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# NEW JERSEY EMT COVID-19 VACCINATION TRAINING



## TOPICS

Requirements

COVID-19 Vaccines

Intramuscular medication administration procedure

Contraindications, Precautions & Side effects



## OBJECTIVES

Discuss the requirements for a NJ EMT to administer the COVID-19 vaccine

Discuss and review the different COVID-19 vaccines

Review the intramuscular (IM) medication procedure

Discuss the contraindications, precautions and side effects of the COVID-19 vaccine



# REQUIREMENTS

- A New Jersey EMT may administer the COVID-19 vaccines ONLY if ALL the following have been met and/or adhered to:
  - ≥ 18 years of age
  - Possession of a valid New Jersey EMT Certification
  - Possession of a valid CPR Certification (Professional/Healthcare Provider Level)
  - Successful completion of the New Jersey EMT COVID-19 Vaccination Training Program
    - ❖ Psychomotor and Cognitive Examination (Passing score of 80%)
  - Successful demonstration of skill competency with Intramuscular (IM) injection and vaccine administration
  - A physician, nurse practitioner, physician assistant, registered nurse, or pharmacist directly supervises the EMT in administering the vaccine (max. 3 EMTs for every 1 supervisor)





# VACCINE OVERVIEW

# PFIZER- BIONTECH (AGES 12+)

Type of Ingredient	Ingredient	Purpose
Messenger ribonucleic acid (mRNA)	<ul style="list-style-type: none"><li>Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2</li></ul>	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
Lipids (fats)	<ul style="list-style-type: none"><li>2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide</li><li>1,2-distearoyl-sn-glycero-3-phosphocholine</li><li>Cholesterol (plant derived)</li><li>[(4-hydroxybutyl)azanediyl]bis(hexane-6,1-diyl)bis(2-hexyldecanoate)</li></ul>	Work together to help the mRNA enter cells.
Salts and sugar	<ul style="list-style-type: none"><li>Dibasic sodium phosphate dihydrate</li><li>Monobasic potassium phosphate</li><li>Potassium chloride (common food salt)</li><li>Sodium chloride (basic table salt)</li><li>Sucrose (basic table sugar)</li></ul>	Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.



# PFIZER- BIONTECH (AGES 5-11)

Type of Ingredient	Ingredient	Purpose
Messenger ribonucleic acid (mRNA)	<ul style="list-style-type: none"><li>Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2</li></ul>	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
Lipids (fats)	<ul style="list-style-type: none"><li>2[[polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide</li><li>1,2-distearoyl-sn-glycero-3-phosphocholine</li><li>Cholesterol (plant derived)</li><li>[[4-hydroxybutyl)azanediyl]bis(hexane-6,1-diyl)bis(2-hexyldecanoate)</li></ul>	Work together to help the mRNA enter cells.
Sugar and acid stabilizers	<ul style="list-style-type: none"><li>Sucrose (table sugar)</li><li>Tromethamine</li><li>Tromethamine hydrochloride</li></ul>	Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.



# MODERNA (AGE ≥ 18)

Type of Ingredient	Ingredient	Purpose
Messenger ribonucleic acid (mRNA)	<ul style="list-style-type: none"><li>Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2</li></ul>	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
Lipids (fats)	<ul style="list-style-type: none"><li>PEG2000-DMG: 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol</li><li>1,2-distearoyl-sn-glycero-3-phosphocholine</li><li>BotaniChol® (non-animal origin cholesterol)</li><li>SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate</li></ul>	Work together to help the mRNA enter cells.
Salt, sugar, acid stabilizers, and acid	<ul style="list-style-type: none"><li>Sodium acetate</li><li>Sucrose (basic table sugar)</li><li>Tromethamine</li><li>Tromethamine hydrochloride</li><li>Acetic acid (the main ingredient in white household vinegar)</li></ul>	Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.





