

Pressure ulcer

Therapy approach



Cutimed®

Advanced
wound care

A guide for the **successful therapy**

Every wound needs the best possible conditions for healing. Though no two wounds are the same, Cutimed® advanced wound care products help physicians and caregivers create the ideal conditions for wound healing.

The information to follow focuses on the appropriate treatment of pressure ulcers. The therapy approach outlined here was jointly developed with wound specialists and aims to provide guidance for all those involved in wound care management. It demonstrates the principle of wound bed preparation, including wound cleansing as well as preparing the wound bed for later stages of healing, followed by the recommended treatment of pressure ulcers.

BSN medical offers a full range of dressings, fixation products, medical skin care and casting products to help you provide optimal treatment to your patients with pressure ulcers and get them on their way to healing.

Pressure ulcers cause much suffering for a patient. Treatment can often take several months and as a result, a more holistic approach is recommended, which takes into account the patient and his or her circumstances.



of pressure ulcers.

M E D I C A L
S K I N
C A R E

Necrotic wounds

Necrotic tissue inhibits wound healing. Hydrogels offer an alternative to surgically removing necrosis by creating a gentle method of debridement through moisture donation, as well as helping support autolysis.

Infected wounds

Critical colonization and wound infections can seriously hinder healing. Dressings that help reduce a wound's bacterial load, preferably without chemical agents or promoting bacterial resistance, are an effective option for wound management, without the risk of impairing the wound healing process.

Sloughy wounds

Gel products act gently to help remove slough, a mixture of fibrin, pus and cellular debris. Bacteria-binding dressings can further help reduce the bacterial load and encourage healing, without adding additional cellular debris to the wound.

Granulating wounds

Granulation is an important part of the wound healing process. Highly absorbent wound dressings that offer excellent exudate management and oxygen permeability, help optimize granulation as well as maintain an ideal wound environment for moist wound healing.

Epithelialising wounds

Key to treating epithelialising wounds is protecting the newly formed epithelium and fragile skin. Atraumatic dressings provide protection for the wound bed and peri-wound area, while medical skin care helps prevent the new skin from drying out to keep it more flexible and smooth.

W O U N D
B E D
P R E P A R A T I O N

E X U D A T E M A N A G E M E N T

Pressure ulcers – particular characteristics.

How do pressure ulcers develop?

The most serious risk factor to a patient for developing a pressure ulcer is immobility. If a specific part of the body is exposed to pressure for more than two hours, local ischaemia, followed by cell damage, could be the consequence. At this point, if the pressure continues, a blister will develop and in a matter of hours, loss of skin and tissue.

What are the stages and how are they recognised?



Stage 1:
Visible reddening of the skin



Stage 2:
Formation of a blister



Stage 3:
Loss of skin areas



Stage 4:
Loss of deeper tissue, possibly affecting bones or tendons

(Classification ref: National Pressure Ulcer Advisory Panel, 1989 (NPUAP))

Where do pressure ulcers develop?

Those areas where there is only a thin layer of tissue present between the skin and the underlying bones are at the highest risk for developing a pressure ulcer. Common locations include:



Sacrum



Heel



Back of the head,
shoulder blades

Manage the cause as well as the wound.

A holistic approach needs to be taken when treating pressure ulcers. In addition to wound management, successful treatment should also involve additional therapeutic measures, such as:

▶ **Pressure relief**

A variety of aids are available which help reduce pressure on the affected skin areas. Soft positioning systems, for example, serve to enlarge the contact area. The distribution of pressure over the largest possible area or intermittent pressure relief are key. Today, "traditional" aids such as furs, water mattresses, sitting rings and cotton dressings are no longer recommended.

▶ **Positioning techniques**

Various positioning techniques can also be used to help relieve pressure. Of particular significance is the 30° oblique position, especially when the position is changed frequently.

▶ **Pain treatment**

Most pressure ulcers are also a source of pain. It is important to keep a record of the pain, for example, in a daily diary, so that the appropriate pain treatment can be determined.

▶ **Restoring circulation**

An essential goal of treatment is to restore circulation to the affected area of skin. This is achieved by systematically relieving the pressure on the area and by mobilizing the patient, if possible.

