

Developed by the BC Provincial Nursing Skin & Wound Committee in collaboration with Wound Clinicians from:



<p>Title</p>	<p>Procedure: Wound Cleansing</p>
<p>Practice Level</p>	<ul style="list-style-type: none"> Nurses in accordance with health authority/agency policy.
<p>Background</p>	<ul style="list-style-type: none"> Wound cleansing and irrigation are defined as the application of fluid to a wound to remove exudate, slough, necrotic debris, bacterial contaminants and dressing residue without adversely impacting cellular activity vital to the wound healing process, or inoculating the underlying tissue with bacteria. Pressures between 8 and 15 psi are sufficient to cleanse or irrigate a wound. Wound cleansing is conducted with at least 100ml of sterile normal saline (NS) or sterile water container. The type of wound cleansing solution to be used is based on the presence of undermining, sinus tracts or tunnels, necrotic slough and/or local wound infection. Undermining, sinuses and tunnels can only be irrigated when there is a known endpoint. Undermining, sinuses or tunnels which extend beyond 15cm (6 inches) are not to be irrigated unless directed by a Physician/NP. Cotton tipped applicator or metal probe is 15cm. Wound cleansing solution should be non-toxic to human tissue, remain effective in the presence of organic material, reduce the number of microorganisms in the wound, avoid sensitivity reactions, be widely available, and cost effective. Sterile NS and sterile water are the solutions of choice for cleansing wounds and should be at least room temperature (20° C) in order to support wound healing. Containers and bottles of sterile NS and sterile water must be client specific and be discarded after 24 hours. If fluid is instilled into a sinus, tunnel, or undermined area and cannot be removed from the area, stop irrigating and refer to a Wound Clinician or Physician/NP. If commercially prepared sterile NS is not available then home prepared NS can be substituted (see Appendix A for procedure). Use of potable tap water for wound cleansing is acceptable in some situations, and should be based on agency guidelines and/or direction from a Wound Clinician. Showering may be appropriate in some situations and is preferable to tub bathing; however the decision to shower or bath should be based on agency guidelines or direction from a Wound Clinician or Physician/NP. Do not use commercial saline-based wound cleansers or potable water to irrigate undermining, sinus tracts or tunnels. However, commercial antiseptic/antimicrobial wound cleansers may be used on the recommendation of a Wound Clinician or Physician/NP. For wounds in which the local bacterial burden is of greater current concern than healing, antiseptic solutions such as povidone iodine or chlorhexidine may be used for cleansing based on the recommendation of a Wound Clinician or Physician/NP. Many topical antiseptic solutions are cytotoxic and will delay wound healing so should only be used until the signs and symptoms of bioburden or local wound infection are resolved.
<p>Indications / Precautions/ Contra-indications</p>	<p>Indications for wound cleansing</p> <ul style="list-style-type: none"> Wounds which are undergoing moist wound healing. <p>Precautions when cleansing a wound</p> <ul style="list-style-type: none"> Undermining, sinuses and tunnelling can only be irrigated when there is a known endpoint. Commercial non-antimicrobial wound cleansers or potable water should not be used to cleanse wounds with undermining, sinuses, or tunnels. <p>Contraindications for wound cleansing</p> <ul style="list-style-type: none"> Wounds which require a dry, stable environment, such as wounds covered with stable, hard, dry eschar or dry gangrene. Wounds with an endpoint that cannot be reached using a 15cm (6 inch) sterile Q-tip or metal probe unless under the direction of a Physician/NP or Wound Clinician. Wounds that have areas from which the cleansing solution cannot be retrieved. <p>Do not use this procedure for fistula management; collaborate with a Physician/NP.</p>

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.](#)

