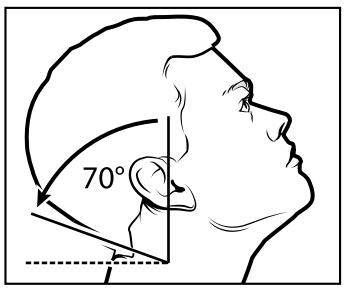
Influenza Specimen Collection

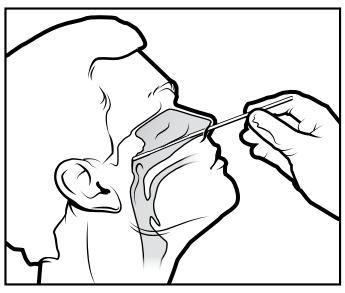
Nasopharyngeal Swab

Materials
- Sterile Dacron/nylon swab
- Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*

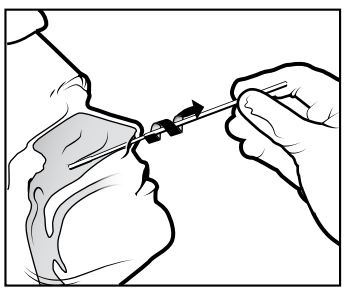
Procedure



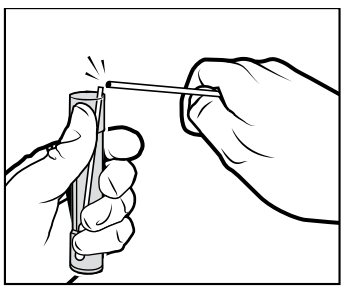
1 Tilt patient's head back 70 degrees.



2 Insert swab into nostril. (Swab should reach depth equal to distance from nostrils to outer opening of the ear.) Leave swab in place for several seconds to absorb secretions.



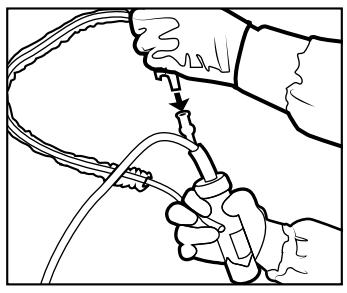
3 Slowly remove swab while rotating it. (Swab both nostrils with same swab.)



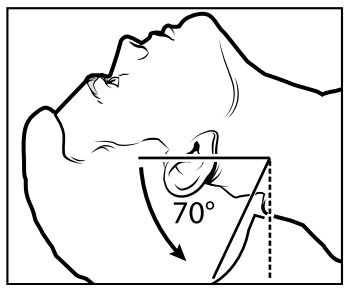
4 Place tip of swab into sterile viral transport media tube and snap/cut off the applicator stick.

Nasopharyngeal/Nasal Aspirate

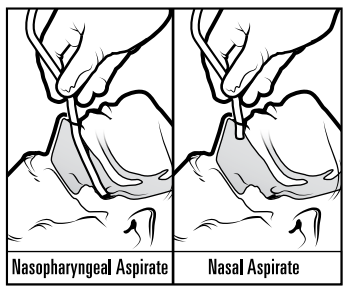
- Sterile suction catheter/suction apparatus
- Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*



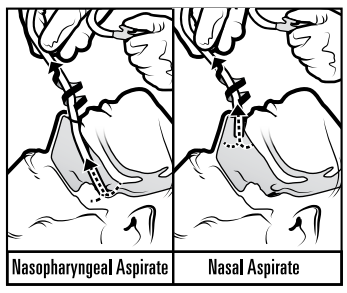
1 Attach catheter to suction apparatus.



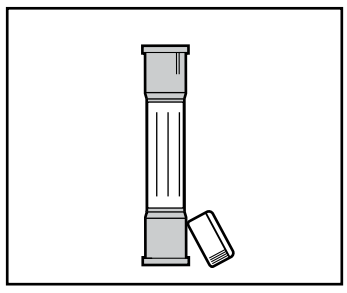
2 Tilt patient's head back 70 degrees.



3 Insert catheter into nostril. (Catheter should reach depth equal to distance from nostrils to outer opening of ear.)



4 Begin gentle suction. Remove catheter while rotating it gently.

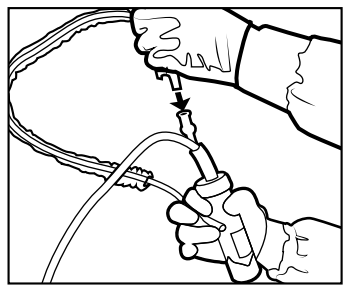


5 Place specimen in sterile viral transport media tube.

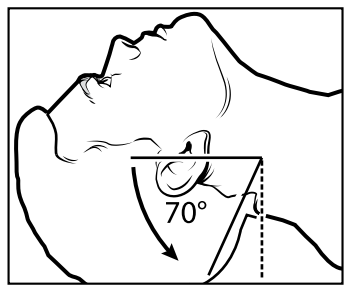
Note: NP aspirate may not be possible to conduct in infants

