

HOW TO CHOOSE THE APPROPRIATE DRESSING FOR EACH WOUND TYPE

Pauline Beldon is Tissue Viability Nurse Consultant for Epsom and St Helier Hospitals NHS Trust

Choosing the right dressing to suit the conditions of a patient's wound is vital for optimum healing and quality of life. This article examines the different types of wound dressing available, looks at the healing properties of each dressing and provides examples of the types of wounds that each dressing type should be used upon.

Wound dressings are categorised in the Drug Tariff, which is administered and published by the Department of Health. The products are classified according to the properties of the dressing and there are usually several different types of dressings within a category.

However, from a clinical perspective there is an easier way of classifying dressings into the following groups:

- ▶▶ Film dressings
- ▶▶ Simple island dressings
- ▶▶ Non-adherent dressings
- ▶▶ Moist dressings
- ▶▶ Absorbent dressings.

One of the roles of a tissue viability nurse is to examine the products available and together with other healthcare professionals, such as infection control nurses, pharmacists and procurement personnel, reach a decision regarding which of the different types of dressings will be used in their trust.

That decision will be made following evaluation of the products to ensure they perform as well as the manufacturers claim. It is also crucial to ensure that the dressings meet the needs of patients and do not cause any unnecessary discomfort on application, while the dressing is being worn, or on removal.

Antimicrobial dressings (those used to combat infection) should be selected by a tissue viability

nurse or doctor, specifically to ensure the mode of action and treatment of infection is appropriate for the patient's wound type.

Film dressings

These dressings can be used as primary or secondary dressings. Film dressings can also be used as a barrier to protect an area of the body that might be experiencing friction or shear forces, for example



Figure 1. A superficial heel ulcer resulting from friction/shear.



Figure 2. This wound exhibits granulation and has new epithelial tissue at the edges.



Figure 3. This wound exhibits dry slough, which needs to be removed in order for a wound to heal.

a small superficial wound, producing minimal exudate or a superficial heel ulcer caused by friction or shear (Figure 1).

Examples of film dressings include:

- ▶▶ Mepore Film® (Mölnlycke)
- ▶▶ Askina® Derm (B Braun)
- ▶▶ Bioclusive™ (Systagenix Wound Management)
- ▶▶ OpSite® FlexiFix® (Smith & Nephew)
- ▶▶ Tegaderm Film™ (3M™).

Simple island dressings

Simple island dressings are only to be used over wounds closed by primary intention, in other words over a suture line. The dressings have a central pad of cellulose material to absorb any oozing from the suture line during the first 24 hours post-surgery.

It is important to ask patients if they have any skin allergies before the application of any adhesive dressing. It is inappropriate to use island dressings over open wounds. Some simple island dressings have a shower proof backing.

Examples of simple island dressings include:

- ▶▶ Primapore® (Smith & Nephew)
- ▶▶ Medipore™ + Pad (3M™)
- ▶▶ Alldress® (Mölnlycke).

Non-adherent dressings

Many dressings are termed 'non-adherent', meaning they are designed not to stick to the drying secretions of the wound, thereby resulting in less pain and trauma on removal. However, some are more effective than others. Wound dressings which are coated with silicone, a lipido-colloid contact layer, or petroleum emulsion prevent the dressing from adhering to the wound bed.

This is important as on removal an adherent dressing can tear away any new granulation or epithelialising tissue within the wound bed, resulting in bleeding, which will distress the patient.

A non-adherent dressing is removed easily and causes no pain or discomfort to the patient or damage to the wound bed.

Figure 2 shows a wound for which a silicone, non-adherent dressing is appropriate. This patient's wound is granulating and has new epithelial tissue at the edges and around the skin island visible in the centre of the wound.

A dressing is required that can be easily applied and left in place for several days, eventually being removed without traumatising the new tissue. When the wound is in place, a limb padding and a bandage may suffice as a secondary dressing. It is vital to ensure the correct size is used. It is possible to change the secondary dressing while leaving the primary dressing in place.

Paraffin gauze dressings are no longer recommended for use on open wounds (NICE, 2008).

Examples of non-adherent dressings include:

- Urgotul® (Urgo Medical)
- Mepitel® (Mölnlycke)
- Adaptic™ (Systagenix).

Moist dressings

Moist dressings function by either preventing the skin surrounding the wound from losing moisture, or actively donating moisture to the area.

Moist dressings can be divided into two groups

- ▶▶ Hydrogel dressings
- ▶▶ Hydrocolloid dressings.

Both groups work by a process known as autolytic debridement, whereby the dressing accentuates the body's process of ridding itself of dead tissue.

Hydrocolloid dressings

Although the name begins with

the word hydro, these dressings do not contain moisture, but instead form a 'seal' at the wound surface. This prevents the normal daily evaporation of moisture from the skin.

Figure 3 shows a wound that would be suitable for treatment with a hydrocolloid dressing. It exhibits dry slough, a mixture of dead tissue and bacteria. This needs to be removed in order for the wound to heal. It is important to ensure that a large enough dressing is selected. The dressing should exceed the size of the wound by at least 2cm.

Warming the hydrocolloid dressing prior to application (while still in the packet) will make application easier and the dressing more conformable. Hydrocolloid dressings may also be cut to size to help conformability.