<p><u>Bookmarks</u></p>	<p>Practice Level Background Indications for Use Related Documents Equipment and Supplies Procedure</p> <ul style="list-style-type: none"> • Preparation and Setup • Wounds without Undermining, Sinus or Tunnel • Wounds with Undermining, Sinus or Tunnel and a Known Endpoint • Wounds with Undermining, Sinus or Tunnel and an Unknown Endpoint <p>Documentation Definitions References/Bibliography Document Creation/Review Appendix A: Procedure for Home Prepared Normal Saline or Sterile Water</p>
<p><u>Related Documents</u> on CLWK.ca</p>	<p>E-Learning Module: Wound Cleansing Guideline: Wound Bed Preparation Procedure: Wound Packing Assessment Flow Sheet: Wound Assessment & Treatment Flow Sheet</p>

Equipment and Supplies

- Antiseptic hand cleanser if not available at the bedside
- Depending upon which aseptic technique used:
 - 2 pair of clean gloves if using no-touch or clean technique; if taking photos then bring a third set of clean gloves.
 - 1 pair each of clean and sterile gloves if using sterile technique; if taking photos then bring a third set of clean gloves.
 - Sterile dressing tray.
- For cleansing or irrigating the wound:
 - At least 100ml of the following cleansing solutions designated for wound cleansing:
 - Sterile Normal Saline(NS) in a squeezable container or a pourable container.
 - Sterile water in a squeezable container or a pourable container.
 - Potable tap water, if approved for use within the agency.
 - Topical antiseptic solution on the recommendation of a Physician/NP or Wound Clinician.
 - If using a pourable container of NS or sterile water, use a sterile 30cc or 35cc syringe and a sterile wound irrigation tip catheter; if irrigation tip catheter is not available use an 18 to 19 gauge catheter device.
 - Commercial wound cleansers may be used, if approved within the agency.
 - A disposable procedural pad and/or a kidney basin to collect fluid.
 - If required, personal protective equipment (PPE) e.g., apron, gown, eye protection, face shield.
- To conduct a wound assessment:
 - Sterile metal probe (preferable) or sterile or clean cotton tipped applicator 15cm (6 inches).
 - Wound measurement guide.
 - Camera (as per agency policy).
- To pack/dress the wound, as per the client’s care plan:
 - Cover dressing.
 - Wound filler/packing material.
 - Skin barrier/protectant.
 - Sterile or clean cotton tipped applicator or sterile metal probe.
 - Sterile scissors.
 - Adhesive strip, e.g., sterile steri-strips or paper tape to secure a packing ‘tail’.
 - Marker/pen to note (mark) the number of packing pieces on the cover dressing.
 - New C&S container(s)/new plastic storage bag(s) (e.g., Ziploc bag) for unused dressing piece(s).

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.

Procedure

Steps	Key Points
Preparation and Set-up	
1. Assess client for the presence of pain or a history of pain with wound cleansing and pre-medicate if necessary.	
2. Check the dressing supplies available at the bedside or in the home. Appropriately saved dressing pieces may be used if within 2 weeks of the date on the container/re-sealable plastic storage bag (e.g., Ziploc bag). Gather all other additional supplies that are required.	Take only necessary dressing change supplies to the bedside or into the home - all supplies taken to the bedside or home cannot be returned to the dressing supply and must be discarded if not used. Saved dressing pieces must be discarded 2 weeks after date noted on container/plastic storage bag.
3. Ensure cleansing solution is at least room temperature (20 ^o C).	Using a cool/cold cleansing solution to cleanse the wound can lower the wound temperature delaying healing and can cause discomfort for the client.
4. Prepare/clean work surface.	
5. Perform hand hygiene.	Follow agency policy/guidelines for hand washing.
6. Position client for procedure. If needed, position disposable procedural pad/kidney basin to catch the cleansing solution. Wear gloves if needed.	
7. Perform hand hygiene.	Follow agency policy and guidelines for hand washing.
8. Set up dressing tray using appropriate aseptic technique. If using a saved dressing piece, use no-touch technique to remove it from the C&S container/storage bag and add it to the aseptic field.	The decision regarding aseptic technique for wound care (sterile, no touch or clean) is based on the clinical condition of the client, the etiology of the wound, the location of the wound, the invasiveness of the dressing procedure, the goal of care and agency policy. The decision to use saved dressing pieces is based on the aseptic technique being used see Wound Bed Preparation Guideline .
9. If required, put on personal protective equipment as per agency policy.	Using fluid under pressure can cause splash-back.
10. Put on clean gloves.	

