of muscle.

*Why absorbed faster? Muscle has a rich blood supply*

**Slide 3:** Most vaccines are given into the muscle. Some conditions such as multiple sclerosis (a nerve disorder) is treated with IM anti-inflammatories called interferons.

If the patient cannot take oral pain medications (in cases like nausea/vomiting) and there is no

IV access or medication cannot be given IV, then IM would be the chosen route.

**Slide 4:** Site should be free of pain, infection, necrosis, bruising and abrasions.

Consider the location of underlying bones, nerves and blood vessels and the volume of medication that you will administer.

Because of the sciatic nerve location, the dorsogluteal muscle is not recommended as an injection site. If a needle hits the sciatic nerve, the patient may experience partial or permanent paralysis of the leg. If it must be used, aspiration is recommended.

The recommendation for pediatric IM injection sites includes use of the anterolateral thigh for infants up to 12 months of age, deltoid in children 18 months and older and ventrogluteal for children of all ages.

Doses over 3mL should be split. For example, if a dose is 5mL (although unusual), 3mL could go in the left Vastus lateralis and 2mL in the right.

*Have students locate these muscles on each other*

**Slide 5:** Gauge refers to the diameter of the needle. The higher the gauge the thinner the needle.

The viscosity of the medication, injection site, patient's weight and amount of subcutaneous tissue influence needle size selection.

For example, give medications in aqueous (thin) solutions with a 20- to 25-gauge needle. Give viscous (thick) with an 18- to 21-gauge needle.

Use a small-gauge (22- to 25-gauge) needle for children.

## Introduction to Intramuscular Injections

*(Show the students the supplies and where to find the length/gauge of a needle on the package)*

**Slide 6:** Review *Introduction to Intramuscular Injections (Focus on Empathy)* worksheet.

Prior to administering any medication, it is important to review the medication administration record and provider's order. It is essential to review general information about the medication as well.

Make sure the medication is appropriate for your patient.

Since IM injections causes pain, have the order changed if the medication could be given via a different route.

**Slide 7:** *Demonstrate swabbing of vial, removing needle cap in one smooth motion to prevent a rebound needle stick and drawing of medication*

*One handed scoop method:* Place the cap on a flat surface and hold the syringe in one hand. Keep the other hand by your side. Slide the needle into the cap, then lift it up and snap it on securely using only one hand.

Adding air equal to the dose into the vial prior to removing the medication equalizes the pressure in the vial.

Finish completing the rights of administration once dose is drawn. This may be done at a medication cart or at bedside depending on facility.

**Slide 8:** Review proper identifiers (name, date of birth, medical record number, photograph in MAR).

*Ask students how they would explain an intramuscular injection. Discuss FOCUS Part 1 - Empathy*

**Slide 9:** Prepare the site. Assist patient to comfortable position. Make sure you are communicating the process to the patient.

**Slide 10:** *Demonstrate intramuscular injection.*  
Note: Depending on which injection trainer you use, it may not have Z-track injection capability.

*Z-track:* Pull on skin with side of hand moving tissue to prevent later tracking. The Z-track left after injection prevents deposit of medication through sensitive tissue.

Per recent literature, aspiration is not needed for pediatric IM injections if proper technique and location is used except for the dorsogluteal site where it should be used. Some textbooks still recommend it though. Aspiration is not needed for vaccines per CDC.

Sisson, H. (2015). Aspirating during the intramuscular injection procedure: a systematic literature review. *Journal of Clinical Nursing*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/25871949>

Centers for Disease Control (2016). Vaccine Administration. Retrieved from <https://www.cdc.gov/vaccines/pubs/pinkbook/vacc-admin.html>

**Slide 11:** Follow these steps for 'after administration.' Patient teaching can include answering questions about when pain relief is to be expected, reassessment in 15-30 minutes and signs/symptoms of an adverse reaction.