Type of Ingredient	Ingredient	Purpose
A harmless version of a virus unrelated to the COVID-19 virus	<ul style="list-style-type: none"> <li>Recombinant, replication-incompetent Ad26 vector, encoding a stabilized variant of the SARS-CoV-2 Spike (S) protein</li> </ul>	Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.
Sugars, salts, acid, and acid stabilizer	<ul style="list-style-type: none"> <li>Polysorbate-80</li> <li>2-hydroxypropyl-<math>\beta</math>-cyclodextrin</li> <li>Trisodium citrate dihydrate</li> <li>Sodium chloride (basic table salt)</li> <li>Citric acid monohydrate (closely related to lemon juice)</li> <li>Ethanol (a type of alcohol)</li> </ul>	Work together to help keep the vaccine molecules stable while the vaccine is manufactured, shipped, and stored until it is ready to be given to a vaccine recipient.

# J&J/JANSSSEN (AGE $\geq$ 18)



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# VACCINATION PROCEDURE

- Recipient screening conducted (not by the EMT)
- A vaccine will be provided to the EMT in a syringe, with a capped needle attached
- The EMT will then:
  - Ensure appropriate monitoring equipment and treatment supplies are available to manage any adverse reactions (e.g., anaphylaxis)
  - Verify completion of the COVID-19 screening and consent form
  - Ensure the “Vaccination Fact Sheet” is provided to the recipient and/or caregiver
  - Reconfirm that the recipient meets the indications for a COVID-19 vaccine and has NO contraindications
  - Determine which injection site the recipient prefers
  - Verify the “7 Rights” of the vaccine administration



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# THE 7 RIGHTS OF VACCINE ADMINISTRATION

## The 7 Rights of Vaccine Administration

- ✓ Right **Patient**
- ✓ Right **Vaccine or Diluent**
- ✓ Right **Time\***
- ✓ Right **Dosage**
- ✓ Right **Route, Needle Length, Technique**
- ✓ Right **Site** for route indicated
- ✓ Right **Documentation**



*\* Correct age, appropriate interval, and administer before vaccine or diluent expires*

Ref: Epidemiology and Prevention of Vaccine-Preventable Diseases. 13th Edition, 2015.



# VACCINATION PROCEDURE

- Assure correct needle length to reach muscle
  - 5-10 years old 1-1.25 in
  - >11 years old 1-1.5 in
- Assure proper vaccine dosage
  - 5-11 years old = 0.2 mL
  - >12 years old = 0.3 mL

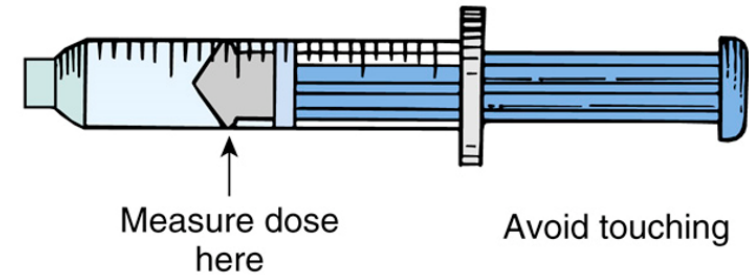
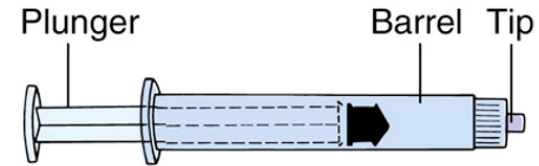
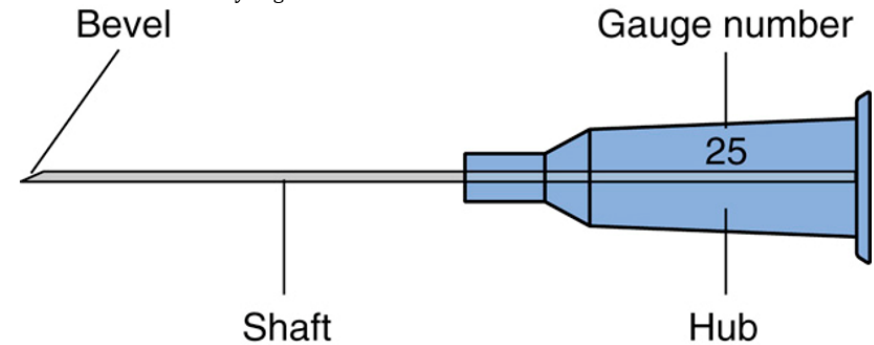
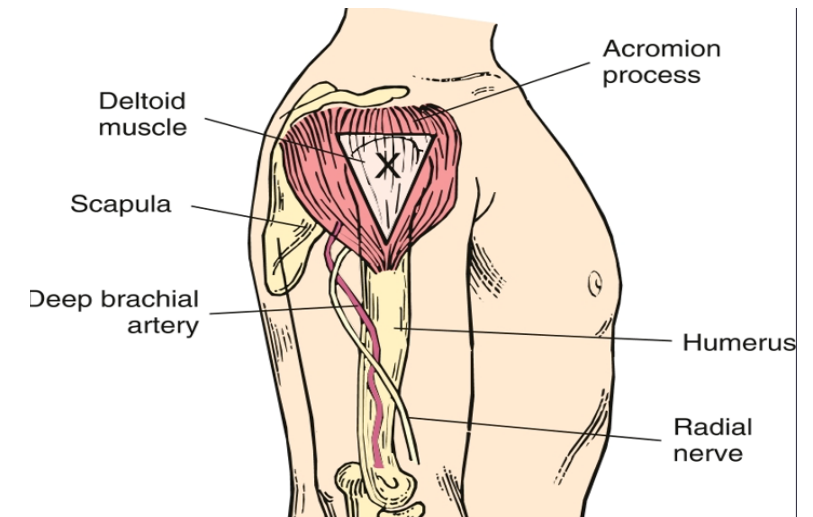


