

Appendix R: A Guide to Dressing Foot Wounds

There is limited evidence demonstrating that any specific dressing type enhances the rate of wound healing for diabetic foot ulcers. It is known, however, that a moist wound environment encourages rapid wound healing. Dressing selection depends on a variety of factors, and may change as the wound and skin at the ulcer site changes. Factors influencing dressing selection include wound type, wound depth, presence and volume of exudates, presence of infection, surrounding skin conditions, likelihood of re-injury and cost. Dressings should not be applied in isolation, but should be a part of a care plan consisting of debridement, pressure off-loading and when indicated, antibiotic medications. It is important to note that dressings themselves can be a source of pressure. Care and caution should be taken to ensure that the selected dressing does not increase pressure at the ulcer site. Furthermore, big and bulky dressings, and donut-type devices should be avoided as they can decrease circulation to the area.

The following list of dressings is not exhaustive and are products commonly used in Ontario.

Note: Read the product monographs for specific details.

CLASS	DESCRIPTION	TISSUE DEBRIDEMENT	INFECTION	MOISTURE BALANCE	INDICATIONS/ CONTRAINDICATIONS
1. Films/ membranes	<ul style="list-style-type: none"> ■ Semipermeable adhesive sheet; impermeable to water molecules and bacteria 	+	–	–	<ul style="list-style-type: none"> ■ Moisture vapour transmission rate varies from film to film ■ Should not be used on draining or infected wounds* ■ Create an occlusive barrier against infection
2. Nonadherent	<ul style="list-style-type: none"> ■ Sheets of low adherence to tissue ■ Nonmedicated tulle 	–	–	–	<ul style="list-style-type: none"> ■ Allow drainage to seep through pores to secondary dressings ■ Facilitate application of topical medications
3. Hydrogels	<ul style="list-style-type: none"> ■ Polymers with high water content ■ Available in gels, solid sheets or impregnated gauze 	++	–/+	++	<ul style="list-style-type: none"> ■ Should not be used on draining wounds ■ Solid sheets should not be used on infected wounds

CLASS	DESCRIPTION	TISSUE DEBRIDEMENT	INFECTION	MOISTURE BALANCE	INDICATIONS/ CONTRAINDICATIONS
4. Hydrocolloids	<ul style="list-style-type: none"> ■ May contain gelatine, sodium carboxymethylcellulose, polysaccharides and/or pectin; sheet dressings are occlusive with a polyurethane film outer layer 	+++	-/+	++	<ul style="list-style-type: none"> ■ Use with care on fragile skin ■ Should stay in place for several days ■ Should not be used on heavily draining or infected wounds* ■ Create an occlusive barrier to protect the wound from outside contamination ■ Odour may accompany dressing change and should not be confused with infection
5. Acrylics	<ul style="list-style-type: none"> ■ Clear acrylic pad enclosed between 2 layers of transparent adhesive film 	+++	-/+	++	<ul style="list-style-type: none"> ■ Use on low- to moderately draining wounds where the dressing may stay in place for an extended time ■ May observe wound without changing
6. Calcium alginates	<ul style="list-style-type: none"> ■ Sheets or fibrous ropes of calcium sodium alginate (seaweed derivative); have hemostatic capabilities 	++	+	+++	<ul style="list-style-type: none"> ■ Should not be used on dry wounds ■ Low tensile strength – avoid packing into narrow, deep sinuses ■ Bioreabsorbable
7. Composite	<ul style="list-style-type: none"> ■ Multilayered, combination dressings to increase absorbency and autolysis 	+	-	+++	<ul style="list-style-type: none"> ■ Use on wounds where dressings may stay in place for several days*
8. Foams	<ul style="list-style-type: none"> ■ Nonadhesive or adhesive polyurethane foam; may have occlusive backing; sheets or cavity packing; some have fluid lock 	-	-	+++	<ul style="list-style-type: none"> ■ Use on moderately to heavily draining wounds ■ Occlusive foams should not be used on heavily draining or infected wounds*
9. Charcoal	<ul style="list-style-type: none"> ■ Contains odour-absorbing charcoal within product 	-	-	+	<ul style="list-style-type: none"> ■ Some charcoal products are inactivated by moisture ■ Ensure dressing edges are sealed

CLASS	DESCRIPTION	TISSUE DEBRIDEMENT	INFECTION	MOISTURE BALANCE	INDICATIONS/ CONTRAINDICATIONS
10. Hypertonic	<ul style="list-style-type: none"> ■ Sheet, ribbon or gel impregnated with sodium concentrate 	+	+	++	<ul style="list-style-type: none"> ■ Gauze ribbon should not be used on dry wounds ■ May be painful on sensitive tissue ■ Gel may be used on dry wounds
11. Hydrophilic fibres	<ul style="list-style-type: none"> ■ Sheet or packing strip of sodium carboxymethylcellulose; converts to a solid gel when activated by moisture (fluid lock) 	+	–	+++	<ul style="list-style-type: none"> ■ Best for moderate amount of exudates ■ Should not be used on dry wounds ■ Low tensile strength – avoid packing into the narrow, deep sinus
12. Antimicrobials	<ul style="list-style-type: none"> ■ Silver, iodides, PHMB, honey aniline dyes with vehicle for delivery: sheets, gels, alginates, foams or paste 	+	+++	+	<ul style="list-style-type: none"> ■ Broad spectrum against bacteria ■ Should not to be used on patients with known hypersensitivities to any product component
13. Other devices	<ul style="list-style-type: none"> ■ Negative-pressure wound therapy applies localized negative pressure to the surface and margins of wound 	–	+	+++	<ul style="list-style-type: none"> ■ This negative pressure-distributing dressing actively removes fluid from wound and promotes wound edge approximation ■ Advanced skill required for patient selection
14. Biologics	<ul style="list-style-type: none"> ■ Living human fibroblasts provided in sheets at ambient or frozen temperature; extracellular matrix ■ Collagen-containing preparations; hyaluronic acid, platelet-derived growth factor 	–	–	–	<ul style="list-style-type: none"> ■ Should not be used on wounds with infection, sinus tracts or excessive exudate or with patients known to have hypersensitivity to any of the product components ■ Cultural issues related to source ■ Advanced skill required for patient selection

Adapted from the CAWC.

* Use with caution if critical colonization is suspected.

– no activity. + minimal activity. ++ moderate activity. +++ strong activity.

Note. From “Special considerations in wound bed preparation 2011: An update (Part 2),” by R.G. Sibbald, L. Goodman, K.Y. Woo, D. Krassner and H. Smart, 2012, *Wound Care Canada*, 10(3), p. 25-33. Reprinted with permission.