Wounds without Undermining, Sinus/Tunnel	
1. Follow steps 1-10 of Preparation and Setup (above) for the dressing change.	
2. Remove the cover dressing. Using forceps or sterile gauze, gently remove the wound filler/packing from the wound. If wound filler or packing material adheres to the wound, soak the packing with sterile normal saline or sterile water before removing. If used, set aside or discard forceps as they are now contaminated.	Removing wound filler/packing that adheres to the wound bed without soaking can cause trauma to the wound bed tissue. If packing material cannot be removed, contact the Physician/NP or Wound Clinician. If wound packing adheres to the wound, reassess the amount of wound exudate and consider a different product(s).
3. Remove gloves and perform hand hygiene.	Follow agency policy/guideline for hand hygiene.
4. Put on new clean gloves.	

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.](#)

Steps	Key Points
Wounds <u>without</u> Undermining, Sinus/Tunnel con't	
<p>5. Cleanse the wound using: At least 100ml squeezable container designated for wound cleansing; hold tip of the container 10-15cm (4-6 inches) from the wound and squeeze solution over wound bed in a sweeping motion. OR A bottle of sterile NS or sterile water; gently pour at least 100mls of cleansing solution over the wound. OR A 30-35cc syringe fitted with either a wound irrigation tip catheter or an 18-19 gauge device and at least 100mls of cleansing solution:</p> <ul style="list-style-type: none"> • Start at one edge of the wound • Hold the end of the wound irrigation tip catheter / device 10-15cm (4-6 inches) from the wound. • Angle the wound irrigation tip catheter or device towards the wound bed • Apply full force on the syringe plunger and slowly 'sweep' across the wound bed; refill the syringe as needed. • Repeat the process from the opposite side of the wound. <p>OR Commercial wound cleanser, follow manufacturer's instructions or the PISheet.</p> <p>Use sterile cotton gauze to gently and firmly remove any loosened slough/debris and wick any excess solution from the wound bed. Use a clean gauze for each wipe, do not reuse gauze once soiled.</p>	<p>Use only cleansing solutions that have agency approval.</p> <p>Do not allow the tip of the container or the wound irrigation tip catheter to touch the wound bed.</p> <p>A wound cleansing container and a 30-35cc syringe with either an 18-19 gauge device or a wound irrigation tip delivers approximately 8-15 psi of pressure which is sufficient to remove slough, bacteria, debris and exudate from the wound but does not harm granulating tissue.</p> <p>The smaller the diameter of the syringe the greater the psi; pressures higher than 15 psi can damage the wound bed and may drive bacteria into the deeper tissues.</p> <p>If commercially prepared sterile normal saline is not available, may use home prepared normal saline (see Appendix A fseeor procedure).</p> <p>When using commercial wound cleansers, follow the instructions on the Product Information Sheet.</p>
<p>6. Cleanse the peri-wound skin to remove tape residue, previous skin barrier, ointments, creams, lotions and/or dry skin.</p>	<p>This cleanses and protects the peri-wound skin.</p>
<p>7. Perform a Wound Assessment:</p> <ul style="list-style-type: none"> • Measure the wound, if doing a full assessment. • Check for undermining, sinuses/ tunnels. • Assess the wound bed, exudate characteristics and amount, odour, wound edges and periwound skin. • Assess for signs and symptoms (S&S) of wound infection. • Assess the client for wound pain. 	<p>This assessment will determine if the wound is healing see Wound Assessment and Treatment Flow Sheet.</p> <p>If 2 or more signs and symptoms of an infection are evident and the infection is not currently being treated, take a swab for C&S and notify a Physician/NP if C&S results are abnormal see Wound Infection Guideline.</p>
<p>8. Remove gloves and perform hand hygiene.</p>	<p>Follow agency policy/guidelines for hand hygiene.</p>
<p>9. Take wound photos, if required.</p>	
<p>10. Perform hand hygiene and put on sterile or clean gloves depending on aseptic technique being used.</p>	

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.

