

# Dressing Selection Guide

## IIWCG Wound Care

### Wound Dressing Formulary

Product Categories	Product Descriptions	Usage Considerations
<b>Antimicrobial</b>	<ul style="list-style-type: none"> <li>Classifications:                             <ul style="list-style-type: none"> <li>Gentian violet/methylene blue</li> <li>Honey</li> <li>Iodine (povidone and cadexomer)</li> <li>Polyhexamethylene biguanide (PHMB)</li> <li>Silver</li> <li>Hydrophobic</li> </ul> </li> <li>Forms:                             <ul style="list-style-type: none"> <li>Calcium alginate</li> <li>Foam</li> <li>Gauze</li> <li>Gel</li> <li>Gelling fibre</li> <li>Non-adherent synthetic contact layer</li> <li>Paste</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Indicated to reduce bacterial burden and/or to disrupt biofilms in locally infected wounds and in wounds with spreading or systemic infection (in conjunction with systemic antibiotics)</li> <li>May be used prophylactically in non-healing or non-healable wounds to prevent wound infection</li> <li>Iodine-based dressings are contraindicated before/after use of radio-iodine, in pregnant and breastfeeding women and in those with renal disorders</li> <li>Iodine-based dressings should be used with caution in those with thyroid disorders, deep ulcerative wounds, burns or large injuries and in infants under six months of age</li> <li>Honey must be medical grade</li> <li>Silver dressings come in either a salt or metallic form</li> <li>Antimicrobial dressing MUST come into direct contact with the wound bed to be effective</li> <li>Use a topical antimicrobial dressings for two weeks before reaching conclusions about its effectiveness (two-week challenge)</li> <li>Avoid the use of topical antibiotics that can be used systemically to avoid resistance</li> </ul>
<b>Calcium alginate</b>	<ul style="list-style-type: none"> <li>Sheets or fibrous ropes of calcium sodium alginate (seaweed derivative)</li> <li>Has hemostatic capabilities</li> <li>Some options contain silver</li> <li>Various sizes</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for:                             <ul style="list-style-type: none"> <li>Moderately to highly exuding wounds</li> <li>Local hemostasis</li> <li>Autolytic debridement facilitation</li> <li>Filling wound dead space</li> </ul> </li> <li>Contraindicated for:                             <ul style="list-style-type: none"> <li>Dry wounds</li> <li>Narrow or deep sinuses</li> <li>Situations of heavy or uncontrolled bleeding</li> </ul> </li> <li>Requires a secondary dressing</li> </ul>
<b>Charcoals</b>	<ul style="list-style-type: none"> <li>Odour-absorbent activated charcoal within a sleeve dressing</li> <li>Some options contain silver</li> <li>Various sizes and shapes</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for odourous wounds</li> <li>Contraindicated for highly exuding wounds</li> <li>Functions as a primary and/or secondary dressing (depending on product)</li> <li>Most products mask the odour but do not treat the underlying cause. The underlying cause of the odour should be investigated and treated (if possible).</li> <li>Ensure that dressing edges are sealed to control odour</li> </ul>
<b>Acrylic dressings</b>	<ul style="list-style-type: none"> <li>Acrylic polymer pad, topped with breathable, waterproof film that has a moisture vapour transmission rate (MVTR) to support evaporation</li> <li>Various sizes and shapes</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for:                             <ul style="list-style-type: none"> <li>Low-exuding wounds</li> <li>Autolytic debridement facilitation</li> <li>Protection of intact or newly epithelialized skin</li> </ul> </li> <li>Contraindicated for moderately and highly exuding wounds and infected wounds</li> <li>Enables wound monitoring without changing the dressing</li> <li>Extended wear time (14–21 days)</li> <li>Do not cut the acrylic pad</li> <li>Avoid using on venous leg ulcers</li> </ul>
<b>Films/ membranes</b>	<ul style="list-style-type: none"> <li>Transparent, semi-permeable, polyurethane adhesive sheets</li> <li>Moisture vapour transmission rates vary from film to film</li> <li>Impermeable to liquid and bacterial infiltration</li> <li>Various sizes and shapes</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for superficial skin loss and partial-thickness wounds, including donor sites:                             <ul style="list-style-type: none"> <li>As a cover dressing for showering</li> <li>To protect skin at risk of friction injury</li> <li>As a secondary dressing or fixation device</li> <li>To support autolytic debridement</li> </ul> </li> <li>Contraindicated for:                             <ul style="list-style-type: none"> <li>Moderately and highly exuding wounds</li> <li>Infected wounds</li> <li>Deep cavities</li> <li>Full-thickness burns</li> </ul> </li> <li>Allows for easy assessment of the wound or skin</li> </ul>