**Slide 12:** Every MAR is different. Documentation should include these things.

*Demonstrate documentation of intramuscular injections.*

# Introduction to Intramuscular Injections Check-Off

## (Sample Medication Administration Record)

|               |               |           |         |
|---------------|---------------|-----------|---------|
| Patient       | Grant, Hannah | MRN       | 1524833 |
| Date of Birth | 02/28/XXXX    | Provider  | Frey    |
| Age           | 22 years      | Allergies | NKDA    |

| Initials  | Signature/Title        | Initials | Signature/Title |
|-----------|------------------------|----------|-----------------|
| <i>JW</i> | <i>Janice Wells SN</i> |          |                 |
|           |                        |          |                 |
|           |                        |          |                 |

| Medication                                       | Time     | Mon                           | Tue | Wed | Thurs | Fri | Sat | Sun |
|--------------------------------------------------|----------|-------------------------------|-----|-----|-------|-----|-----|-----|
| Ketorolac (Toradol) 30mg IM                      | Initials | <i>JW</i>                     |     |     |       |     |     |     |
|                                                  | Site     | <i>Right vastus lateralis</i> |     |     |       |     |     |     |
| Ketorolac (Toradol) 15-30mg IM every 6 hours PRN | Initials |                               |     |     |       |     |     |     |
|                                                  | Site     |                               |     |     |       |     |     |     |
|                                                  |          |                               |     |     |       |     |     |     |

## Lesson One - Introduction to Intradermal Injections

# REVIEW: Practice and Assessment of Intramuscular Injections

30 minutes

### Purpose:

Participants will practice intramuscular injections on models and then complete a quiz to assess mastery.

### Materials:

- *Introduction to Intramuscular Injections Check-Off (Instructor Resource)*
- *Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)*
- *Introduction to Intramuscular Injections Check-Off (Sample Provider's Orders)*
- *Introduction to Intramuscular Injections worksheet*
- *Introduction to Intramuscular Injections Check-Off (Medication Administration Record) worksheet*
- Injection pad, model or simulator
- *Introduction to Intramuscular Injections Quiz*
- *Introduction to Intramuscular Injections Quiz - Answer Key*

### Supplies:

- Med cart or mock med cart
- Mock/demo vial of ketorolac (Toradol) 15 mg/mL
- Intramuscular injection models, task trainer or simulator
- Intramuscular syringe/needle
- Alcohol swab
- Hand sanitizer or access to a sink
- Clean gloves

### Facilitation Steps:

1. Give students the following handouts:
  - *Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)*

- *Introduction to Intramuscular Injections Check-Off (Sample Provider's Orders)*
  - *Introduction to Intramuscular Injections worksheet*
  - *Introduction to Intramuscular Injections Check-Off (Medication Administration Record) worksheet*
2. Access the *Introduction to Intramuscular Injections Check-Off (Instructor Resource)* page. Following the steps on the check-off page, demonstrate an intramuscular injection on the model, task trainer or simulator.
  3. Have students review the *Introduction to Intramuscular Injections Check-Off (Sample Medication Administration Record)* and *Introduction to Intramuscular Injections Check-Off (Sample Provider's Orders)*. Answer any questions students may have on using these.
  4. Following the steps on their *Introduction to Intramuscular Injections* worksheet, have students practice intramuscular injections on the model, task trainer or simulator available.
  5. Students should properly document their injection on the *Introduction to Intramuscular Injections Check-Off (Medication Administration Record)* worksheet.
  6. Hand out the *Introduction to Intramuscular Injections Quiz* to students. Give them a couple of minutes to complete it.
  7. Have students self-check or peer check their answers as you share them from the *Introduction to Intramuscular Injections Quiz - Answer Key*.

# Introduction to Intramuscular Injections

## Check-Off (Instructor Resource)

### PREPARATION:

Supplies:

- Provider Order
- MAR
- Med cart or mock med cart
- Mock/demo vial of ketorolac (Toradol) 15 mg/mL
- Intramuscular injection models (can be placed on a manikin)
- Intramuscular syringes and needles
- Alcohol swab
- Hand sanitizer or access to sink
- Clean gloves

After demonstration, have students practice intramuscular injections on the models using the following steps:

|     |                                                                                                |  |
|-----|------------------------------------------------------------------------------------------------|--|
| 1.  | Verify MAR with written order from provider                                                    |  |
| 2.  | Review medication reference information (proper dosage, side effects, contraindications, etc.) |  |
| 3.  | Gather supplies needed for preparing and administering medication                              |  |
| 4.  | Wash your hands with sanitizer or soap/water                                                   |  |
| 5.  | Compare MAR with medication; complete the Rights of Administration                             |  |
| 6.  | Draw up the correct dose; complete the Rights of Administration                                |  |
| 7.  | Wash your hands with sanitizer or soap/water                                                   |  |
| 8.  | Gather supplies, lock medication cart and ensure no patient information is visible per HIPAA   |  |
| 9.  | Knock, enter room and provide for privacy                                                      |  |
| 10. | Identify yourself with name and title (student nurse, medical assistant, etc.)                 |  |
| 11. | Wash your hands with sanitizer or soap/water                                                   |  |