Steps	Key Points
Wounds without Undermining, Sinus/Tunnel con't	
<p>11. Complete wound dressing as per the care plan. If the wound dressing needs to be cut, use sterile scissors to cut the dressing to the appropriate size. If wound is to be packed, refer to the Wound Packing Guideline Protect with appropriate protectant or barrier product. If the dressing piece is to be saved, use no-touch technique to place the dressing piece into a C&S container or re-sealable plastic storage bag (e.g., Ziploc) see Wound Infection Guideline.</p>	<p>If the dressing is larger than required, the unused piece(s) of dressing <u>may</u> be saved for the next dressing change in a new C&S container or new re-sealable plastic storage bag that is labelled with the client's name, the current date, and the name of the dressing. Saved dressing pieces and container/re-sealable plastic storage bag must be discarded after 2 weeks.</p>
<p>12. Clean-up work surface. NS or sterile water bottles must be single client use only; any left-over solution should be discarded after 24 hours.</p>	<p>This protects against possible contamination of the bottles.</p>
<p>13. Remove gloves and personal protective equipment. Perform hand hygiene.</p>	<p>Follow agency policy and guidelines for hand hygiene.</p>

Wounds with Undermining, Sinus/Tunnel and a Known Endpoint	
<p>1. Follow steps 1-10 of Preparation and Setup (above) for the dressing change.</p>	
<p>2. Remove the cover dressing. Using forceps or sterile gauze, gently remove the wound filler/packing from the wound. If wound filler or packing material adheres to the wound, soak the packing with sterile normal saline or sterile water before removing. If used, set aside or discard forceps as they are now contaminated.</p>	<p>Removing wound filler/packing that adheres to the wound bed without soaking can cause trauma to the wound bed tissue. If packing material cannot be removed, contact the Physician/NP or Wound Clinician. If wound packing adheres to the wound, reassess the amount of wound exudate and consider a different product(s).</p>
<p>3. Remove gloves and perform hand hygiene.</p>	<p>Follow agency policy and guidelines for hand hygiene.</p>
<p>4. Put on new clean gloves.</p>	
<p>5. Using a moistened sterile cotton or foam tipped applicator or sterile metal probe, gently probe undermining and/or sinus/tunnel to determine length and direction of the wound. If the cotton tipped applicator or probe does not reach the end of the undermining and/or sinus/tunnel notify a Wound Clinician or Physician/NP and do not proceed with cleansing until further direction is received.</p>	<p>Knowing the length and direction of the wound endpoint ensures that the cleansing solution is directed to the appropriate areas. Moistening the cotton tipped applicator with sterile NS or sterile water reduces the possibility of leaving fibres in the wound. If a 15cm (6 inch) cotton tipped applicator or probe does not reach the end of the undermining and/or sinus/tunnel, refer to the Physician/NP and inform the Wound Clinician. Do not proceed with cleansing until further direction is received.</p>

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia](#), however, it is not a substitute for education, experience and the use of clinical judgment.