<b>Foams</b>	<ul style="list-style-type: none"> <li>Non-adherent (without adhesive border) or adherent (with adhesive border) polyurethane foam dressings</li> <li>Various moisture vapour transmission rates</li> <li>Various sizes, shapes and thicknesses</li> <li>Some options include:                             <ul style="list-style-type: none"> <li>Antimicrobial</li> <li>Low tack</li> <li>Non-adherent contact layer on foam pad</li> <li>Pain control</li> </ul> </li> <li>Transfer forms wick exudate to a secondary cover dressing</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for low- to moderately exuding wounds and to facilitate autolytic debridement</li> <li>Use with caution on persons with diabetes: foam dressings do not reduce plantar pressures and excessive drainage may lead to maceration</li> <li>Contraindicated for:                             <ul style="list-style-type: none"> <li>Highly exuding wounds where dressing changes are required daily or more frequently</li> <li>Ischemic non-healable wounds</li> </ul> </li> <li>Functions as a primary and/or secondary dressing</li> <li>May wick vertically or horizontally</li> </ul>
<b>Hydrogel</b>	<ul style="list-style-type: none"> <li>Polymers with high water content</li> <li>Available in gels, solid sheets or embedded into gauze.</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for wounds with minimal or no exudate to add moisture and/or to facilitate autolytic debridement</li> <li>Contraindicated for:                             <ul style="list-style-type: none"> <li>Moderately and highly exuding wounds</li> <li>Infected wounds</li> <li>Lower limb ulcers with arterial insufficiency</li> </ul> </li> <li>To be applied at a minimum thickness of 5 mm</li> <li>Not to be mixed with iodine paste compounds</li> <li>Periwound skin may need protection from maceration</li> </ul>
<b>Hydrophilic dressings</b>	<ul style="list-style-type: none"> <li>Paste that can conform to uneven wound bed and will adhere in a moist environment</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for wounds with low to moderate exudate in difficult-to-dress areas</li> <li>Facilitates autolytic debridement</li> </ul>
<b>Hypertonic</b>	<ul style="list-style-type: none"> <li>Hypertonic sodium chloride solution or crystals impregnated into gauze ribbon or gauze wafer</li> <li>Draw fluid from surface cells via osmosis</li> <li>Available in various sizes</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for wounds with necrotic tissue to facilitate autolytic debridement, or highly exuding wounds</li> <li>Contraindicated in wounds with:                             <ul style="list-style-type: none"> <li>Granulation tissue</li> <li>Exposed tendon</li> <li>Low exudate</li> </ul> </li> <li>Requires a secondary dressing</li> <li>May be painful on sensitive tissue</li> </ul>
<b>Negative pressure wound therapy (NPWT)</b>	<ul style="list-style-type: none"> <li>Consists of wound dressing (foam), vacuum pump, canister and tubing</li> <li>Applies localized negative pressure to the surface and margins of the wound and assists in removing fluids from the wound.</li> <li>Some contains antimicrobial</li> </ul>	<ul style="list-style-type: none"> <li>Skilled required for patient selection for this therapy: do not use if: non-enteric and unexplored fistulas, necrotic tissue with eschar present, osteomyelitis (untreated), malignancy in the wound.</li> <li>Do not place device over exposed blood vessels or organs.</li> </ul>
<b>Non-adherent synthetic</b>	<ul style="list-style-type: none"> <li>Porous sheets of dressings with low adherence to tissue</li> <li>Serve as a contact layer that allows the transfer of exudate to secondary dressing</li> <li>May be composed of silicone, medicated or non-medicated tulle</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for:                             <ul style="list-style-type: none"> <li>Painful wounds</li> <li>Wounds with friable granulation tissue</li> <li>Prevention of secondary dressings adhering to the wound</li> </ul> </li> <li>Delivery of antiseptic or antimicrobial pastes, creams, gels, etc.</li> </ul>
<b>Pain-control dressing</b>	<ul style="list-style-type: none"> <li>Foam dressings with a continuous release of ibuprofen</li> <li>Foam dressing with low tack for easier removal</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for the treatment of painful exuding wounds</li> <li>Not to be used with known hypersensitivities to any of the product components</li> <li>Do not exceed recommended dose</li> </ul>

