

Immunization Techniques Safety, Administration, Storage, and Handling

**Satellite Conference and Live Webcast
Tuesday, October 6, 2009
3:00 - 4:30 p.m. Central Time**

Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division

Faculty

**Tracey England, RN, BSN
Director of Outreach and Surveillance
Immunization Division**

**Winkler Sims
Director
Immunization Division**

Alabama Department of Public Health

Safety

- All staff should be trained on the use and administration of vaccine
- Keep reference material current including info on timing, spacing, recommended sites, routes and needle length, in areas of frequent use for medication preparation

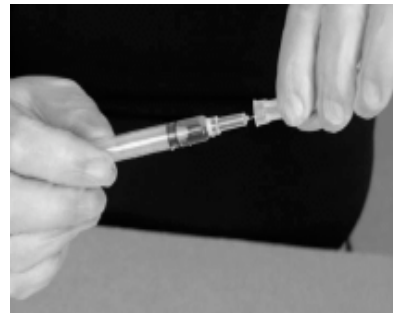
Safety

- Rotate vaccines so that the shortest expiration dates are used first
- Administer vaccine that only you have prepared yourself
- Always check your vaccine and your work before administration
 - Expiration dates, correct age, correct meds

Safety

- Prevent needle sticks and properly dispose of the equipment
- Provide the vaccine information statement and educate the parent/patient on the vaccine before administering the vaccine





Drawing Up Vaccine

- **Examine the vial**
- **Cleanse the stopper**
- **Pull plunger back to draw air that equals the dose**
- **Remove cap from needle**
- **Insert needle into space then invert vaccine vial & withdraw medication**
- **Recap needle & remove air bubbles**

Vaccine Administration

- **Prepare the patient**
 - Consider their age, provide a vaccine information statement prior to giving the vaccine
 - Be prepared to discuss any questions/concerns

Vaccine Administration

- **Screening the patients**
 - Basic screening questions
 - Serious allergy to egg or anything that is known
 - Guillain-Barre' syndrome
 - Contraindications and precautions

Vaccine Administration

- **Positioning the patient and comforting restraint**
 - DO NOT HOLD A PERSON DOWN

Vaccine Administration

- **Wash hands with soap and water or sanitize hands before vaccine preparation, between patients, or anytime the hands become soiled**
- **Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands**

Vaccine Administration

- **Needle stick injuries should be immediately reported, but safety needles should be used if available to reduce the risk if needle injury**

Vaccine Administration

- **Equipment disposal**
 - Never recap or detach a used needle
 - Needles should be placed in a puncture proof container (biohazard/sharps container) and disposed of according to state regulations

Vaccine Administration

- Preparing the vaccine
 - Separate needle and syringe should be used for each injection
 - Check the prescribed dosage
 - Safety needles encouraged
 - 22-25 gauge needle recommended

Vaccine Administration

- Inspect the vaccine
 - Expiration date
 - Damage
 - Contamination

Vaccine Administration

- Prefilling syringes
 - This practice is discouraged
 - In some circumstances as with a large flu clinic, a few syringes can be drawn up at a time but the same person should administer them
 - If any prefilled syringes are left at the end of the day they should be discarded

Vaccine Administration

- Route
 - IM
 - Nasal

Influenza, live attenuated (LAIV)	0.2mL	Intranasal spray
Influenza, trivalent inactivated (TIV)	6-35 mos.: 0.25mL ≥3 yrs.: 0.5mL	IM

Intramuscular Injection (IM)

- Use a 22-25 gauge needle
- Choose the injection site and needle length appropriate to the person's age and body mass

Intranasal Spray

- Not licensed for vaccination of children under 2 years or adults over 49 years
- Contraindications and precautions
 - History of hypersensitivity, anaphylaxis to any component of LAIV or eggs
 - Adults or children with chronic illness and immunosuppression

Intranasal Spray

- Children 6 months - 18 years receiving aspirin therapy
- Pregnant women

1 Check expiration date. Product must be used before the date on sprayer label.

2 Remove rubber tip protector. Do not remove dose-divider clip at the other end of the sprayer.

3 With the patient in an upright position, place the tip just inside the nostril to ensure the vaccine is delivered into the nose.

4 With a single motion, depress plunger as rapidly as possible until the dose-divider clip prevents you from going further.

5 Pinch and remove the dose-divider clip from plunger.

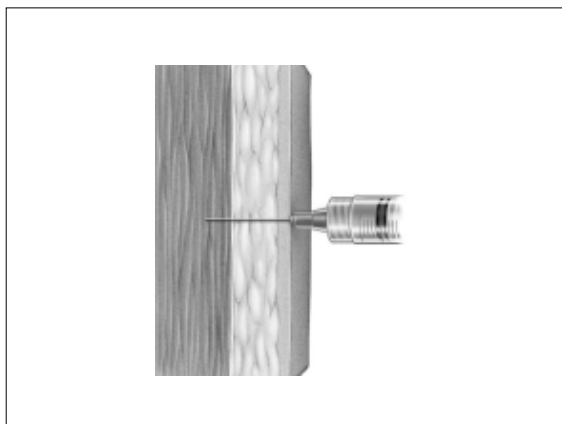
6 Place the tip just inside the other nostril and with a single motion, depress plunger as rapidly as possible to deliver remaining vaccine.