Hydrocolloid dressings may be left in place up to seven days. The wound itself will indicate when a dressing change is required by the accumulation of moisture within the dressing. When removing a hydrocolloid dressing, support the surrounding skin. If the dressing is stubborn then submerge the limb in warm water in a bath or shower.

Examples of hydrocolloid dressings include:

- ▶▶ Duoderm Signal® (ConvaTec)
- ▶▶ Tegaserb™ (3M™)
- ▶▶ Nu-Derm™ (Systagenix).

Hydrogel dressings

Hydrogel dressings contain water but the percentage varies depending on the dressing. However, dressings generally contain between 60–70% water,

which, with other constituents, is held in a viscous form known as the hydrogel. Alternatively, there are also hydrogel sheet dressings available, which contain less water.

Hydrogel dressings are applied to wounds containing necrotic or dead tissue. Dead tissue becomes hard and desiccated due to the loss of a blood supply and the application of a hydrogel dressing donates water to the dead tissue, softening it and aiding the body's process of autolytic debridement. *Figure 4* shows a wound exhibiting hard black necrotic tissue. If this wound were to be left exposed, the tissue would continue to dry out but remain firmly adhered to the live tissue underneath. Rehydrating the necrotic tissue with a hydrogel dressing enables the body to loosen the tissue.

It is important not to apply excessive amounts of hydrogel as this may cause skin maceration. Any hydrogel dressing should be large enough to cover the wound and at least 3cm of surrounding skin. A hydrogel dressing will require a secondary dressing to hold it close against the wound bed — either a film dressing or

a hydrocolloid dressing can be used for this purpose.

Hydrogel dressings may require changing every 2–3 days and care must be taken not to macerate the surrounding skin with excessive amounts of hydrogel.

If the patient is known to have skin sensitivities, then a hydrogel sheet should be used in place of a hydrogel dressing — this should be covered with padding and a bandage.

Hydrogel sheet dressings can also be used in preference to hydrogel dressings if the patient has localised pain and cannot tolerate an adherent dressing. In this case, the hydrogel sheet can be held in situ with padding and bandaging or a film dressing.

Hydrogel sheet dressings will require changing every 2–3 days and the patient/carers should be cautioned that on removal the dressing may have changed in colour/consistency as a result of it removing debris from the wound bed.

Examples of hydrogels and hydrogel sheets include:



Figure 4. This heel ulcer exhibits hard black necrotic tissue.



Figure 5. A wound exhibiting the presence of exudate.

- ▶▶ Intrasite Gel® (Smith & Nephew)
- ▶▶ Nu-Gel™ (Systagenix)
- ▶▶ Actiform Cool™ Hydrogel Sheet (Activa Healthcare)
- ▶▶ Aquaflo™ (Covidien).

Absorbent dressings

There are a vast number of different absorbent dressings, mainly because one of the most difficult tasks in wound management is the containment of exudate.

Different types of absorbent dressings act in different ways, for example, wounds may be flat or present as cavities that need to be lightly filled with an absorbent primary dressing and then covered with a further absorbent secondary dressing. The aim is to reduce unnecessary dressing changes for both the patient and the nurse.

If the exudate is not contained within an absorbent dressing the moisture may cause skin maceration. In addition leaking and wet dressings and clothing cause distress to patients and must be avoided. *Figure 5* demonstrates an exudate-producing wound.

Prompt change of any absorbent dressing when indicated is necessary in order to prevent skin maceration.

All absorbent dressings are applied dry to a wound bed. It is crucial to select a size and shape of dressing that best suits the site of the wound, e.g. heel-shaped dressings are available.

Alginate dressings

Alginate dressings absorb exudate and form a gel-like covering over the wound. There are many different alginate dressings available and the way they absorb exudate is dependant on the make up of the alginate, for example some retain their integrity and can be removed in one piece; others disintegrate and need to be irrigated away from the wound bed. Alginate dressings can be used to lightly fill a cavity but should always be covered by a secondary dressing.

Examples of alginate dressings include:

- ▶▶ Kaltostat® (ConvaTec)
- ▶▶ Sorbsan Flat® (Aspen Medical)

- ▶▶ Curasorb® (Covidien)
- ▶▶ Algisite® (Smith & Nephew).

Hydrofiber dressings

These are white fibrous dressings comprising 100% Hydrofiber® (sodium carboxymethylcellulose), which is applied dry. On absorbing exudate it is transformed into a gel-like sheet. It is used on moderate to heavily exuding wounds and must be changed when fully saturated with exudate. Patients may occasionally mention a 'drawing' sensation as the dressing absorbs the exudate. These dressings may occasionally stick to the edges of a wound so it is advisable not to overlap onto the surrounding skin.

Examples include:

- ▶▶ Aquacel AG® (ConvaTec)
- ▶▶ ActivHeal AquaFiber® (Advanced Medical Solutions).

Foam dressings

Foam dressings absorb exudate — some lock fluid within the core of the dressing, others transform into a gelling foam. Most foam dressings are available in bordered or non-bordered formats — the latter to be used if the patient has a skin sensitivity to adhesives.

Foam dressings indicate when they need to be changed through the spreading discoloration that appears on the dressing.

Examples of foam dressings include:

- ▶▶ Allevyn AG® (Smith & Nephew)
- ▶▶ Mepilex Border® (Mölnlycke)
- ▶▶ Biatain Adhesive® (Coloplast)
- ▶▶ Versiva®XC™ (ConvaTec)
- ▶▶ Tielle Lite™ (Systagenix). **WE**