Steps	Key Points
Wounds <u>with</u> Undermining, Sinus/Tunnel and a <u>Known</u> Endpoint con't	
<p>6. Draw the cleansing solution up into a 30-35cc syringe fitted with either a wound irrigation tip catheter or the catheter device e.g., straight catheter.</p> <p>Do not use commercial non-antimicrobial wound cleansers or potable water to cleanse wounds with undermining, sinus/tunnel.</p>	<p>An irrigation tip catheter or catheter device provides access to the base of the undermining, sinus/tunnel to ensure the area is thoroughly cleansed.</p> <p>If unsure about whether to use a particular wound cleanser, consult the Wound Clinician or the product information sheet. Link to CLWK Skin & Wound Product Information Sheets</p>
<p>7. a. Gently insert the wound irrigation tip catheter or catheter device into the undermining, sinus/tunnel and flush with gentle force until the returning fluid is clear.</p> <p>b. Then cleanse the wound bed:</p> <ul style="list-style-type: none"> • Start at one edge of the wound • Hold the end of the wound irrigation tip catheter or catheter device 10-15cm (4-6 inches) from the wound. • Angle the wound irrigation tip catheter or catheter device towards the wound bed. • Apply full force on the syringe plunger and slowly ‘sweep’ across the wound bed; refill the syringe as needed. • Repeat the process from the opposite side of the wound. 	<p>Flushing will assist with removing loose tissue debris, bacteria, slough and exudate. Use at least 100ml of fluid to adequately flush all areas of the wound; larger wounds may require additional fluid.</p>
<p>8. Using a gloved hand, apply gentle pressure over the undermining, sinus/tunnel area and/or change the client's position to remove any retained fluid.</p>	<p>Retained fluid may provide a medium for bacterial growth and may soak the cover dressing prematurely.</p>
<p>9. Use sterile cotton gauze to gently and firmly remove any loosened slough/debris and wick any excess solution from the wound bed. Use a clean gauze for each wipe, do not reuse gauze once soiled.</p>	<p>Loosen debris and excess solution needs to be removed from the wound.</p>
<p>10. Follow steps 5-12 of Wounds without Undermining, Sinus/Tunnel (above) to complete the dressing change.</p>	

Wounds with Undermining, Sinus/Tunnel with an <u>Unknown</u> Endpoint	
<p>1. Do not irrigate undermining, sinus/tunnel with an unknown endpoint unless ordered to do so by the Physician/NP. Cleanse only the visible part of the wound:</p> <ul style="list-style-type: none"> • Use sterile cotton gauzes, moistened with sterile NS, to gently and firmly remove any loosened slough/debris and wick any excess solution from the wound bed. Use clean gauze for each wipe, do not reuse the gauze once soiled. 	<p>Do not pour NS into the wound or cleanse the wound bed using a 30cc syringe/irrigation tip catheter as these methods will introduce too much NS into wound space and potentially into the unknown endpoints of the undermining, sinus/tunnel.</p>

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.](#)

Documentation

1. Document the type of aseptic technique used and the effectiveness of wound cleansing as per agency guidelines.
2. Document the wound assessment as per agency guidelines and attach wound photos to client's chart as per agency guidelines.

Definitions

Antiseptic wound cleansers - Wound cleansers containing antiseptic agents that kill, inhibit or reduce the number of microorganisms in a wound.

Antimicrobial wound cleansers - Means the same as antiseptic wound cleanser but is newer terminology.

Aseptic Technique - Technique used to limit the transfer of microorganisms from one person to another by minimizing the microbe count and preventing cross contamination; includes sterile, no-touch, and clean technique. The decision regarding the appropriate aseptic technique is made based on the client's clinical condition, the wound etiology, the wound location, the invasiveness of the dressing procedure, the goal of care, and agency policy.

- **Sterile Technique** - the use of sterile gloves, a sterile field, sterile tray, sterile instruments, sterile solution and sterile dressings. Only sterile gloved hands or instruments are used for direct contact with the wound.
- **No-Touch Technique** - the use of clean gloves and a sterile field, sterile tray, sterile instruments, sterile solution and sterile dressings. Only sterile instruments are used for direct contact with the wound.
- **Clean Technique** - the use of clean gloves (single client use, non-sterile), a clean field, a clean or sterile dressing tray, clean instruments (single client use), clean solution (single client use) and clean dressings. Clean gloved hands or instruments are used for direct contact with the wound.

Cleansing solutions - Wound cleansing sprays or solutions including sterile NS, sterile water, potable tap water, commercial cleansers and antiseptic / antimicrobial topical solutions. Antiseptic / antimicrobial solutions may be used on the recommendation of a Physician/NP or Wound Clinician.

Children - Clients are considered children if they are 17 years and under.

Client - Recipient of care: in the community-client, in residential care-resident, and in acute care - patient.

Debris - Remains of damaged or dead cells in the wound.

Fistula - An abnormal track connecting a hollow organ to the skin surface or wound bed or to another organ.