### INTRODUCTION

Tissue Type	Description
<b>Necrotic</b>	 <p>Necrosis or eschar on a wound is usually identified through its black/ dark grey appearance and, when dried out, is tough and leathery to touch. Wound eschar is full thickness, dry, devitalized tissue that has arisen through prolonged local ischemia (Gray et al, 2005).</p>
<b>Slough</b>	 <p>Slough is adherent fibrous material derived from proteins, fibrin and fibrinogen (Tong, 1999). It is usually creamy yellow in appearance and can be found dehydrated and adhered to the wound bed or loose and stringy when associated with increased wound moisture.</p>
<b>Granulating</b>	 <p>The pink to red, moist, fragile tissue that fills in an open wound bed during the proliferative phase of healing. Capillary buds on its surface give it the characteristic bumpy or granular appearance.</p>
<b>Epithelization</b>	 <p>The process of covering a denuded surface with epithelium.</p>
<b>Critical Colonization/Infection</b>	 <p>An increasing bacterial load in a wound is intermediate between the category of colonization and infection. Will not heal but may not display classical signs of infection.</p>

### Definitions

- Healing wound:** Causes and co-factors that can interfere with healing have been removed. Wound healing occurs in a predictable fashion. Wound may be acute or chronic.
- Non-healing wound:** Wound has healing potential, but causes and co-factors that can interfere with healing have not yet been removed.
- Non-healable wound:** Causes and co-factors that can interfere with healing cannot be removed (e.g., in cases of terminal disease or end-of-life care).
- Primary dressing:** Comes directly in contact with the wound bed.
- Secondary dressing:** Covers a primary dressing – not all secondary dressings support thermal insulation and contain exudate.
- Contact layer:** Thin, single layer dressings that are designed to protect fragile tissue in the wound base.
- Occlusive dressing:** Seals a wound from the outside environment and does not allow moisture evaporation.
- Semi-occlusive dressing:** Allows some oxygen into the dressing and allows some moisture to evaporate.
- Moisture vapour transmission rate (MVTR):** The amount of moisture that can evaporate through the dressing.

