



We developed the Comfort Release® technology to help people of all ages who have experienced the discomfort or injury associated with the removal of bandages, medical tapes or dressings.

Comfort Release® is recommended by doctors and nurses, caregivers and other patients - particularly for pediatric and geriatric patients.



Comfort  
Release®

A Global Biomedical Technology Company

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Visit [comfortrelease.com/where-to-buy](http://comfortrelease.com/where-to-buy) for more product details and where to buy.  
All Comfort Release® products are waterproof or water resistant.



MEDICAL ADHESIVE-RELATED SKIN INJURIES

UNDERSTANDING  
+ REDUCING THE RISK  
OF MARS



# MEET MARSII

## // MEDICAL ADHESIVE-RELATED SKIN INJURY (MARSII)

A medical adhesive is “a product used to affix an external component (ie, tape, dressing, catheter, electrode, ostomy pouch, or patch) to the skin. However, selected tapes, dressings, and devices can also function as medical adhesives.”<sup>1</sup>

MARSII is a widely prevalent often painful but under-reported complication that can require additional expensive treatment.

MARSII can also increase infection risk, delay healing and can influence the patient’s quality of life.<sup>1</sup>

# MARSII RISK FACTORS

Although many Medical Adhesive-Related Skin Injuries (“MARSII”) are preventable, the pathophysiology of MARSII is still only partially understood. There are many intrinsic and extrinsic factors that can raise a patient’s risk for MARSII. These include:

## INTRINSIC RISK FACTORS

### AGE EXTREMES

neonate/premature infant and elderly

### DEHYDRATION

### DERMATOLOGIC CONDITIONS

e.g. dermatitis, eczema, epidermolysis bullosa, chronic exudative ulcers

### ETHNICITY

### MALNUTRITION

### UNDERLYING MEDICAL CONDITIONS

e.g. diabetes, renal insufficiency, immunosuppression, infection, venous insufficiency, venous hypertension, peristomal varices

## EXTRINSIC RISK FACTORS

### DRY SKIN

due to low humidity, overbathing, harsh cleansers or high pH cleansers

### PROLONGED MOISTURE EXPOSURE

### RADIATION THERAPY

### PHOTODAMAGE

Exposure to sun

### MEDICATION EFFECT

anticoagulants, anti-inflammatories, immunosuppressants, long-term corticosteroids

### REPEATED ADHESIVE APPLICATION/REMOVAL

# MARSI CAN OCCUR IN VARIOUS WAYS

## INCLUDING THESE PRESENTATIONS

### 1 / SKIN TEAR

A partial- or full- thickness wound caused by friction, shear or blunt force during the removal of an adhesive device.<sup>1</sup>

### 2 / SKIN STRIPPING

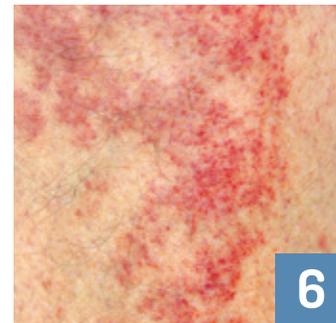
Inadvertent removal of one or more layers of skin following the removal of an adhesive device. Lesions are often shallow and may be shiny. Open lesions may be erythematous (red) and also have bullae (blisters).<sup>1,3,4,5</sup>

### 3 / FOLLICULITIS

Inflammatory reaction in hair follicles caused by entrapment of bacteria. Appears as papule or pustule.<sup>1,6,7</sup>

### 4 / MACERATION

Skin changes resulting in moisture entrapment against the skin for a prolonged period. Skin looks wrinkled or white/gray. Skin softening results in increased permeability with increased susceptibility to damage from irritants and/or friction.<sup>1</sup>



### 5 / TENSION INJURY/BLISTER

Separation of the epidermis from dermis caused by shear force resulting from the distention of skin under an unyielding adhesive, inappropriate strapping of tape, tape/dressing application, or when a joint or other moveable area is covered with an unyielding adhesive.<sup>1,2,4,9</sup>

### 6 / ALLERGIC CONTACT DERMATITIS

Cell-mediated immunologic response to a component of the adhesive or backing. Usually appears as an area of erythematous vesicular or pruritic dermatitis corresponding to the area of exposure and/or beyond. Can persist up to a week.<sup>1,9,10</sup>

### 7 / IRRITANT CONTACT DERMATITIS

Contact dermatitis as a result of a chemical irritant. The defined area of contact correlates with the area of exposure. May appear erythematous and swollen. Typically of shorter duration than allergic contact dermatitis.<sup>1,2,10</sup>



# THE PATIENT – MARSI RISK

Potentially, anyone is at risk for MARSI.  
There are, however, specific patients  
for whom adhesives pose a higher risk.