Nasopharyngeal/Nasal Wash

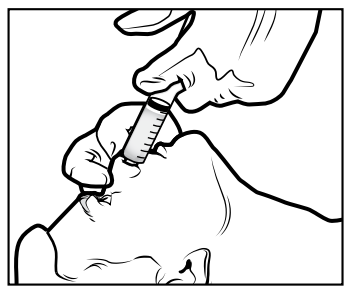
- Sterile suction catheter/suction apparatus
- Sterile normal saline



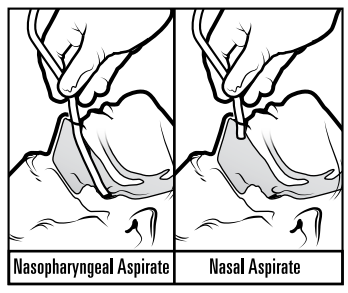
1 Attach catheter to suction apparatus.



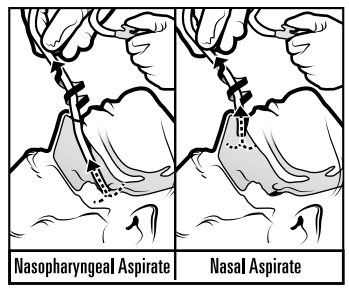
2 Tilt patient's head back 70 degrees.



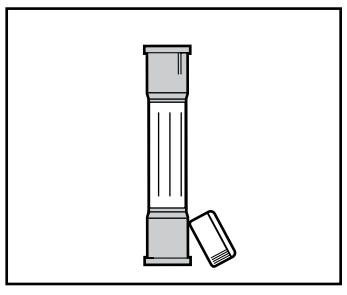
3 Insert several drops of sterile normal saline into each nostril.



4 Insert catheter into nostril. (Catheter should reach depth equal to distance from nostrils to outer opening of ear.)



5 Begin gentle suction. Remove catheter while rotating it gently.

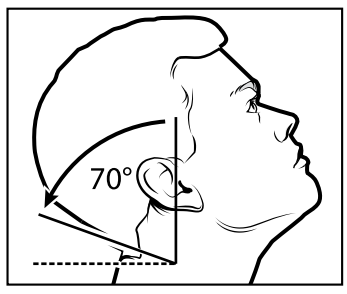


6 Place specimen in sterile viral transport media tube.

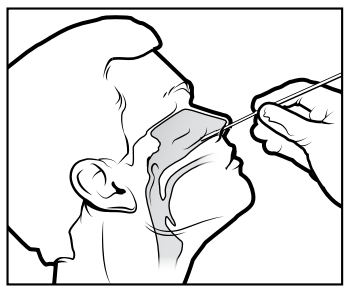
Note: NP aspirate may not be possible to conduct in infants

Deep Nasal Swab

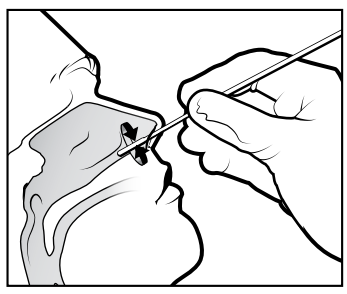
- Sterile polyester swab *(aluminum or plastic shaft preferred)*
- Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*



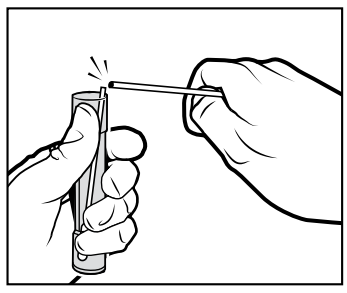
1 Tilt patient's head back 70 degrees.



2 While gently rotating the swab, insert swab less than one inch into nostril (until resistance is met at turbinates).



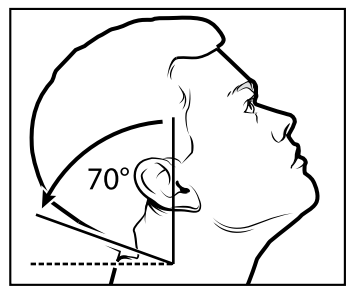
3 Rotate the swab several times against nasal wall and repeat in other nostril using the same swab.



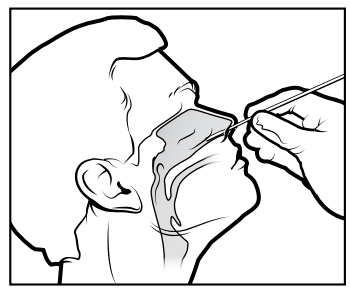
4 Place tip of the swab into sterile sterile viral transport media tube and cut off the applicator stick.

