

WOUND CULTURE PROTOCOL

Background: All wounds are contaminated so a positive culture does not automatically indicate an infection. This must be clinically determined based on wound characteristics, erythema, edema, pain, heat, increased exudate & odor. Proper technique for obtaining a specimen is crucial to avoid false negative or positive results. Current best practice calls for the Levine technique as described below (Cross).

Culture wound prior to initiation of antibiotics if signs or symptoms of infection are present. If Culture and Sensitivity (C&S) is obtained after antibiotics have been started, list the antibiotic(s) on the laboratory C&S request.

Assemble Supplies

Gloves
10ml syringe (prefilled with 0.9% sodium chloride) – for irrigation
5 ml syringe (prefilled with 0.9% sodium chloride) – for moistening culture swab
Sterile gauze pads
Culture swab, sterile swab container & transport kit
Appropriate wound dressing
Biohazard bag

Procedure

1. Wash hands, apply gloves, remove soiled dressing and place in biohazard bag.
2. Cleanse wound by removing excess debris from the wound base by irrigating with normal saline. Thoroughly flush wound.
3. Gently wipe excess saline with a sterile gauze pad
4. Remove soiled gloves and cleanse with hand sanitizer
5. Apply sterile gloves
6. Moisten the culture swab with the 0.9% sodium chloride (a moist swab provides more accurate results than a dry swab).
7. Identify a small area (1 cm) of clean viable tissue and rotate the swab on it for 5 seconds while applying enough pressure to produce exudate. Avoid necrotic tissue and wound edges. A wound culture must be taken from clean tissue because pus or necrotic tissue will not provide an accurate profile of the microflora contained within the tissue.
8. Insert swab into the sterile container.
9. Redress the wound and perform hand hygiene.
10. Assess the patient and ensure that any wound pain has been managed. (This is done initially and again during the process.)
11. Complete the lab slip and/or electronic document, including wound site, time the specimen was collected, and any antimicrobials the patient is receiving.
12. Send the specimen to the lab immediately (within 1 hour) to keep the specimen stable. If specimen must be stored, refrigerate immediately after specimen collection.

Sources: Cross, HH, Obtaining a wound swab culture specimen, [Nursing](#). 2014 Jul;44(7):68-9

F.A. Davis Company, Wilkinson & Van Leuven/Procedure Checklists for Fundamentals of Nursing.

REFERENCES

1. Stotts N. Wound infection: diagnosis and management. In: Bryant R, Nix D, eds. *Acute and Chronic Wounds: Current Management Concepts*. St. Louis, MO: Elsevier Mosby; 2012:270–278. [\[Context Link\]](#)
2. Wounds International. Infection update. 2012. http://www.woundsinternational.com/pdf/content_10386.pdf. [\[Context Link\]](#)
3. Rondas AA, Schols JM, Halfens RJ, Stobberingh EE. Swab versus biopsy for the diagnosis of chronic infected wounds. *Adv Skin Wound Care*. 2013;26(5):211–219. [Ovid Full Text Bibliographic Links](#) [\[Context Link\]](#)
4. Gardner SE, Frantz RA, Saltzman CL, Hillis SL, Park H, Scherubel M. Diagnostic validity of three swab techniques for identifying chronic wound infection. *Wound Repair Regen*. 2006;14(5):548–557. [ILLiadBibliographic Links](#) [\[Context Link\]](#)
5. Cooper R. Ten top tips for taking a wound swab. 2010. <http://www.woundsinternational.com/practice-development/ten-top-tips-for-taking-a-wound-swab/page-4>. [\[Context Link\]](#)
6. Bonham PA. Swab cultures for diagnosing wound infections: a literature review and clinical guideline. *J Wound Ostomy Continence Nurs*. 2009;36(4):389–395. [Ovid Full Text Bibliographic Links](#) [\[Context Link\]](#)
7. Centers for Disease Control and Prevention. Clinician guide: get smart for healthcare. 2012. <http://www.cdc.gov/getsmart/healthcare/implementation.html>. [\[Context Link\]](#)
8. Gabriel A. Wound irrigation. 2013. <http://emedicine.medscape.com/article/1895071-overview>. [\[Context Link\]](#)