

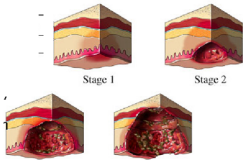
Wound Care Products

"Getting below the skin"

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A wound is a disruption in the continuity of cells—anything that causes cells that would normally be connected to become separated. Wound healing is the restoration of that continuity.

Anyone who must stay in a bed, chair, or wheelchair because of illness or injury can get pressure ulcers. A pressure ulcer, sometimes called "bed sores" is an injury usually caused by unrelieved pressure that damages the skin and underlying tissue by squeezing tiny blood vessels which supply the skin with nutrients and oxygen. Pressure ulcers lead to pain, a long stay in the hospital or nursing home and slower recovery from health problems. Pressure sores are categorized into four key stages depending on their age and severity. It is always wise to seek medical advice from a doctor or health care giver if you suspect the start of a pressure sore.



A Stage I pressure ulcer is an observable pressure related alteration of intact skin whose indicators as compared to the adjacent or opposite area on the body may include changes in one or more of the following: skin temperature (warmth or coolness), tissue consistency (firm or boggy feel) and/or sensation (pain, itching). The ulcer appears as a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue, or purple hues.

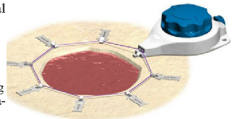
Alternating pressure and low air loss technologies are known to be effective in healing and preventing these wounds and make care giving tasks significantly easier. These systems are designed for the prevention and treatment of stage I-IV pressure ulcers.



Wound closure can be facilitated through a variety of methods and modalities, which have been employed with varying success. These methods are segmented into two primary categories 1) healing by non-surgical methods

and 2) closure by surgical methods. Healing by non-surgical methods include negative pressure wound therapy, pulsed electromagnetic fields, ultrasound, hyperbaric therapy, growth factors and bioengineered tissue equivalents. Even with the most diligent care, healing by secondary intention can take weeks, months, or may never fully close a wound. Traditional surgical techniques can be challenging, including various complex closures, grafts or flaps. These have limitations and complications inherent to any surgical procedure.

A technique that would allow expansion and advancement of adjacent soft tissue to fill a wound is desirable, but the previously existing techniques for tissue expansion have been complex and often cumbersome. The Dermaclose (www.dermaclose.com) is a new product that can be used on radial wounds up to 15 cm in diameter or any size linear wound using one or more of the units in a "shoelace" configuration. The "shoelace" technique provides considerable flexibility by utilizing constant force dynamic tension on opposing wound margins.



The V.A.C. Freedom System is a portable system for advanced wound healing. The System is lightweight and portable, helping individuals return to work and daily activities. It features a patented technology for safe, controlled wound healing. It provides a controlled application of sub-atmospheric pressure to a wound using a therapy unit to intermittently or continuously convey negative pressure to a specialized wound dressing to help promote wound healing. The wound dressing is a resilient, open-cell foam surface dressing that assists tissue granulation and is sealed with an adhesive drape that contains the subatmospheric pressure at the wound site. Special technology enhances patient safety by regulating pressure at the wound site. Additionally, the system helps direct drainage to a specially designed canister that reduces the risk of exposure to fluids and infectious materials.

In recent years, the technology of burn and wound care using cellular wound dressings and grafts are helping to transform the treatment of burns and chronic wounds by decreasing the risk of infection, protecting against fluid loss, requiring fewer skin grafts, and promoting and speeding the healing process. These dressings provide a cover that keeps fluids from evaporating and prevents blood from oozing out once the dead skin has been removed. Some of these products grow in place and expand natural skin when it heals.

Cellular wound dressings may look and feel like skin, but they do not function totally like skin because they are missing hair follicles, sweat glands, melanocytes, and Langerhans' cells. Some cellular wound dressings have a synthetic top layer structured like an epidermis. It peels away over time, or is replaced with healthy skin through skin grafting. How these products are involved in wound repair is a subject of great scientific interest; it is known that they promote a higher rate of healing than does standard wound care. To help ensure the safety and quality of products such as cellular wound dressings, the FDA initiated a new regulatory system that requires all human cell, tissue, and cellular- and tissue-based product manufacturers to register and list their products with the FDA.