### Dressing Selection Guide by Wound Condition

Clinical Situation	Local Wound Care	Care Considerations	Indicated Generic Products	
<b>TISSUE TYPE</b>	<ul style="list-style-type: none"> <li>Granulation</li> <li>Fibrin</li> <li>Slough</li> <li>Eschar</li> </ul>	<ul style="list-style-type: none"> <li>Optimize wound bed</li> <li>protection of granulation tissue</li> <li>removal of necrotic tissue</li> </ul>	<ul style="list-style-type: none"> <li>Dressing selection based on type of tissue in the wound bed</li> <li>Dressings that promote autolysis may be indicated for necrotic wounds</li> <li>Necrotic wounds may need to be augmented with other forms of debridement</li> </ul>	<ul style="list-style-type: none"> <li>Hydrogels</li> <li>Clear Acrylics</li> <li>Calcium alginate:</li> <li>Film/membrane:</li> <li>Foam:</li> <li>Gauze (daily dressing changes only):</li> <li>Gelling fibre:</li> <li>Hydrocolloid:</li> <li>Non-adherent synthetic contact layer:</li> </ul>
<b>INFLAMMATION &amp; INFECTION</b>	<ul style="list-style-type: none"> <li>Localized</li> <li>Spreading</li> <li>Systemic</li> </ul>	<ul style="list-style-type: none"> <li>Reduce bacterial burden</li> </ul>	<ul style="list-style-type: none"> <li>Treat the cause of the infection (if possible)</li> <li>Select a topical antimicrobial primary dressing</li> <li>Select a secondary dressing that can remain in place as long as possible and maintain an appropriate moisture balance</li> <li>Spreading or systemic infections require systemic antimicrobial therapy in addition to topical treatment</li> </ul>	<ul style="list-style-type: none"> <li>Antimicrobial agents</li> <li>Honey:</li> <li>Iodine (povidone and cadexomer):</li> <li>PHMB:</li> <li>Silver:</li> <li>Hypertonic dressings:</li> </ul>
<b>DRAINING WOUNDS</b>	<ul style="list-style-type: none"> <li>Nil (dry wounds)</li> <li>Lightly draining wounds</li> <li>Moderately draining wounds</li> <li>Heavily draining wounds</li> </ul>	<ul style="list-style-type: none"> <li>Provide Moisture Balance:</li> <li>either add or remove moisture from wound environment</li> </ul>	<ul style="list-style-type: none"> <li>Dressing selection based on amount of exudate</li> <li>Dry wounds require a dressing that adds moisture (if they are considered healable)</li> <li>Draining wounds require a dressing that absorbs moisture</li> <li>Peri-wound skin may require protection against maceration and/or dermatitis</li> </ul>	<ul style="list-style-type: none"> <li>Film/membrane</li> <li>Hydrogel</li> <li>Clear acrylic</li> <li>Alginate</li> <li>Hydrofibre</li> <li>Foam</li> <li>Superabsorbent</li> </ul>
<b>PAINFUL WOUNDS</b>	<ul style="list-style-type: none"> <li>Pain at dressing change</li> <li>Pain between Dressing changes</li> </ul>	<ul style="list-style-type: none"> <li>Provide pain control.</li> </ul>	<ul style="list-style-type: none"> <li>Dressing selection will be dependent on type of pain patient is experiencing</li> </ul>	<ul style="list-style-type: none"> <li>Foam dressing with continuous release of ibuprofen:</li> <li>Hydrogel:</li> <li>Non-adherent synthetic contact layer</li> </ul>
<b>ODOUR</b>	<ul style="list-style-type: none"> <li>Odorou wounds</li> </ul>	<ul style="list-style-type: none"> <li>Minimize odour</li> <li>Treat infection</li> <li>Absorb exudate</li> </ul>	<ul style="list-style-type: none"> <li>Odour may be caused by infection so ensure cause of odour has been determined</li> </ul>	<ul style="list-style-type: none"> <li>Charcoal:</li> <li>Antimicrobial agents</li> <li>Iodine (povidone and cadexomer):</li> <li>Polyhexamethylene biguanide (PHMB):</li> </ul>
<b>DEEP WOUNDS</b>	<ul style="list-style-type: none"> <li>Cavity</li> <li>Undermining</li> <li>Sinus tracts</li> <li>Fistula</li> </ul>	<ul style="list-style-type: none"> <li>Occupy dead space.</li> </ul>	<ul style="list-style-type: none"> <li>Dead space needs to be filled but not packed.</li> <li>Avoid using product that may break in deep wounds</li> <li>Excessive packing may cause tissue necrosis and/or cause further damage to the wound</li> </ul>	<ul style="list-style-type: none"> <li>Calcium alginate (not recommended for tunneling wounds):</li> <li>Specialized foam dressings (e.g., foam dressings that are indicated for use as a wound filler):</li> <li>Gauze:</li> <li>Gelling fibre:</li> <li>Hypertonic gauze ribbon:</li> </ul>
<b>STALLED WOUNDS</b>	<ul style="list-style-type: none"> <li>Indolent</li> <li>Dormant</li> </ul>	<ul style="list-style-type: none"> <li>Re-initiate healing</li> </ul>	<ul style="list-style-type: none"> <li>Wound must be optimize prior to use of dressings: free of necrotic and infected tissue</li> </ul>	<ul style="list-style-type: none"> <li>Expert opinion</li> </ul>

### Resources

- Sibbald RG, Orsted HL, Coutts PM, Keast DH. Best Practice Recommendations for Preparing the Wound Bed: Update 2011.
- Keast DH, Parslow N, Houghton PE, Norton L, Fraser C. Best Practice Recommendations for the Prevention and Treatment of Pressure Ulcers: Update 2006. Wound Care Canada. 2006;4(1):31-43
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- LeBlanc K, Baranoski S; International Skin Tear Advisory Panel, 2013. STs: the forgotten wound. Nurs Manage 2014;45(12):
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