





Reducing The Risk Of Superficial Skin Damage Related To Adhesive Use

Superficial skin damage can occur when adhesive products are used. Skin stripping and tension blisters are the most common problems associated with dermal bandages. Many of these injuries may be prevented by correct use including careful attention to skin preparation, choice of dermal bandage, and proper application and removal of dermal bandage. Less common types of skin damage are irritant contact dermatitis, allergic contact dermatitis, folliculitis and maceration. A small percentage of individuals may experience hypopigmentation or hyperpigmentation of the skin following the removal of an adhesive product. Similar problems may occur with dermal bandages.



Problem	Cause	To reduce the risk of injury
<p>Stripping</p> 	<p>A partial thickness injury may occur where tape is frequently re-applied to the same area of skin. As tape is removed, the epidermal cells remain attached to the adhesive, which may result in a painful area of moist exposed dermis. Degree of stripping varies with skin condition, adhesive characteristics, and frequency of using a dermal bandage.</p>	<ul style="list-style-type: none"> • Use gentle, sterile, hypoallergenic dermal bandage • Match strength of adhesive to clinical needs and skin condition • Apply dermal bandage to clean, dry skin • For high risk patients, avoid using skin tackifiers under dermal bandage • Protect skin with 3M™ Cavilon™ No Sting Barrier Film (or equivalent) allowing it to dry before taping • If repeated use of dermal bandage is anticipated, consider applying dermal bandage over a platform • Use proper removal technique
<p>Mechanical injury due to Tension</p> 	<p>The most common causes of tension injury are inappropriate strapping of the dermal bandage during application and distention of skin under an unyielding bandage. Strapping the dermal bandage across skin is mistakenly thought to increase adhesion. As the bandage backing resists stretch or regains its original shape, the epidermis begins to lift. This results in 'tension blisters' typically seen at ends/edges of the dermal bandage. Skin tears may occur before a blister even forms. Tension injuries may also occur when oedema, haematoma formation, or distention distorts the skin surface or when a joint or other area of movement is covered with an unyielding bandage.</p>	<ul style="list-style-type: none"> • Apply the dermal bandage without tension • Identify patients at high-risk: fragile skin, medical conditions (e.g., long term corticosteroid use, malnutrition) or surgical procedures where oedema or distention is expected (abdominal, orthopedic) • Protect skin with 3M™ Cavilon™ No Sting Barrier Film (or equivalent) • If swelling or movement is expected, use smaller pieces of the bandage and overlap the bandage to help prevent the stretch. Apply the dermal bandage so direction of stretch corresponds with direction of swelling • If desired, compression may be obtained by carefully stretching the dermal bandage over a tattoo while securing the dermal bandage to the skin without tension. • If distention or oedema is noted, loosen, reposition, or replace the dermal bandage.

Problem	Cause	To reduce the risk of injury
<p data-bbox="81 230 360 304">Non-Allergic Contact Dermatitis</p> 	<p data-bbox="440 230 911 472">A non-allergic contact dermatitis may result when chemical irritants such as tackifiers or some skin preparations are trapped between adhesive and skin. The affected area will correlate to the area of exposure and may appear reddened, swollen, blistered, or weeping.</p>	<ul data-bbox="965 230 1533 450" style="list-style-type: none"> • Assure that skin is clean and dry before applying tape • Protect skin with 3M™ Cavilon™ NoSting Barrier Film (or equivalent) allowing it to dry before applying tape • If possible, avoid using tackifiers
<p data-bbox="113 701 331 775">Allergic Contact Dermatitis</p> 	<p data-bbox="440 701 911 1081">Allergic reactions are cell mediated immunologic responses to a particular component of a medical adhesive or backing and occur infrequently. Clients may be mistakenly identified as having medical adhesive allergies when, in fact, they have experienced a non-allergic contact dermatitis. Clinical signs include well defined areas of erythema and oedema; vesicles may be present, as well as small erosions.</p>	<ul data-bbox="965 701 1541 981" style="list-style-type: none"> • Identifying type of the medical adhesive causing sensitivity • Options may include identifying an alternative hypoallergenic medical adhesive or contacting the manufacturer for assistance • Using 3M™ Cavilon™ No Sting Barrier Film (or equivalent) may not prevent an allergic reaction
<p data-bbox="153 1164 292 1193">Folliculitis</p> 	<p data-bbox="440 1164 911 1272">Folliculitis is an inflammation of the hair follicle caused by shaving, blockage of the follicle entrapment of bacteria.</p>	<ul data-bbox="965 1164 1525 1227" style="list-style-type: none"> • Use a clipper or depilatory preparation if hair removal is necessary
<p data-bbox="148 1590 296 1619">Maceration</p> 	<p data-bbox="440 1590 911 1832">Maceration refers to skin changes seen when moisture is trapped against the skin for a prolonged period. The skin will turn white or grey, softens and wrinkles. Macerated skin is more permeable and prone to damage from friction and irritants.</p>	<ul data-bbox="965 1590 1485 1776" style="list-style-type: none"> • Keep skin clean and dry where the dermal bandage is being applied • Replace the dermal bandage if soiled • Avoid occlusive dermal bandages unless clinically indicated