Exudate - Fluid released from the wound which may contain serum, cellular debris, bacteria, and leukocytes.

Irrigation - The instillation of fluid into a wound, undermining, sinus tract, or tunnel to remove slough and/or necrotic tissue.

Periwound skin - the area of skin within 4cms from the wound edge, as well as, any skin which will be covered by the dressing /securement product

Potable tap water - Tap water that has been determined by local water authorities to be safe to drink.

Product Information Sheet (PISheet) - Product Information Sheet(s) are developed by the Provincial Nursing and/or Interprofessional Skin & Wound Committee. PISheets are found on the British Columbia Patient Safety and Quality Council's Connecting Learners With Knowledge website <https://clwk.ca>

Sinus / tunnel - A channel that extends from any part of the wound and tracks into deeper tissue.

Topical antiseptic solution - A solution that kills, inhibits or reduces the number of microorganisms in a wound; usually has a broad spectrum of activity.

Undermining - A separation of tissue that occurs underneath the intact skin of the wound perimeter.

References/Bibliography

1. Anglen, J. (2001). Wound irrigation in musculoskeletal injury. *Journal of the American Academy of Orthopedic Surgeons*, 9(4), 219-226.
2. Atiyeh, B., et al. (2009). Wound cleansing, topical antiseptics and wound healing. *International Wound Journal*, 6(6), 420-430.
3. Bee, T., et al. (2009). Wound bed preparation – cleansing techniques and solutions: A systematic review. *Singapore Nursing Journal*, 36(1), 16-22.
4. Bryant, R., & Clarke, R. (2007). Skin pathology and types of damage. In: Bryant, R., & Nix D. (Eds). *Acute and Chronic Wounds: Current Management Concepts*. (3rd ed.). St. Louis: Mosby. pp. 100-129.

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.](#)

5. Bryant, R, A., & Nix, D. P. (2016). Principles of wound healing and topical management. In *Acute & chronic wounds: Current management concepts* (5th ed). St. Louis, Missouri: Elsevier. 306-324.
6. Clinical guidelines from Vancouver Coastal Health / Providence Health Care (2008), Providence Health Care: Storyboard documents (2011) and Northern Health (2009).
7. Fernandez, R., et al. (2008). Water for wound cleaning. *Cochrane Database Systematic Review*, 23(1): CD 003861.
8. Fernandez, R., et al. (2004). Effectiveness of solutions, techniques and pressure in wound cleansing. *JBI Reports*, 2, 231-270.
9. Hamilton Health Sciences: McMaster Children's Hospital. (2012, July 24). *How to make normal saline at home*. Retrieved from <http://www.hamiltonhealthsciences.ca/documents/Patient%20Education/NormalSalineAtHome-lw.pdf>
10. Irion, G. (2010). *Comprehensive wound management*. (2nd ed). Thorofare: Slack Inc. pp. 204-205.
11. Joanna Briggs Institute. (2009). Solutions, techniques & pressure in wound cleansing. *Nursing Standard*, 22(27), 35-39.
12. Moore, Z., et al. (2008). A systematic review of wound cleansing for pressure ulcers. *Journal of Clinical Nursing*, 17(15), 1963-1972.
13. Rodeheaver, G., et al. (2007). Wound cleansing, wound irrigation and wound disinfection. In: Krasner D, Rodeheaver G, Sibbald R., (Eds.) *Chronic wound care: A clinical source book for healthcare professionals*. (4th ed.). Malvern, PA: HMP Communications. pp 331-342.
14. Sibbald, G., et al. (2006). Best practice recommendations for preparing the wound bed: Update 2006. *Wound Care Canada*, 4(1), 15-29.
15. Sibbald, G., et al. (2011). Best practice recommendations in wound bed preparation: Update 2011. *Wound Care Canada*, 10(3), 25-33.
16. Sussman, C., & Bates-Jensen, B. (2007). *Wound care: A collaborative practice manual for health professionals*. (3rd ed.). Philadelphia: Lippincott Williams & Wilkins. 102.
17. Tamagnini, L., et al. (1997). Bacteriological stability and growth kinetics of *Pseudomonas aeruginosa* in bottled water. *Journal of Applied Microbiology*, 83, 91-94.
18. Wound Ostomy and Continence Nurses Society. (2012). Clean versus sterile dressing technique for management of chronic wounds. *Journal of Wound Ostomy Continence Nursing*, 39(2S), S30-S34.
19. Wound Ostomy and Continence Nurses Society. (2016). Guideline for prevention and management of pressure ulcers (injuries): Wound management strategies. Mt. Laurel, NJ: Author. 66-68.