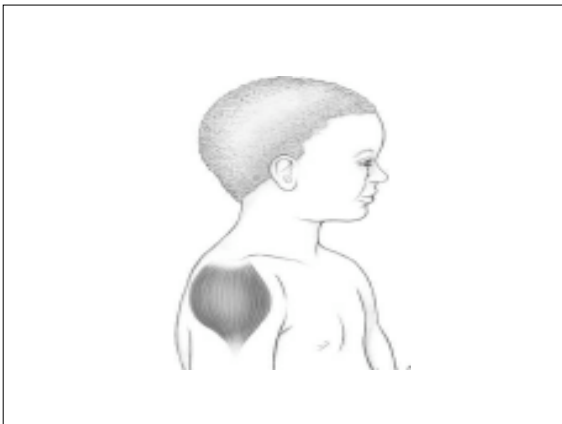
DO NOT INJECT. DO NOT USE A NEEDLE.

Note: Active inhalation (i.e., sniffing) is not required by the patient during vaccine administration

Age	Needle Length	Injection site
Infants (6- 12 months)	1" (25mm)	Anterolateral thigh
Toddlers (1- 2 yrs)	1" - 1.1" (25-32 mm), 5/8" - 1" (16-25 mm)	Anterolateral thigh (preferred site) or the Deltoid muscle of the arm
Children & teens (3 - 18 years)	1" - 1.1" (25-32 mm) 5/8"-1" (16-25mm)	Anterolateral thigh muscle or the Deltoid muscle of the arm (preferred site)
Adults 19 yrs or older		
Male and female less than 130 lbs (60kg)	1" (25-38mm)	Deltoid muscle of the arm
Female 130 - 200 lbs	1"-1.1" (25-38mm)	Deltoid muscle of the arm
Male 130- 260 lbs	1.1" (38mm)	Deltoid muscle of the arm
Female 200+ lbs.	1.1" (38mm)	Deltoid muscle of the arm
Male 260+ lbs	1.1" (38mm)	Deltoid muscle of the arm

*A 5/8" needle may be used only if the skin is stretched tight, the subcutaneous tissue is not bunched and the injection is made at a 90-degree angle.





- **Aspiration**
- **Fainting**
- **Anaphylaxis**
- **Documentation**

Storage and Handling

- **Vaccine Receipt Information**
- **Vaccine Storage Information**

Vaccine Receipt Information

- **Upon receipt of the package, please take the following steps:**
 - **Inspect for damage**
 - **Review temperature monitoring card immediately**

Vaccine Receipt Information

- Damaged packages or vaccine concerns:
 - Fed Ex
 - Contact McKesson customer service 1 - 877 - 836 - 7123
 - UPS
 - Contact State Immunization Program 1 - 800 - 469 - 4599

Vaccine Receipt Information

- If the vaccines are in satisfactory condition, process according to the following procedure:
 1. Count vials/product and place the vaccine in monitored refrigerator immediately.
 2. If doses received do not match the packing list, contact your state/local immunization program immediately.

Vaccine Receipt Information

- NOTE
 - If multiple boxes are received, segregate the vaccine by box
 - Annotate box and temperature monitors/indicators to identify which temperature monitors belong to which box of vaccine

Vaccine Receipt Information

- FedEx boxes contain hot and cold monitors
- UPS boxes contain no monitors
- This identifies which vials or sprayers were affected if one of the boxes is compromised in shipment

Vaccine Storage Information

- 2009 H1N1 vaccine must be maintained at 2 to 8 degrees Celsius (35.6 to 46.4 degrees Fahrenheit)
- The vaccine **MUST** be kept at this temperature at all times
- **MUST NOT BE EXPOSED TO FREEZING TEMPERATURES**

Vaccine Storage Information

- Refrigerator must be dedicated to storage of vaccines
 - No food or beverage should be stored in the unit
- Must have sufficient storage space in the refrigerator

Vaccine Storage Information

- Do not store directly under vents, in deli crispers/vegetable bins or in the doors
 - Bottles of water can be added to these areas to create thermal mass, thus stabilizing refrigerator temperature

Vaccine Storage Information

- Dorm-style refrigerator units (freezer and refrigerator with shared exterior door) provide poor control and often freeze the vaccine and should not be used to store vaccines any longer than the length of a clinic for a particular clinic day

Vaccine Storage Information

- The refrigerator storage unit must be electronically alarmed or manually monitored
 - Temperatures should be recorded at a minimum of every 12 hours
- A record of these readings should be maintained at the location of the vaccine storage unit

Resources

- www.cdc.gov/vaccines
- www.immunize.org
- http://ts.nist.gov/Traceability/SupplIMatls/suppl_matls_for_nist_policy_rev.cfm#FAQ_General
- <http://www.cdc.gov/vaccines/pubs/inkbook/default.htm>

Resources

- California Department of Health Services
 - www.cdlnh.com