▶ **Incontinence care**

The risk of skin maceration and diaper dermatitis is especially significant for incontinent patients. Wide-area treatment with a film-forming cream helps provide a much needed protective barrier.

▶ **Protection of wound edges**

Wound edges are often impacted by exudate and other body fluids, which can lead to maceration and subsequently, to further enlargement of the wound. A protective film, applied with a foam applicator for precise application, helps re-establish the skin's barrier function and protects the surrounding skin from damage by adhesive dressings.

▶ **Nutrition**

Patients with pressure ulcers have increased energy and protein requirements and need a special diet. A diet containing sufficient vitamins and minerals clearly supports the healing process.

Medical skin protection and care – an integral element of **ulcer therapy**.

Medical skin care: a preventative and therapeutic approach

The significant importance of medical skin care to professional wound healing is still widely underestimated. Medical skin care not only has a positive impact on all healing phases, but it also helps prevent further damage to the skin, contributing to a patient's general sense of well-being.

What is the basic function of the skin?

The skin is the body's largest organ and contains one third of the water stored in the body. The skin has many functions, including protecting the body from external factors, helping regulate temperature and water loss, as well as preventing substances from entering the body. In the treatment of exuding wounds, the threats are numerous, especially for incontinent patients. These rise significantly with elderly patients as skin is fragile and more susceptible to disease or damage.

Major factors impacting skin at risk:

External

- wound exudate
- urinary or fecal incontinence
- digestive fluids
- removal of adhesive products
- shearing forces

Internal

- age
- nutrition
- dehydration



► Skin areas to focus on:

Surrounding skin: Medical skin protection is of utmost importance in the healing of acute ulcers. Wound margins and peri-wound skin are at risk for maceration, which is caused by excess wound exudate and other body fluids. This damage to the surrounding skin can lead to an enlargement of the wound. Wound protection that supports the skin's barrier function is indicated to help prevent maceration (e.g. **Cutimed® PROTECT spray or foam applicator**).

Skin exposed to incontinence: The risk of skin maceration and diaper dermatitis is critical in the care of incontinent patients. Wide area treatment with a protective cream is recommended for these skin areas (e.g. **Cutimed® PROTECT cream**).

Skin impacted by shearing forces: Friction and shearing forces are a great threat to the skin of immobile patients, as both can lead to the development of pressure ulcers. Because friction and shearing forces often first cause skin irritation and dryness, regular intensive medical skin care is recommended to help prevent these conditions. Products containing urea (e.g. **Cutimed® ACUTE**) help meet very high moisture needs for especially irritated and dry skin.

New epidermis: The new, fragile skin of a healed ulcer requires special attention, as this skin can easily dry out if moisture decreases. Adequate medical skin care provides intense moisture to help keep the skin flexible and healthy and promote regeneration of the epidermal barrier (e.g. **Cutimed® ACUTE**).

Necrotic wounds:

How to achieve gentle yet **effective debridement.**

▶ Donate moisture to dry necroses:



Necroses should be removed from the wound bed as they impair wound healing and hinder the assessment of wound size and depth. Autolytic debridement can be effectively supported by hydrogels. **Cutimed® Gel** offers high moisture donation and helps to gently and effectively dissolve necroses. Cutimed® Gel may be applied with the applicator provided, with a spatula or directly from tube, being careful not to over apply as this can cause maceration.

▶ Dissolve necrotic areas:



A secondary dressing (film or foam) ensures the hydrogel remains in place to help stimulate autolytic debridement to effectively dissolve necroses.



Film dressings

(such as **Leukomed® T** or **Fixomull® transparent**)

- prevent the hydrogel from drying out
- help to maintain a moist wound environment

Foam dressings with a silicone wound contact layer

(such as **Cutimed® Siltec B** or, especially for the awkward sacral region, **Cutimed® Siltec Sacrum**)

- prevent the hydrogel from drying out
- absorb wound exudate if present in other wound areas



Chronic wounds: Moist wound healing is the first choice!

Traditional, dry treatment of chronic, secondary healing wounds could compromise the wound healing process considerably and is not recommended.

