



HOW TO COLLECT NASOPHARYNGEAL AND CONJUNCTIVAL SWABS FOR DETECTION OF VIRAL CONJUNCTIVITIS

March 2024

Center for Vaccines and Immunology
National Institute of Communicable Diseases (NICD)
24-hour hotline number: +27 82 883 9920

Who to swab for detection of viral conjunctivitis?

Patients who present with a pink/red color of the conjunctiva, swelling of the conjunctiva, increased tear production, itching, irritation or burning of the eye, crusting of the eyelids (especially in the morning) as well as a discharge that is usually watery rather than thick should be tested for viral conjunctivitis. These patients may also have symptoms associated with a cold, flu, or other respiratory infections. Recommended samples to test for viral causes of conjunctivitis include nasopharyngeal and conjunctival swabs.

Procedures conducted prior to sample collection for Conjunctivitis.

Appropriate personal protective equipment should be utilized. These include disposable gloves, a surgical mask, disposable gown, and eye protection (goggles or face shield). Meticulous hand hygiene is essential. In all cases of sample collection, explain the procedure to the patient, ensuring to obtain consent.

Nasopharyngeal swabs:

Appropriate swabs for specimen collection include a sterile nasal flocked swab that is gently passed through a nostril into the nasopharynx. Position the patient comfortably in a seated position.

Collection of nasopharyngeal specimen:

1. Ensure adequate personal protective equipment is worn.
2. Open the sterile flocked swab at the plastic shaft.
3. Ask the patient to tilt his/her head back slightly.
4. Gently insert swab into the nostril, aiming backwards (not upwards) until a slight resistance is met – about the distance from the nose to the anterior ear. If resistance is met before fully inserted, remove and try the other nostril.
5. Rotate swab 2-3 times and hold in place for 2-3 seconds.
6. Slowly withdraw the swab, without touching it, and put into the specimen tube containing viral transport medium (VTM).
7. Break the swab's shaft and close the tube.

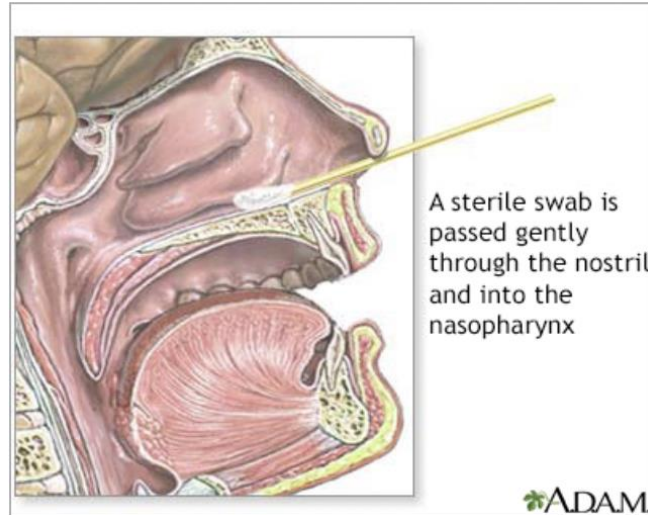


Figure 1: Nasopharyngeal specimen collection. Source: A.D.A.M.

Conjunctival swabs:

Appropriate swabs for specimen collection include a sterile cotton-tipped swab. Position the patient comfortably in a seated position.

Collection of conjunctival specimen:

1. Ensure adequate personal protective equipment is worn.
2. Open the swab package at the plastic shaft.
3. Gently pull down the lower eyelid of the eyelid to expose the conjunctiva that lines the inner eyelid.
4. Gentle rotate the swab over the infected area 2-3 times, avoiding touching the cornea.
5. Remove the swab and place it into the VTM.
6. Break the swab's shaft and close the tube securely.
7. Repeat steps above for the other eye is necessary. A separate swab is required for each eye. Both swabs' sticks can be broken off into the same VTM



Figure 2: Conjunctival specimen collection. Source: British Journal of General Practice

Transport of specimens

- Place the closed VTM tubes, with the specimen inside, for the nasopharyngeal swab and the conjunctival swab into **separate** Ziploc plastic specimen bags.
- The **separate** Ziploc bags can be placed in the same cooler box.
- Ensure the cooler box and ice packs stay under 8°C until transport to the laboratory on the same day as collection.
- Samples can be refrigerated at 2-8°C before transport to the laboratory.

For more information:

- Laboratory related queries, contact NICD:
 - Susan Malfeld – 011 386 6468
 - Lilian Makhathini – 011 386 6398
 - Jayendrie Thaver – 083 266 3323
 - Wayne Howard – 011 386 6438
- Medical/clinical related queries, contact NICD:
 - NICD Hotline +27 82 883 9920

Sources:

1. SOP on collection of nasopharyngeal swabs, National Institute of Communicable Diseases, South Africa, 2022
2. SOP for collection, storage and transportation of viral conjunctivitis specimen, National Institutes of Health, Islamabad, Version 1
3. Procedure for taking a conjunctival swab – viral, Birmingham and Midland Eye Centre Ophthalmic Guideline, Sandwell and West Birmingham Hospitals, 2015