## Introduction to Intramuscular Injections

|     |                                                                                                                 |  |
|-----|-----------------------------------------------------------------------------------------------------------------|--|
| 12. | Identify patient by asking name and date of birth and verify this information with the MAR                      |  |
| 13. | Explain the procedure to the patient, ask if they have any questions and verify allergies with MAR              |  |
| 14. | If not completed at the cart, complete the Rights of Administration                                             |  |
| 15. | Apply clean gloves                                                                                              |  |
| 16. | Assist patient to comfortable position and select appropriate site                                              |  |
| 17. | Clean site with alcohol swab                                                                                    |  |
| 18. | Remove needle cap and hold syringe securely (pull skin to the side if performing Z-track)                       |  |
| 19. | Inset needle in a dart like motion at 90-degree angle and aspirate for blood (depending on site)                |  |
| 20. | Administer injection into the model and withdraw needle (let skin return if performing Z-track)                 |  |
| 21. | Apply alcohol swab or gauze firmly over site for several seconds                                                |  |
| 22. | Ask your patient if they are comfortable, if they have any questions and observe for signs of allergic reaction |  |
| 23. | Remove gloves and wash your hands with sanitizer or soap/water                                                  |  |
| 24. | Document medication administration on the MAR                                                                   |  |
|     | Score                                                                                                           |  |

**Optional:** Evaluate the student's ability to complete an intramuscular injection using the above steps. May score via points or satisfactory/unsatisfactory. See sample completed MAR for proper documentation.

# Introduction to Intramuscular Injections Check-Off

(Sample Medication Administration Record)

|               |               |           |         |
|---------------|---------------|-----------|---------|
| Patient       | Grant, Hannah | MRN       | 1524833 |
| Date of Birth | 02/28/XXXX    | Provider  | Frey    |
| Age           | 22 years      | Allergies | NKDA    |

| Medication                                       | Time | Mon                           | Tue | Wed | Thurs | Fri | Sat | Sun |
|--------------------------------------------------|------|-------------------------------|-----|-----|-------|-----|-----|-----|
| Ketorolac (Toradol) 30mg IM                      | Now  | <i>JW</i>                     |     |     |       |     |     |     |
|                                                  | Site | <i>Right vastus lateralis</i> |     |     |       |     |     |     |
| Ketorolac (Toradol) 15-30mg IM every 6 hours PRN |      |                               |     |     |       |     |     |     |
|                                                  | Site |                               |     |     |       |     |     |     |
|                                                  |      |                               |     |     |       |     |     |     |

| Initials  | Signature/Title        | Initials | Signature/Title |
|-----------|------------------------|----------|-----------------|
| <i>JW</i> | <i>Janice Wells SN</i> |          |                 |
|           |                        |          |                 |
|           |                        |          |                 |

# Introduction to Intramuscular Injections Check-Off

(Sample Provider's Orders)

[illegible]

GRANT, HANNAH

MRN: 1524833

Age: 22 years

# Introduction to Intramuscular Injections

**PART ONE:** Practice intramuscular injections on the model using the following steps:

|     |                                                                                                                    |
|-----|--------------------------------------------------------------------------------------------------------------------|
| 1.  | Verify MAR with written order from provider                                                                        |
| 2.  | Review medication reference information (proper dosage, side effects, contraindications, etc.)                     |
| 3.  | Gather supplies needed for preparing and administering medication                                                  |
| 4.  | Wash your hands with sanitizer or soap/water                                                                       |
| 5.  | Compare MAR with medication; complete the Rights of Administration                                                 |
| 6.  | Draw up the correct dose; complete the Rights of Administration                                                    |
| 7.  | Wash your hands with sanitizer or soap/water                                                                       |
| 8.  | Gather supplies. Lock medication cart and ensure no patient information is visible per HIPAA                       |
| 9.  | Knock, enter room and provide for privacy                                                                          |
| 10. | Identify yourself with name and title (student nurse, medical assistant, etc.)                                     |
| 11. | Wash your hands with sanitizer or soap/water                                                                       |
| 12. | Identify patient by asking name and date of birth and verify this information with the MAR                         |
| 13. | Explain the procedure to the patient, ask if they have any questions and verify allergies with MAR                 |
| 14. | If not completed at the cart, complete the Rights of Administration                                                |
| 15. | Apply clean gloves                                                                                                 |
| 16. | Assist patient to comfortable position and select appropriate site                                                 |
| 17. | Clean site with alcohol swab                                                                                       |
| 18. | Remove needle cap and hold syringe securely (pull skin to the side if performing Z-track)                          |
| 19. | Inset needle in a dart like motion at 90-degree angle and aspirate for blood (depending on site)                   |
| 20. | Administer injection into the model and withdraw needle (let skin return if performing Z-track)                    |
| 21. | Apply alcohol swab or gauze firmly over site for several seconds                                                   |
| 22. | Ask your patient if they are comfortable and if they have any questions and observe for signs of allergic reaction |
| 23. | Remove gloves and wash your hands with sanitizer or soap/water                                                     |
| 24. | Document medication administration on the MAR                                                                      |