In contrast, moist wound management provides an ideal physiological environment and allows nutrients, enzymes and growth factors to spread in the wound bed. These are the best conditions for the formation of new granulation tissue and epithelium.

Infected wounds: How to reduce the **bacterial load**.

▶ Bind and inactivate wound pathogens:



Cutimed® Sorbact® represents a new approach to advanced wound care. Through a purely physical mode of action, wound bacteria are irreversibly bound to the Cutimed® Sorbact® dressing. Once bound, they are rendered inactive and unable to replicate. These pathogens are then removed with each dressing change, reducing the overall bacterial load to support the natural wound healing process, without the risk of cytotoxicity or bacterial resistance.



Apply swabs, round swabs, absorbent pads or gel dressings as primary dressings as needed, depending on wound size, depth and exudate.



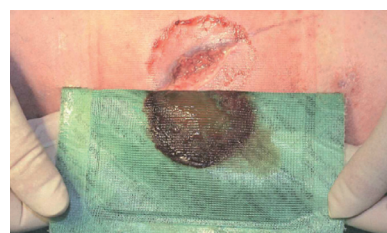
▶ Manage various amounts of exudate:

Depending on the levels of exudate, and the location and type of wound:

- Apply **Cutimed® Sorbact®** ribbon gauze or swabs to the wound and cover with a transparent film dressing (**Leukomed® T** or **Fixomull® transparent**)
- Choose **Cutimed® Sorbact®** absorbent pads held in place by **Fixomull® stretch** or
- Use **Cutimed® Siltec/Cutimed® Cavity** as secondary dressings to absorb higher amounts of exudate.

Dressing combinations offer infection control and fluid management in one product and may avoid the need of a secondary cover:

- **Cutimed® Siltec Sorbact®** not only provides infection prevention and control, but also rapid and reliable absorption for effective fluid management. The polyurethane foam helps maintain a moist wound environment for effective moist wound healing. Vertical absorption and a semipermeable top layer help prevent maceration. Plus, its gentle, readjustable silicone fixation border allows for atraumatic and painless dressing changes.
- **Cutimed® Sorbact® Hydroactive B** combines infection control with reliable fluid management and effective debridement. Its unique hydropolymer gel core can absorb high amounts of exudate while remaining permeable to water vapor to help prevent maceration.



Sloughy wounds:

How to **cleanse the wound bed.**

▶ Dissolve slough and necroses:



Autolytic debridement, supported by hydrogels, is an effective yet gentle method to dissolve necrotic and sloughy tissue. **Cutimed® Gel** offers high moisture donation to help stimulate autolytic debridement. Cutimed® Gel may be applied according to user preference, being careful not to over apply as this can cause maceration. The following methods of application can be used:

- directly from the tube
- via a sterile spatula (due to its viscosity even upside down, which is a major advantage in daily practice)
- with the sterile applicator (for deeper parts of wounds)

For best results make sure to cover Cutimed® Gel with a sterile film dressing (e.g. **Leukomed® T**).

▶ Prevent or manage infection while also dissolving slough:



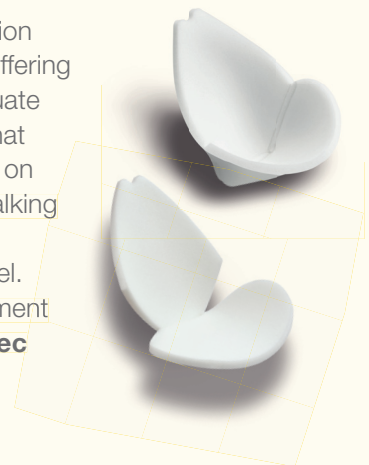
Cutimed® Sorbact® gel combines a bacteria-binding dressing with hydrogel. As a ready-to-use dressing, it takes advantage of Sorbact® technology to bind and inactivate wound pathogens while the hydrogel helps stimulate autolytic debridement to clean the ulcer of slough and fibrin layers.