Document Creation/Review

Created By	British Columbia Provincial Nursing Skin and Wound Committee in collaboration with the Wound Clinicians from across all Health Authorities
Publication Date	September, 2012
Revision Date(s)	December 2014, June 2015, February 2017, August 2017, December 2018
Review Date(s)	September 2020

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia](#), however, it is not a substitute for education, experience and the use of clinical judgment.

Appendix A: Procedure for Home Prepared Normal Saline or Sterile Water

Adapted from Hamilton Health Sciences, 2012. *How to make 'Normal Saline' at home*).

Preparation for Sterile Normal Saline (NS):

Collect supplies:

- 1 large pot with lid
- 1 small pan with lid
- 1 clean glass (not plastic) bottle or jar with a lid
- Table salt
- Water
- Measuring spoon
- Measuring cup

Wash hands with soap and water or antiseptic cleanser. Dry on a clean towel.

Sterilize the Glass Bottle/Jar

1. Place the glass bottle or jar plus its lid (NOT screwed on) into the large pot and cover with tap water.
2. Place the pot on the stove, put the lid on the pot and boil the water for 15 minutes (set a timer).
3. After 15 minutes, set the pot aside to cool while the normal saline is being prepared.

Make the Normal Saline

1. Put one cup of water and ½ (one-half) teaspoon of salt (2.5ml) into the small pan.
2. Place the pan on the stove; put the lid on the pan and gently boil for 15 minutes (set a timer).

Store the Solution

1. When the large pot has cooled, pour off the water; take the bottle/jar and the lid out of the pot **without touching** the **inside** of the bottle or lid.
2. Carefully pour the NS (the boiled salt and water) from the small pan into the glass bottle or jar and put the lid on. Allow to cool to room temperature before using. Do not refrigerate.
3. Keep the NS in the bottle/jar for a maximum of **24 hours**. Throw away any unused solution; prepare new Normal Saline solution following the procedure above.

Preparation for Sterile Water:

Collect supplies:

- 1 small or large pot with lid
- 1 clean glass (not plastic) bottle or jar with a lid
- Water
- Measuring cup

Wash hands with soap and water or antiseptic cleanser.

Sterilize the Glass Bottle/Jar

1. Place the glass bottle or jar plus its lid (NOT screwed on) into the large pot and cover with tap water.
2. Place the pot on the stove, put the lid on the pot and gently boil the water for 15 minutes (set a timer).
3. After 15 minutes, set the pot aside to cool while the sterile water is being prepared.

Make the Sterile Water

1. Put one or more cups of water into a pan.
2. Place the pan on the stove; put the lid on the pan and boil for 20 minutes (set a timer).

Store the Solution

1. When the pot has cooled, pour off the water; take the bottle or jar and the lid out of the pot **without touching** the **inside** of the bottle or lid.
2. Carefully pour the sterile water from the pan into the bottle or jar and put the lid on. Allow to cool to room temperature before using. Do not refrigerate.
3. Keep the water in the bottle or jar for a maximum of **24 hours**. Throw away any unused solution; prepare new solution following the procedure above.

Note: This is a **controlled** document. A printed copy may not reflect the current, electronic version on the CLWK website. Any document appearing in paper form should always be checked against the electronic version prior to use; the electronic version is always the current version. [This DST has been developed as a guide to support nursing practice in British Columbia, however, it is not a substitute for education, experience and the use of clinical judgment.](#)