

How to make a basic dressing in a low-resource setting: instruction manual

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Materials needed (See Fig. 1.)

- Soap.
- Clean water (boiled or heated to over 70 °C and allowed to cool).
- Hydroalcoholic solution like hand sanitizer (optional).
- Greasy, moisturizing agent such as petroleum jelly, shea butter, palm oil, coconut oil, olive oil or another moisturizing oil.
- Gauze squares, nonwoven gauze is preferred.
- Tape.
- Plastic film.
- Bandages.
- Waste bag.

Important considerations

- Find a clear and calm area that is clean and with good light.
- This should be away from any toilets, latrines or areas with trash.
- Ensure dirty and clean objects are kept in different containers.
- If pain control is needed, give acetaminophen or paracetamol by mouth around 40 min before starting dressing.
- Make sure you and the patient are comfortable during the dressing process.

Instructions

1. First wash hands with soap and clean water or hydroalcoholic solution.
2. Prepare necessary materials.
3. Wash hands with soap and clean water or hydroalcoholic solution before removing the old dressing.
4. If the dressing sticks, use potable water to remove it. To take off the bandage and sticky tape, pour water or saline over and between the skin and dressing and allow time for the water to soak in. Lift and pull gently from



Fig 1. Items required.

5. Gently clean the wound and surrounding skin with potable water.
 - Soap can be used if wound is very dirty but remember that it can irritate the skin.
 - Avoid causing trauma to the wound when cleaning.
6. Rinse wound and surrounding skin with saline (NaCl 0.9%) if available.
7. Gently dry the skin surrounding the wound using a dabbing motion. (Do not rub.) Leaving humidity within the wound is not a problem.
8. At this point, use an instrument like the TIME-D model (Table 1 overleaf) to assess the wound and plan for additional steps.
 - If the skin is necrotic (black) or has fibrin (yellow), you will need to do an instrumental debridement.
9. Wash hands with soap and clean water or hydroalcoholic solution before making the new dressing.
10. To protect the skin around the wound, gently spread a greasy agent such as Vaseline®, petroleum jelly, shea butter or palm oil over it.

Continued overleaf...

Table 1. TIME-D Model for Assessing Wounds

T	Tissues	Is the tissue viable? Assess and approximate the state of the tissue using a colour scale	Black Tissue suggests Necrosis/Death Green Tissue suggests Infection Pink Tissue suggests Epithelialisation	Yellow Tissue suggests Fibrin Red Tissue suggests Granulation
I	Inflammation/ Infection	Does the wound show signs of inflammation or infection? Assess for inflammation or infection to inform appropriate treatment	Signs of infection include: <ul style="list-style-type: none"> • Delayed/halted healing • Foul odor • Easy bleeding of wound bed • Wound breakdown or changes in colour • Worsening pain 	
M	Moisture	Is moisture level optimal? Assess any fluid or exudate to ensure that moisture homeostasis necessary for proper healing	Quantity: None, Scant, Moderate, Heavy Texture and Colour: Serous (transparent), Serosanguineous (transparent pink), Sanguineous (bloody), Purulent (pus-like, thick white or greenish) Odour: No Malodour, Slight Malodour, Moderate Malodour, Strong Malodour	
E	Edges	Are the edges advancing properly? Assess the edges to better understand the type of wound, optimize treatment, and visualize epithelialization	Wound edges are classified as the following: Indistinct/diffuse = unable to clearly distinguish wound outline Attached = skin is flat and even with wound base Not Attached/Undermined = base of wound is deeper than edge of wound Rolled Under/Thickened = soft to firm and flexible to touch Hyperkeratotic = callous-like tissue formation around wound and at edge Fibrotic/Scarred = hard, rigid to touch	
D	Disease	Does the patient have other diseases? Assess patient for other comorbidities that can impair wound healing	Important Factors to Consider are: Diabetes, Cardiovascular disease, Tobacco use, healthcare access, nutrition status, pain, social and psychological factors, financial ability, immunosuppression, adherence to plan, beliefs about the illness	

- Always touch the greasy agent with clean gloves or clean tools if taking it out of a pot. Never go back a second or third time with the same glove/tool, to prevent contamination.
11. Gently spread the greasy moisturizer on some gauze to cover the approximate size of the wound. Place the greasy gauze interface onto the wound. This is the primary dressing, and as a contact layer it must not stick to the wound.
 12. Apply a second layer of gauze (without a greasing agent) over the first layer of gauze to help absorb exudate; this is the secondary dressing. It can also help to protect from external trauma. The second gauze layer should be roughly unfolded and bunched or 'fluffed', to look like a bridal veil, rather than neatly folded (see Fig 2).
 - If there is too much exudate or excess fluid, add additional gauze layer(s) or a high absorbent dressing to absorb excess fluid.



Fig 2. Second layer of gauze over wound, roughly bunched or 'fluffed', as a bridal veil.

13. Apply plastic film that is slightly bigger than the gauze, on top of the gauze layers to prevent moisture loss and diminish bacterial contamination; this is the tertiary dressing.
14. Apply tape all around the edges of the plastic film to secure gauze and plastic film in place. Avoid heavy-sticking tapes to prevent mechanical damage of the skin when the tape is removed in the future.

15. Wrap the area in bandages to help secure the dressing in place and offer a final protective barrier. Make sure the bandages are bigger than the wound area so everything can be covered.
 16. Unless the patient has a peripheral arteriopathy (i.e. impaired arterial supply as evidenced by weak or absent peripheral pulses), all wounds benefit from compression, so use the elastic bandage to provide it, starting distally and working proximally up a limb, in a circular and ascending manner, with greater pressure below than above to allow drainage. Each turn of the bandage overlaps the previous by 2/3 of its width, leaving 1/3 uncovered. Check it is not TOO TIGHT – you should be able to put your finger between the wraps of the bandage.
 17. Throughout all the process, evaluate pain and give appropriate pain control, such as acetaminophen or paracetamol.
 18. Ideally, for noninfected wounds, dressings can be changed twice a week if they are not soaked through by exudate and do not stick at removal. If the wound is infected, it may require daily changes.
 19. Wash hands with soap and clean water or hydroalcoholic solution after finishing the new dressing.
 20. Store clean items, dispose of waste properly and clean any instruments.
 21. Wash hands with soap and clean water or hydroalcoholic solution.
 22. Repeat these steps for dressing changes for as long as needed until new skin has formed over the wound bed.
 23. Advise the patient to move at all times despite the bandage. If needed for wounds at or near a joint, provide instructions for exercises to maintain the joint's mobility.
 24. Once the skin is closed, it remains fragile, it must be protected from sun and mechanical forces (blows or shear forces). Use of an emollient (same greasy agent as in point 10) in a thin layer to hydrate it twice a day for at least a few months is optimal.
- The information provided is not intended to be a substitute for professional medical advice, diagnosis or treatment. All information is to be adapted to the patient's unique condition.