- Ensure overlapping edges are folded back in the direction of the wound to avoid maceration of surrounding skin and wound margins
- Actively protect wound margins and peri-wound skin from maceration by providing a film barrier (e.g. **Cutimed® PROTECT spray** or **foam applicator**)
- Apply a secondary dressing to manage the wound exudate and excess moisture (e.g. **Leukomed® T**, **Cutimed® Siltec B** or **Cutimed® Siltec Sacrum**)



Important:

- The process of healing a wound must also take into consideration the underlying disease and relevant risk factors. For patients suffering with a pressure ulcer, it is especially important to provide adequate pressure relief, for example, through soft positioning systems that help expand the contact area or in the case of a pressure ulcer on the heel for a mobile patient, through off-weight casting or a walking device.
- Immobile patients frequently develop pressure ulcers on the heel. Heel dressings that combine cushioning with exudate management might be appropriate. **Cutimed® Siltec Heel** or **Cutimed® Siltec Heel 3D**, offer both of these important benefits for various heel shapes.



Granulating wounds:

How to promote and protect the **formation of new tissue.**

Keyword: Granulation

Today, the principle of moist wound healing is well-accepted as the therapy concept of choice for chronic wounds. It has been confirmed in daily practice that moisture has various beneficial effects in the wound bed:

- nutrients, growth factors, and enzymes can easily spread in a moist wound
- moisture helps facilitate the proliferation of new cells
- epithelialisation can occur more quickly in a moist wound environment

As a result, modern wound dressings should help support a balanced level of moisture in the wound bed.

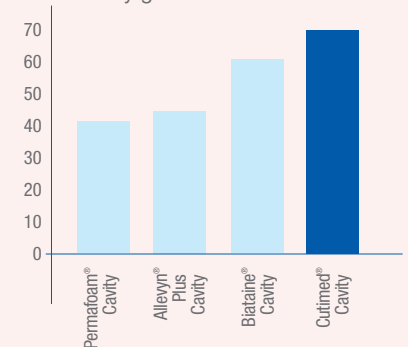
Why absorption capacity is so important:



For state-of-the-art foam dressings to maintain a moist wound environment, they must be designed to handle different amounts of exudate. The wear time of a dressing is largely determined by its absorbent capacity. Through superior fluid handling, the benefits of Cutimed® Cavity include:

- = longer wearing time
- = fewer dressing changes
- = less nursing time required
- = cost effective therapy!

Absorbency grams/100 cm²



High absorbency = longer wear times; in-vitro tests confirm superior absorption. (SMTL report 2008, data on file)

To ensure optimal fluid handling:

- Carefully explore the wound depth.
- Choose the appropriate size and shape. **Cutimed® Cavity** is soft and conformable and can therefore be inserted into cavity wounds really easily.
- Cut to size if necessary. For awkward locations, use **Cutimed® Siltec Sacrum** for secondary fixation.

Important:

The process of healing a wound must also take into consideration the underlying disease and relevant risk factors. It is especially important to provide adequate pressure relief for pressure ulcers and product choices may vary depending on location of the ulcer, e.g.:

- **Cutimed® Siltec Heel/Cutimed® Siltec Heel 3D** for pressure ulcers on the heel
- **Cutimed® Siltec Sacrum** for pressure ulcers on the sacral area.

Those products can be used as a ready-to-use option or, depending on wound depth, as secondary cover for **Cutimed® Cavity**. **Cutimed® Cavity** is a soft, highly absorbent and conformable dressing and can therefore be inserted into deep wounds quite easily to take up fluid, helping to prevent it from pooling and overflowing onto the surrounding skin.

▶ Absorb wound exudate from the wound bed:



Cutimed® Cavity is not only highly absorbent, but due to the small pore size, also ensures minimal risk of granulating tissue in-growth. The small pore size also minimizes pain during removal.

To apply:

- Clean the wound according to local protocol.
- Fold or cut the dressing to the shape or width of the wound.
- Loosely fold **Cutimed® Cavity** into the wound, being careful to only fill 60% of the wound space to accommodate dressing expansion during fluid uptake. The swelling properties of the foam during fluid uptake help optimally cover the wound bed.
- For best results, cover the wound with a sterile film dressing, such as **Leukomed® T** or a foam border dressing like **Cutimed® Siltec B** or **Cutimed® Siltec Sacrum**, designed specifically for pressure ulcers in the sacral region.