FIG. 31.12 Parts of a syringe.



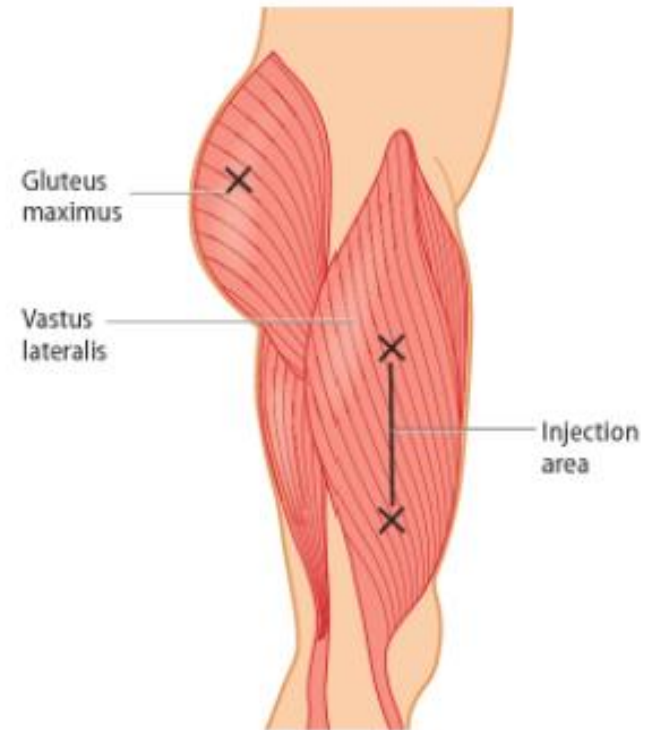
# VACCINATION PROCEDURE CONT. (DELTOID INJECTION)

- Locate landmarks
  - Locate acromion process (bony corner of the shoulder) and find its outermost edge
  - Three finger widths down
    - ❖ With your left hand, utilizing your ring, middle and index fingers, place your ring finger just below the acromion process
    - ❖ With your right hand, utilize your middle and index fingers to create a triangle, with the tips of your middle and index fingers touching the index finger of your left hand
- Aim to administer the injection just below the index finger of your left hand
- Stay within the triangle to avoid puncturing nerves or blood vessels



## VACCINATION PROCEDURE CONT. (VASTUS LATERALIS)

- Often used for infants, toddlers, and children
- Locate landmarks
  - Hand breadth below greater trochanter
  - Hand breadth above the knee on the anterior-lateral aspect of the thigh
  - Inject vaccine into the outer middle third of the muscle