# Introduction to Intramuscular Injections Check-Off

## (Medication Administration Record)

|               |               |           |         |
|---------------|---------------|-----------|---------|
| Patient       | Grant, Hannah | MRN       | 1524833 |
| Date of Birth | 02/28/XXXX    | Provider  | Frey    |
| Age           | 22 years      | Allergies | NKDA    |

| Medication                                       | Time     | Mon | Tue | Wed | Thurs | Fri | Sat | Sun |
|--------------------------------------------------|----------|-----|-----|-----|-------|-----|-----|-----|
| Ketorolac (Toradol) 30mg IM                      | Initials |     |     |     |       |     |     |     |
|                                                  | Site     |     |     |     |       |     |     |     |
| Ketorolac (Toradol) 15-30mg IM every 6 hours PRN | Initials |     |     |     |       |     |     |     |
|                                                  | Site     |     |     |     |       |     |     |     |
|                                                  |          |     |     |     |       |     |     |     |

| Initials | Signature/Title | Initials | Signature/Title |
|----------|-----------------|----------|-----------------|
|          |                 |          |                 |
|          |                 |          |                 |
|          |                 |          |                 |

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Introduction to Intramuscular Injections Quiz

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

1. Intramuscular injections are used for which of the following?
  - a. Pain medications
  - b. Local anesthetics
  - c. Insulin
  - d. Sensitivity tests
2. Which of the following is the proper site for an intramuscular injection for toddlers to adults?
  - a. Anterior forearm
  - b. Abdomen
  - c. Back of upper arm
  - d. Deltoid
3. You need to give an intramuscular injection to a patient. Which of the following needles would you correctly select?
  - a. 1 to 3 inch, 18- to 16-gauge needle
  - b. 5/8 to 1½ inch, 25- to 18-gauge needle
  - c. 5/8 to 1 inch, 27- to 30-gauge needle
  - d. 3/8 to 5/8 inch, 25- to 27-gauge needle
4. When administering an intramuscular injection, what angle should be used?
  - a. 5-15 degree
  - b. 15-45 degree
  - c. 45-90 degree
  - d. 90 degree only
5. After you give a pain medication to a patient, what should be completed 15-30 minutes later?
  - a. Reassess patient's pain level
  - b. Document the medication administration
  - c. Administer another dose
  - d. Give patient food

# Introduction to Intramuscular Injections Quiz

## Answer Key

1. Intramuscular injections are used for which of the following?

**a. Pain medications**

- b. Local anesthetics
- c. Insulin
- d. Sensitivity tests

*Intramuscular can also be used in vaccines or if patient cannot take medication orally or medication cannot be given IV.*

2. Which of the following is the proper site for an intramuscular injection?

- a. Anterior forearm
- b. Abdomen
- c. Back of upper arm

**d. Deltoid**

*Choice a is used for intradermal. Choices b and c are used for subcutaneous injections.*

3. You need to give an intramuscular injection to a patient. Which of the following needles would you correctly select?

- a. 1 to 3 inch, 18- to 16-gauge needle
- b. 5/8 to 1½ inch, 25- to 18-gauge needle**
- c. 5/8 to 1 inch, 27- to 30-gauge needle
- d. 3/8 to 5/8 inch, 25- to 27-gauge needle

*Choice a is too large of a gauge. Choices c is too small of gauge and d is used for intradermal injections.*

4. When administering an intramuscular injection, what angle should be used?

- a. 5-15 degree
- b. 15-45 degree
- c. 45-90 degree

**d. 90 degree only**

*90 degrees allows for access to the muscle.*

5. After you give a pain medication to a patient, what should be completed 15-30 minutes later?

**a. Reassess patient's pain level**

- b. Document the medication administration
- c. Administer another dose
- d. Give patient food

*Per the Joint Commission, all organizations should have a policy on pain reassessment and respond to a patient based on reassessment criteria.*

## Sources

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