▶ Changing the dressing:



Cutimed® Cavity will not disintegrate after exudate uptake and can be removed as one piece. The appropriate interval for dressing changes depends on the healing stage and the exudate level of the individual wound. In later stages of wound healing (after the wound bed is free from necroses, slough or infection), the frequency of dressing changes can be reduced.

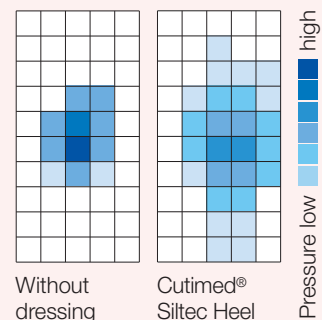
▶ Depending on wound depth:



Once granulation progresses and the wound bed fills with new tissue, it may be appropriate to switch dressing type. **Cutimed® Siltec** dressings will cover superficial wounds and like **Cutimed® Cavity**, are also designed for excellent fluid handling.



In addition, heel dressings, such as **Cutimed® Siltec Heel 3D**, combine exudate handling with cushioning on various heel shapes and can be used both for pressure ulcer therapy as well as for ulcer prevention.



Less pressure load due to superior distribution of pressure by extra thick foam

Epithelialising wounds: How to protect **new tissue**.

▶ **Protect new, fragile skin:**



When the wound has filled with granulation tissue and epithelial cells begin to grow from the wound margins, dressings for superficial wounds may now be recommended, preferably with a silicone wound contact layer.

▶ **Ensure atraumatic dressing changes:**



All **Cutimed® Siltec** dressings are designed with a silicone wound contact layer. This provides gentle adherence to the dry peri-wound skin and no adherence to the moist wound bed at all. Because less exudate is produced as new, fragile, epithelial cells cover the former wound area, this silicone wound contact layer is critical to protecting these new cells. The healing process remains undisturbed and patients experience pain-free dressing changes.



To summarize, the benefits of Cutimed® Siltec's silicone layer include:

- gentle adherence to fragile epithelium
- undisturbed healing progress
- patients experience pain-free dressing changes

In the case of dry, healed wounds, impregnated sterile dressings (e.g. **Cuticell®**) can be used to protect the fragile skin. As a secondary fixation, film dressings are recommended (e.g. **Fixomull® transparent**).

Important:

- The process of healing a wound must also take into consideration the underlying disease and relevant risk factors. In addition to providing adequate pressure relief for pressure ulcers, it may also be necessary to care for the surrounding skin.
- For incontinent patients, there is a particular risk of skin maceration and diaper dermatitis. Wide-area treatment of these skin areas with a protective cream, such as **Cutimed® PROTECT** is recommended.

Ongoing therapy: Keeping the **new skin intact.**

► Prevent skin from drying out:

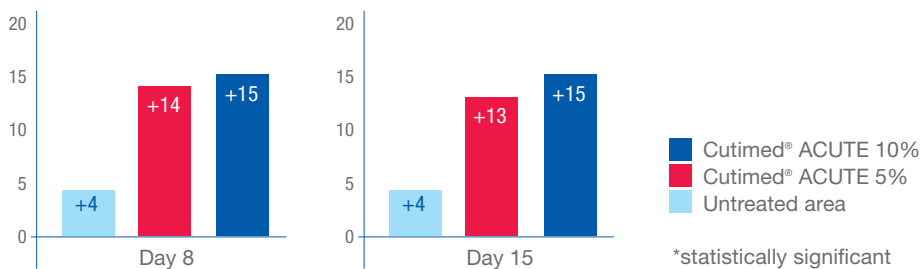
Once the wound is healed and newly formed skin covers the former wound bed, care must be taken to protect this new, fragile tissue. Water-in-oil products help the skin to become smooth, flexible and resistant to the mechanical stress (friction and shear) of day-to-day activities.

- Very dry and itchy skin can be treated with a lotion or foam containing urea, such as **Cutimed® ACUTE** 5% or 10%. Urea-based products can be used externally to bind water, re-balance hydration and help restore elasticity and smoothness to skin.