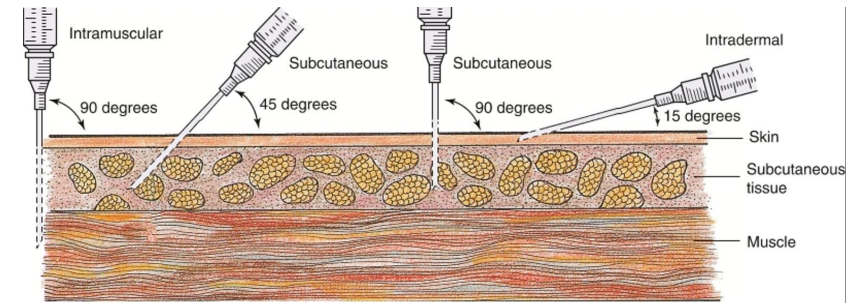
## VACCINATION PROCEDURE CONT.

- Clean the injection site utilizing a 60-70% alcohol-based solution
  - wipe the area from the center of the determined injection site, working outwards, without going over the same area, for 30 seconds
- Allow to dry for an additional 30 seconds



# VACCINATION PROCEDURE OVERVIEW CONT.

- Stabilize/stretch skin if excess soft tissue (DO NOT bunch skin)
- Insert needle at a 90-degree angle with respect to the skin
- Depress the plunger (administer vaccine)
- Remove needle and syringe directly backwards at the same 90-degree angle used for insertion
- Place needle and syringe immediately into a sharp's container
  - DO NOT attempt to re-cap the needle
  - DO NOT put the needle down anywhere but in the sharps container
- Apply bandage over the area of injection
- Ensure all necessary and appropriate documentation has been completed





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## VACCINATION PROCEDURE CONT.

- Instruct and/or assist the vaccine recipient to the nearby waiting area for the time allocated
  - **30 Minutes:** Persons with history of:
    - ❖ A contraindication to another type of COVID-19 vaccination product
    - ❖ Immediate (within 4 hours of exposure) non-severe allergic reaction to a COVID-19 vaccine
    - ❖ Immediate allergic reaction, of any severity, to a non-COVID-19 vaccine or injectable therapies
    - ❖ Anaphylaxis due to any cause
  - **15 Minutes:** All other persons



# CONTRAINDICATIONS

- Anyone who has experienced a severe allergic reaction after a previous dose of the COVID-19 vaccine
- Anyone who has experienced an allergic reaction to any ingredient in the vaccine
- Age < 5 years old
- Current illness or infection
- History of severe allergic reaction to a previous dose of a vaccine or any vaccine ingredients
- Positive COVID-19 test in the last 2 weeks
- Any of the following symptoms in the last ten (10) days:
  - Fever (>100.4F),
  - Chills
  - Cough
  - Shortness of breath
  - Difficulty breathing
  - Fatigue
  - Muscle or body aches
  - Headache
  - New altered sense of taste or smell
  - Sore throat
  - Congestion or runny nose
  - Nausea
  - Vomiting
  - Diarrhea



# PRECAUTIONS

- History of severe allergies or reactions to any medications, foods, vaccines, or latex
  - Monitor closely after administration (30 minutes)
- Immunocompromised or on a medication that affects the immune system.
  - Inform recipient that the vaccine might not provide as strong an immune protection.
- Bleeding disorder or taking blood thinners
  - Risk of hematoma at injection site
- Has received a first dose of another COVID-19 vaccine
  - Ensure same manufacturer as previous dose



# SIDE EFFECTS

- In the arm/leg where the vaccine was administered:
  - Pain
  - Redness
  - Swelling
- Throughout the body:
  - Tiredness
  - Headache
  - Muscle Pain
  - Chills
  - Fever
  - Nausea



## CONCLUSION

- Be vigilant during medication administration
- Check for accuracy
- Use STRICT aseptic technique during preparation and administration to prevent infection
- Educate the recipient and/or caregiver
- Prevent needlestick injury
- Decontaminate workspace after every administration
- Always wear appropriate PPE when administering the vaccine
- Refer to <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html> for the most up to date information, recommendations, indications, and contraindications.



\*\*\*New Jersey EMTs are **ONLY** permitted to administer IM injections while acting in the capacity of a vaccinator at an approved New Jersey COVID-19 vaccination site\*\*\*

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**THANK YOU!**

