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WOUND CARE
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What you need to know about hydrogel dressings

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Each issue, *Apple Bites* brings you a tool you can apply in your daily practice.

Description

Hydrated polymer (hydrogel) dressings, originally developed in the 1950s, contain 90% water in a gel base, which helps regulate fluid exchange from the wound surface. Hydrogel dressings are usually clear or translucent and vary in viscosity or thickness. They're available in three forms:

- *amorphous* hydrogel—free-flowing gel, packaged in tubes, foil packets, and spray bottles
- *impregnated* hydrogel—amorphous hydrogel saturated onto a gauze pad, nonwoven sponge ropes and/or strips
- *sheet* hydrogel—a gel supported by a thin fiber mesh. The dressing can overlap intact skin and generally won't harm it. It's available with and without adhesive borders and can be cut to fit the wound.

Benefits

By providing moisture to the wound, hydrogel dressings create a moist healing en-



Types of hydrogel dressings, clockwise from top left: amorphous, impregnated, and sheet.

vironment, which promotes granulation, epithelialization, and autolytic debridement. The high water content of hydrogel dressings cools the wound, producing pain relief that can last up to 6 hours. Dressing-change discomfort is also reduced because hydrogels don't adhere to the wound surface.

In summary, hydrogel dressings:

- are soothing and reduce pain
- rehydrate the wound bed
- facilitate autolytic debridement
- fill in dead space (amorphous and impregnated types)
- can be used when infection is present.

Indications

Examples of wounds that may benefit from a hydrogel dressing include:

- dry or slightly moist wounds
- soothing painful wounds

- partial- and full-thickness wounds
- wounds with granulation tissue, eschar, or slough
- abrasions or minor burns
- radiation skin damage.

Disadvantages

Hydrogel dressings are *not* recommended for wounds with heavy exudate. In addition:

- some require a secondary dressing
- some are difficult to secure
- they may cause periwound maceration
- they can dehydrate easily if not covered.



Amorphous hydrogel dressing

Frequency of dressing changes

The frequency of dressing changes varies from daily to every 4 days depending on specific manufacturer guidelines.

1. Wash your hands and put on gloves.
2. Note the date on soiled dressing; then remove it and put it in a trash bag.
3. Remove your gloves, wash your hands, and put on new gloves.
4. Clean the wound with normal saline or prescribed cleanser.
5. Pat the tissue surrounding the wound dry with clean gauze.
6. Remove your gloves, wash your hands, and put on new gloves.
7. Apply liquid barrier film or moisture barrier ointment to the periwound area to protect the skin from maceration.
8. Apply the dressing

Amorphous hydrogel dressing

- a. Apply the product with a sterile tongue blade or cotton-tipped applicator, spreading it evenly over the wound

bed to a thickness of 5 mm (¼ inch).

Or, a sterile gauze pad may be saturated with hydrogel and placed into the wound with no overlap onto the surrounding skin.

- b. Insert appropriate packing materials as needed.
- c. Cover the dressing with a secondary wound dressing. The secondary wound dressing should cover the entire wound bed.

Gauze impregnated with hydrogel

- a. Lay the dressing directly on top of the wound or loosely pack it into the wound bed.
- b. Cover the dressing with a secondary wound dressing. The wound dressing should cover the entire wound bed.

Sheet hydrogel

- a. Use a marker to trace the outline of the wound on the dressing.
 - b. Using clean scissors, cut the hydrogel sheet to the size of the wound.
 - c. Apply the sheet to the wound bed, taking care not to overlap onto intact skin.
 - d. Cover the sheet with a secondary wound dressing. The wound dressing should cover the entire wound bed.
9. Dispose of waste in an appropriate container. Remove your gloves and discard; then wash your hands.

How to remove

1. Wash your hands and put on gloves.
2. Gently remove the secondary wound dressing.
3. Remove the hydrogel dressing:
 - a. Amorphous hydrogel dressing: Rinse away any remaining gel with a wound cleanser or normal saline if necessary.
 - b. Hydrogel impregnated gauze or hydrogel sheet: Gently lift one edge of

- the dressing and peel it back slowly. If the dressing has adhered to the wound surface, saturate the dressing with wound cleanser or normal saline to soften it; then gently remove.
4. Check the removed dressing for type, amount, color, and consistency of exudate.

Discard the old dressing in an appropriate container. Remove your gloves and discard; then wash your hands.

Examples

Here are links to samples of each type of hydrogel dressing:

- [Amorphous hydrogel dressings](#)
- [Impregnated hydrogel dressings](#)
- [Sheet hydrogel dressings](#)

PATIENT EDUCATION RESOURCE

University of Virginia Health System
hydrogel dressing instructions.

Selected references

European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. *Treatment of Pressure Ulcers: Quick Reference Guide*. Washington, DC: National Pressure Ulcer Advisory Panel; 2009.

Hess CT, ed. *Clinical Guide to Wound Care*. 7th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2012.

Nancy Morgan, cofounder of the Wound Care Education Institute, combines her expertise as a Certified Wound Care Nurse with an extensive background in wound care education and program development as a nurse entrepreneur. Read her blog, "[Wound Care Swagger](#)."

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