

Quick Guidelines for Selection, Collection, and Transportation of Specimens for Microbiology

General Rules:

- ◆ **Do not use swabs** for routine cultures (except throat, genital, or rectal specimens). Whenever possible, send **fluid or tissue** to microbiology for testing
 - **The best specimen is one collected with metal**
 - Please do not drain fluid, stick a swab into the fluid, and send the swab to Microbiology
- ◆ Do not culture the surface of wounds (e.g., decubitus or diabetic ulcers) – decontaminate and collect tissue or material from the leading edge of the wound
- ◆ Accurate and complete labeling, e.g., 'left knee aspirate', with date and time, is essential to ensure appropriate care
- ◆ Send as much specimen as possible (can pool if from same site)
- ◆ Obtain specimen before antibiotics
- ◆ **Do not use a Gram stain to determine if a site or prosthesis is infected**
- ◆ Do not send specimens to Microbiology if clinically without suspicion of infection; however, always send specimens to microbiology if you suspect infection
 - **It is impossible to culture tissue after it has been placed in formalin!**
- ◆ Never send a swab for AFB or fungi – it will be rejected; if truly assessing for mycobacteria or fungi, send tissue or at least 5 mL of specimen in sterile container

Blood Cultures:

- ◆ Always order two sets of blood cultures. Blood cultures should be obtained via venipuncture and one venipuncture = one culture, therefore two separate venipunctures are required.
 - If indwelling line (e.g., PICC, tunnelled or non-tunnelled central lines, etc.) with suspicion of infection, obtain additional blood culture off line
 - If endocarditis is suspected, at least 3 blood cultures spread over 24 hours are recommended

Aerobic Cultures:

- ◆ Do not use swabs except for throat, genital, and rectal specimens
- ◆ Tissue/fluid should be collected and transported in sterile container (Not swab tubes)

Anaerobic Cultures:

- ◆ Do not use swabs
- ◆ Do not request anaerobic culture on anything that touches mucous membranes or the GI tract

Fungal and AFB (Mycobacterial) Cultures:

- ◆ Do not use swabs – the test will be cancelled
- ◆ Collect at least 5 mL of specimen
- ◆ Fungal or AFB blood cultures are rarely required for most patients; obtain ID input regarding the appropriateness of these cultures

Viral Cultures:

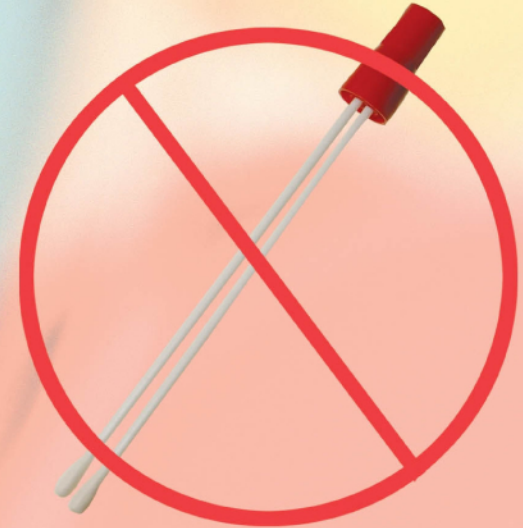
- ◆ Obtain **M4 RT Transport Medium** (pink liquid) with rayon or Dacron swab from Microbiology; do not use cotton, calcium alginate or wooden-shafted swabs
- ◆ Unroof vesicles and collect fluid/cells from base of lesion with swab
- ◆ Place swab in M4 RT Transport Medium, and keep cold during transport to the laboratory
- ◆ **Influenza:** Send nasopharyngeal swabs (M4 RT Transport Medium) or washes for influenza EIA or DFA; the latter is more sensitive and will be followed by a culture if it is negative but is only performed twice daily (Chris-this may change when we get the molecular test)

Containers:

- ◆ **Do not use swabs** (for throat, genital, and rectal specimens)
- ◆ Fluid:
 - Inject fluid into Remel A.C.T. II glass tube with gel at bottom; larger volumes may be placed into a sterile specimen cup
 - If only a tiny amount of fluid is aspirated in the hub or needle, aspirate a small amount of non-bacteriostatic sterile saline with into the syringe then transfer as above
 - After injection, you may need to aspirate air to avoid problems with the vacuum seal.
 - Attach one label and include the other label with the culture.
- ◆ Tissue:
 - Small tissue specimens (< 3 mm): place into Remel A.C.T. II glass tube with gel at bottom and minimally push into gel (about 2 mm)
 - Larger tissue specimen: place in specimen container and label appropriately
- ◆ **Questions:** Contacts in Microbiology (1-8090): Dr. Robinson-Dunn (2-6780) and Jan Pierzchala (5-3663)

Swabs don't do the job...

- Out of every 100 bacteria absorbed on a swab, only 3 make it to culture.
- Anaerobes on swabs die upon exposure to air, but survive in tissues and fluids.
- Swabs hold only 150 microlitres of fluid.



**FOR QUALITY RESULTS, SEND TISSUE
AND FLUIDS TO MICROBIOLOGY**

Make the Right Choice!



Good Specimens

- Tissue (in large mouth sterile container)
- Whole fluid (in A.C.T. II tube
NOT on a swab)

Bad Specimens

- Any specimen collected with a swab
- Tissue or fluid placed into a swab
tube/device
- Any surface specimens

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Do the Math:

An effective culture requires 6 plates
1 broth
AND
1 gram stain



If a swab yields only 3 bacteria,
what are your chances for 'cultural' success?

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