## // PROPER PRODUCT SELECTION & INTERVENTION FOR THE PREVENTION OF MARSI<sup>2</sup>

### SELECT APPROPRIATE ADHESIVE

Use adhesive with correct adhesion for patient/application.  
Example: need adhesive with stretch for movement/swelling

### APPLY ADHESIVE CORRECTLY

- No tension during application
- Apply in correct direction for stretch
- Apply to dry skin
- Allow any skin preparations to dry
- Clip hair
- Avoid excessive bonding agents

### APPROPRIATE REMOVAL

### AVOID LEAVING OCCLUSIVE ADHESIVES ON TOO LONG

### AVOID REPEATED ADHESIVE APPLICATION/REMOVAL

### MAINTAIN HYDRATION



### INFANTS & CHILDREN

Neonatal skin is 40% - 60% thinner than adult skin. This is primarily due to fewer epidermal cells in the stratum corneum.<sup>10</sup>

Neonates most often experience the MARSI injury of skin stripping.<sup>12</sup>

### OLDER ADULTS

As aging occurs, the skin loses its strength and elasticity. There is also less subcutaneous tissue and epidermal thinning. The flattening of rete ridges between the epidermis and dermis leads to less cohesion between these layers, increasing the risk of skin injury. The loss of skin moisture and vascularity also enhances the risk of injury and slows the healing rate.<sup>1,11</sup>

### ORTHOPEDIC PATIENTS

Edema, friction and joint movement coupled with significant tape use make the orthopedic surgical patient at high risk for MARSI. Tension blisters are the most common MARSI injury in this population.<sup>1,2</sup>

### PATIENTS WITH SPECIFIC MEDICAL CONDITIONS OR OTHER CHRONIC SKIN CONDITIONS

Other patients with chronic conditions impacting the skin are at risk for MARSI. These include medical conditions such as diabetes, renal failure, infection and venous insufficiency, oncology patients, ICU patients, patients with malnutrition or dehydration and patients with chronic skin conditions such as eczema, chronic ulcers and epidermolysis bullosa.<sup>1</sup>



**8%**  
RISK FOR HOSPITALIZED  
INFANTS & CHILDREN<sup>10</sup>



**15.5%**  
RISK FOR ELDERLY  
& LONG-TERM  
CARE PATIENTS<sup>1</sup>



**6%**  
TO **41%**  
RISK FOR  
ORTHOPEDIC  
PATIENTS

## CHOOSE COMFORT

// CHOOSE COMFORT RELEASE®

In “Medical Adhesives and Patient Safety: State of the Science”<sup>1</sup> several consensus statements were made regarding prevention and treatment of MARSIs. Comfort Release® is at the cutting edge as the only wound care product specifically designed to prevent and treat MARSIs. With its patented adhesive polymer, it provides predictable adhesion with gentle, skin sparing removal. Comfort Release® sticks when you need it and releases when you don't need it.

## CHOOSE CLINICAL IMPACT

// CHOOSE COMFORT RELEASE®

By electing to use a product with excellent adhesion and painless removal, MARSIs can be avoided while dressings and medical devices remain predictably secure. Comfort Release® provides better, more predictable adhesion than silicone-based adhesives while allowing a painless, trauma-less removal.

## CHOOSE COST BENEFIT

// CHOOSE COMFORT RELEASE®

One MARSIs can cost \$88.50 to treat.<sup>13</sup> That is 125x the cost of one roll of plastic tape. Silicone tapes are more expensive and provide less predictable adhesion. Adhesive removers add cost. Comfort Release® is priced to compete with current brands that contribute to MARSIs and Comfort Release® PREVENTS and TREATS MARSIs. All that is required for removal is one or two rubbing alcohol swabs, something readily available in every healthcare setting.

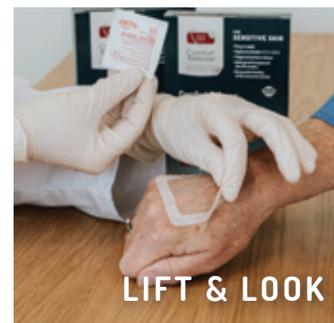
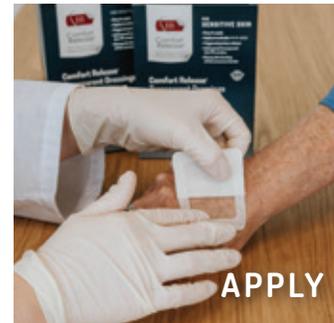


Comfort  
Release®

Sticks when you need it.  
Releases when you don't.