Excellent skin hydration by Cutimed® ACUTE

Change of corneometer units from day 1



All you need

for the successful therapy of **pressure ulcers.**

Primary dressing

Necrotic wounds



Cutimed® Gel

Donates moisture to dry necrotic or sloughy wounds.

Infected wounds



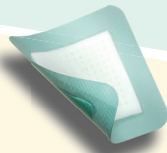
Cutimed® Sorbact® gel

Reduces the bacterial load while providing a moist wound environment, helps clean slough and fibrin layers from wound.

Cutimed® Sorbact®

Binds and thereby inactivates microbes in colonized and infected wounds.

Sloughy wounds



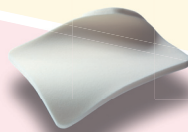
Cutimed® Siltec Sorbact®

Super-absorbent polyurethane foam dressing combined with Sorbact® technology for moderately to highly exuding wounds; skin-friendly silicone adhesive border.

Cutimed® Sorbact® Hydroactive B

Absorbent hydrogel core combined with Sorbact® technology for low to moderately exuding wounds; reliable skin-friendly adhesive border.

Granulating wounds



Cutimed® Cavity

Maintains a moist environment in deep wounds with moderate to high levels of exudate. Requires secondary fixation.

Epithelialising wounds



Cutimed® Siltec Sacrum

Especially designed for the sacral area, for superficial pressure ulcers.

Cutimed® Siltec Heel/ Cutimed® Siltec Heel 3D

Cushioning and fluid handling for the heel, ready-to-fit.



Recurrence prevention

Cuticell®

Impregnated sterile dressing. Protects fragile skin and keeps a moist wound environment.



Cutimed® ACUTE

Cream mousse which contains urea and offers medical skin care for all types of dry skin, particularly stressed or elderly skin.

Secondary dressing/fixation



Cutimed® Siltec B

Maintains a moist environment in wounds with moderate to high exudate levels. Can also be used as a secondary fixation and allows atraumatic dressing changes.



Cutimed® Siltec Sacrum

Appropriate as a secondary fixation (for example, over Cutimed® Cavity), especially in the sacral area.

or



Fixomull® transparent

or

Leukomed® T

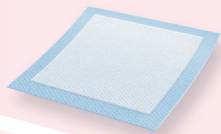
The waterproof, fully adhesive transparent dressing for easy wound inspection.



Cutisorb® LA

A low adherent wound contact layer with excellent absorption.

or



Cutisorb® Ultra + Fixomull® stretch

The economic temporary solution for very high exudate levels.



Skin care



Cutimed® PROTECT

Re-establishes the skin's barrier function and protects wound edges.

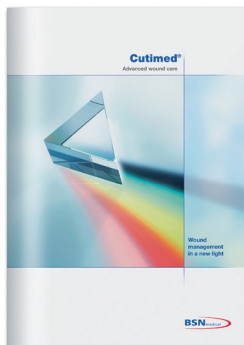


Cutimed® ACUTE

With urea for very dry and itchy skin.

Discover the world of BSN medical.

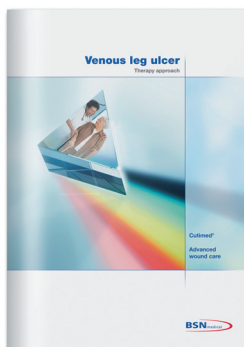
For more information and therapy approaches for other indications, please visit www.cutimed.com or contact us.



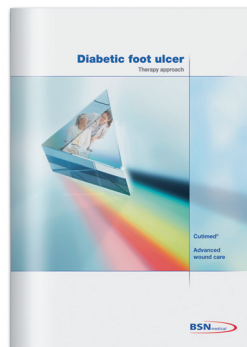
Assortment folder



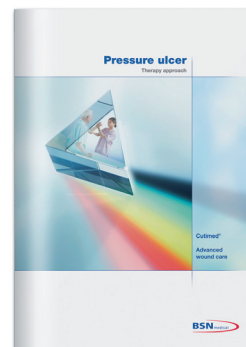
Cutimed® Sorbact® folder



Therapy approach:
Venous leg ulcer



Therapy approach:
Diabetic foot ulcer



Therapy approach:
Pressure ulcer