Combined Nasal & Throat Swab

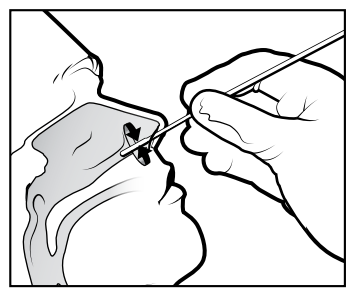
- 2 dry sterile polyester swabs *(aluminum or plastic shafts preferred)*
- Viral transport media tube *(should contain 1-3 ML of sterile viral transport medium)*



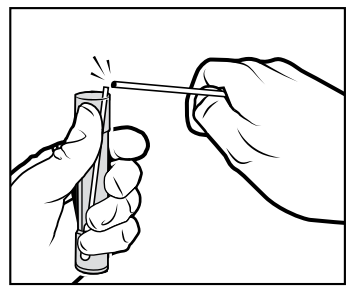
1 Tilt patient's head back 70 degrees.



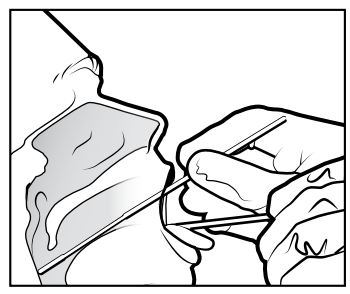
2 While gently rotating the swab, insert swab less than one inch into nostril (until resistance is met at turbinates).



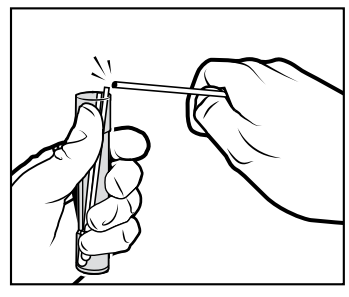
3 Rotate the swab several times against nasal wall and repeat in other nostril using the same swab.



4 Place tip of the swab into sterile viral transport media tube and cut off the applicator stick.



5 For throat swab, take a second dry polyester swab, insert into mouth, and swab the posterior pharynx and tonsillar areas. (Avoid the tongue.)



6 Place tip of swab into the same tube and cut off the applicator tip.

Packing:
- Label the specimen on viral transport media tube and ensure cap on tube is tightly sealed. (Do not use a pencil or pen for labeling, as they can rub off or smear. Instead, use a bar code or permanent marker).
- Fill out paperwork in accordance with state health department guidelines.
- Include a frozen cold pack with the specimen(s).
- Pack specimens in accordance with U.S. Department of Transportation regulations regarding shipment of biological substances, see **www.cdc.gov/flu/professionals/diagnosis/index.htm.**

Storing:
- Specimens should be placed into sterile viral transport media and immediately placed on refrigerant gel packs or at 4 degrees Celsius (refrigerator) for transport to the state public health laboratory.
- Keep specimens refrigerated (2-8 degrees Celsius, 26-46 degrees Fahrenheit) prior to shipping.

Shipping:
- Ship specimens for testing as soon as possible.
- If delivery will be delayed for more than 3-4 days, specimen should be frozen at -70 degrees Celsius (-94 degrees Fahrenheit).
- Ensure specimen will be received by the public health laboratory during normal business hours.

Considerations:
- A nasopharyngeal (NP) swab is the optimal upper respiratory tract specimen collection method for influenza testing. However, such specimens cannot be collected from infants and many older patients may not allow an NP specimen to be collected. Alternatively, a combined nasal and throat swab specimen or aspirate specimens can provide good influenza virus yield.
- Some influenza tests are approved only for use with certain kinds of respiratory tract specimens, so follow guidelines provided by test. Also, some tests (e.g., rapid influenza diagnostic tests) are only approved for certain kinds of respiratory tract specimens.
- For best results (i.e., highest influenza virus yield), collect respiratory tract specimens within four days of illness onset.
- Most sensitive and accurate tests for influenza virus detection are molecular or nucleic acid amplification tests (RT-PCR).
- Negative test results obtained from rapid influenza diagnostic tests (RIDTs) **that detect influenza viral antigens** do not exclude influenza virus infection in patients with signs and symptoms of influenza. A negative test result could be a false negative and should not preclude further diagnostic testing (such as RT-PCR) and starting empiric antiviral treatment.
- A surgical mask and gloves are recommended at a minimum for all procedures. For some patients and procedures, additional precautions may be indicated, see Standard Precautions at **www.cdc.gov/hicpac/2007IP/2007ip_part4.html#a4**.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS246972