## TURN THE ADHESIVE OFF — THEN REMOVE

**COMFORT RELEASE® ALLOWS YOU TO TRIGGER  
THE ADHESIVE BOND TO TURN-OFF  
FOR PAIN-FREE REMOVAL**



Comfort Release® delivers the strength of an acrylic adhesive with the easy release of silicone – with no residual glue or mess. The difference is in our patented oligomeric switch (OGS) technology. Comfort Release® is made with a unique polymer that allows for secure adhesion to the skin when it is needed-while a simple swipe with rubbing alcohol triggers the adhesive to turn-off, to release for painfree, trauma-less removal.

### STEPS FOR REMOVAL

Wipe the entire outside of the bandage or tape and the border of the dressing with alcohol prep pads until it begins to lift easily from the skin (about 3-10 seconds). Alternatively use a cotton ball soaked with a 70% solution of isopropyl/common rubbing alcohol.

Lift the bandage, tape, or dressing from the skin.

To reapply or reposition, simply allow the rubbing alcohol to evaporate and replace bandage or tape on skin.

# COMFORT RELEASE® PRODUCTS

## BORDERED FOAM DRESSING

Adhesive in border, not on foam. Recommended wear time is 3 to 7 days. Removes painlessly by swiping the outside border with rubbing alcohol.

## BORDERED TRANSPARENT FILM DRESSING

Adhesion comparable to the market leader with adhesive primarily in the border, not in the film window. Occlusive. Moisture vapor transmission rate (MVTR) is more than 4x the market leader. Recommended wear time is 3 to 7 days. Removes painlessly by swiping the white outside border with rubbing alcohol.

## TAPE

Adhesion comparable to the market leader. Removes painlessly by swiping the outside with rubbing alcohol. Available in multiple sizes, including single use, single patient short rolls.

## BANDAGES

Removes painlessly by swiping the outside with rubbing alcohol. Available in multiple sizes, with alcohol prep pads or without alcohol prep pads.

Visit [comfortrelease.com/where-to-buy](http://comfortrelease.com/where-to-buy) for more product details and where to buy. All Comfort Release® products are waterproof or water resistant.



**OUR MISSION** is to improve the clinician and patient experience by providing high quality acute and advanced adhesive wound care products with skin injury prevention solutions.

**OUR VISION** for the lives we touch is to have a compassionate experience with a painless and trauma-free adhesive use and which is easily implemented everywhere care is provided.

## REFERENCES

- 1 McNichol L, Lund C, Rosen T, Gray M. Medical adhesives and patient safety: state of the science. Consensus statements for the assessment, prevention and treatment of adhesive-related skin injuries. *J WOCN*. 2013;40(4):365-380.
- 2 Gerhardt LC, et al. Skin-textile friction and skin elasticity. *Skin research and technology: official journal of International Society for Bioengineering and the Skin*. 2009;15(3):288-298.
- 3 Smith MA, et al. Pressure-sensitive tape and techniques for its removal from paper. *Journal of the American Institute for Conservation*. 1984;23(2):101-113.
- 4 Farris MK, et al. Medical adhesive-related skin injury prevalence. *Journal of Wound Ostomy and Continence Nursing*. 2015;42(6):589-598.
- 5 Resnick B. Wound care for the elderly. *Geriatr. Nurs. (Lond.)*. 1993;14:26-29.
- 6 Alvey B & Beck DE (2008) Peristomal dermatology. *Clinics in Colon and Rectal Surgery*, 21(1), 41-44.
- 7 Napierkowski, D (2013). Uncovering common bacterial skin infections, *Nurse Practitioner*, 38(3), 30-37.
- 8 Lund CH, Tucker JA. Adhesion and newborn skin In: Hoath SB, Maibach HI eds. *Neonatal skin: Structure and Function*. 2nd ed. New York, NY: Marcel Dekker:2003:200-324.
- 9 Shannon ML, Lehman CA. Protecting the skin of the elderly patient in the intensive care unit. *Crit. Care Nurs. Clin. North Am.* 1996;8(1):17-28.
- 10 Lund C. Medical Adhesives in the NICU. *Newborn Infant. Nurs. Rev.* 2014;14(4):160-165.
- 11 Holbrook KA. A histological comparison of infant and adult skin. In: Maibach HI, Boisits EK, eds. *Neonatal skin: structure and function*. 1982.
- 12 Kim MJ, Jang JM, Kim HK, Heo, HJ, Jeong IS. Medical adhesives-related skin injury in a pediatric intensive care unit. *Journal of Wound Ostomy and Continence Nursing*. 2019; 46(6):491-496.
- 13 Maene B. Hidden costs of medical tape induced skin injuries. *Wounds UK*, 9(1):46-50.