SKIN TEAR

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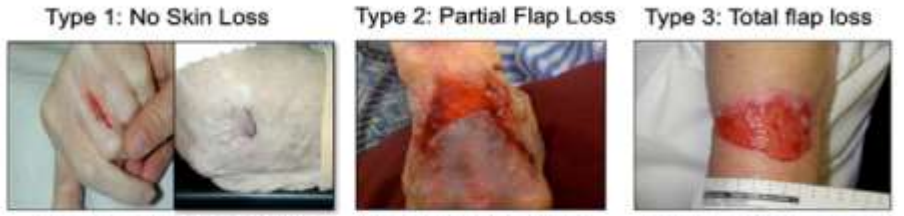
WHAT IS SKIN TEAR?

ISTAP Skin Tear Classification



Available Languages:

Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Hebrew, Italian, Japanese, Portuguese, Spanish, Swedish, Turkish

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UPDATED:
International Skin Tear Advisory Panel: Skin Tear Definition

"A skin tear is a traumatic wound caused by mechanical forces, including removal of adhesives. Severity may vary by depth (not extending through the subcutaneous layer)" LeBlanc et al, 2018

UPDATED:
Definition of a "flap": *"A flap in skin tears is defined as a portion of the skin (epidermis/dermis) that is unintentionally separated (partially or fully) from its original place due to shear, friction, and/or blunt force. This concept is not to be confused with tissue that is intentionally detached from its place of origin for therapeutic use e.g. surgical skin grafting"* Van Tiggelen et al 2020

DECISION ALGORITHM

SKIN TEARS

↓

ASSESS ← CONTROL BLEEDING

↓

CLEANSE

↓

APPROXIMATE WOUND EDGES → CLASSIFY (MEASURE & DOCUMENT)

↓

GOALS OF TREATMENT

- TREAT THE CAUSE
- IMPLEMENT PREVENTION PROTOCOL
- MOIST WOUND HEALING
- AVOID TRAUMA
- PROTECT PERIWOUND SKIN
- MANAGE EXUDATE
- AVOID INFECTION
- PAIN CONTROL

↓

TREATMENT OPTIONS IN ACCORDANCE WITH LOCAL WOUND CONDITIONS

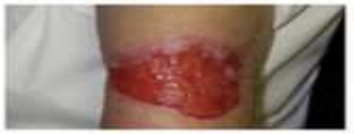
TYPE 1: NO SKIN LOSS

Linear or flap tear that can be repositioned to cover the wound bed

TYPE 2: PARTIAL FLAP LOSS

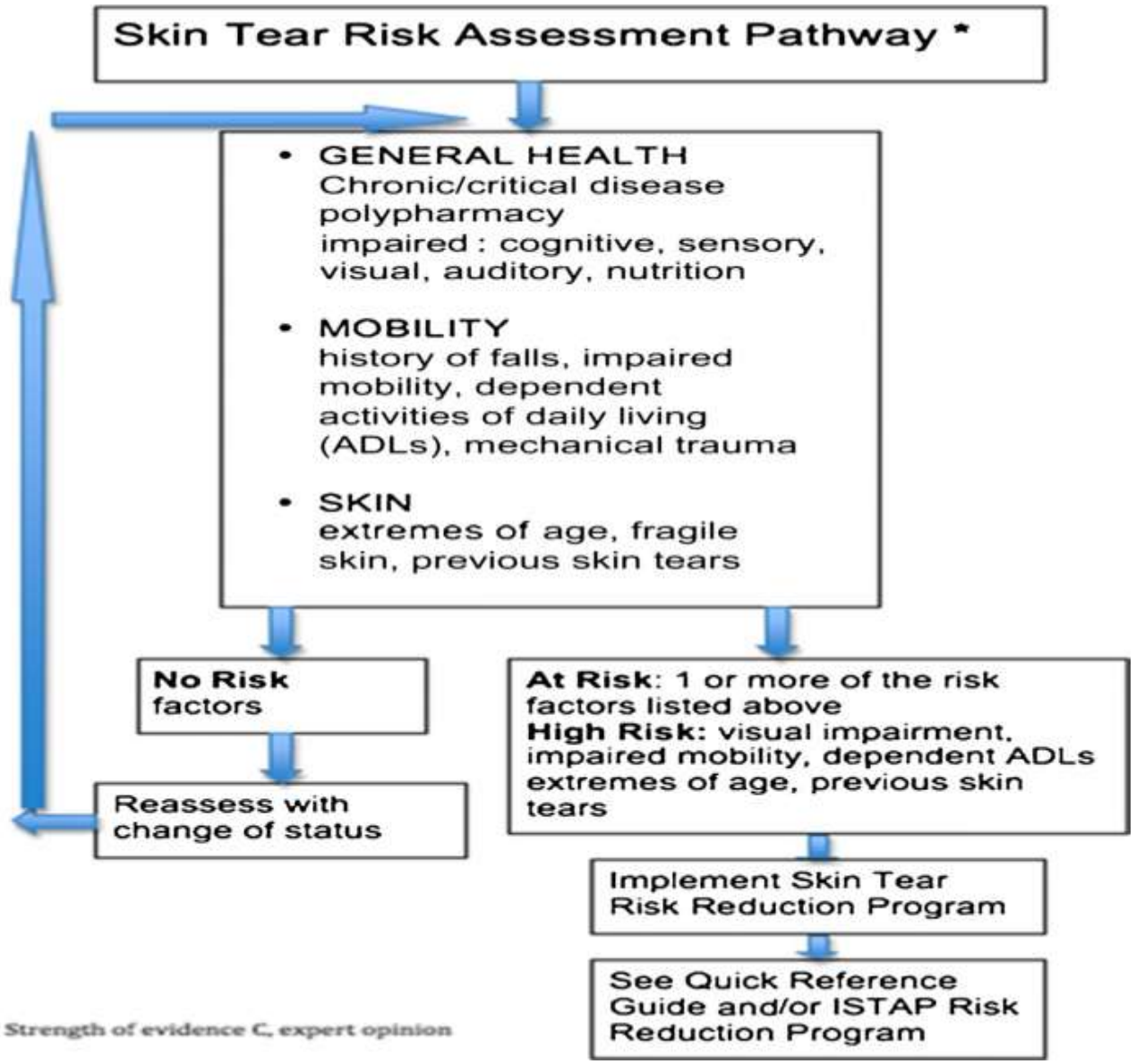
Partial flap loss that cannot be repositioned to cover the wound bed

TYPE 3: TOTAL FLAP LOSS



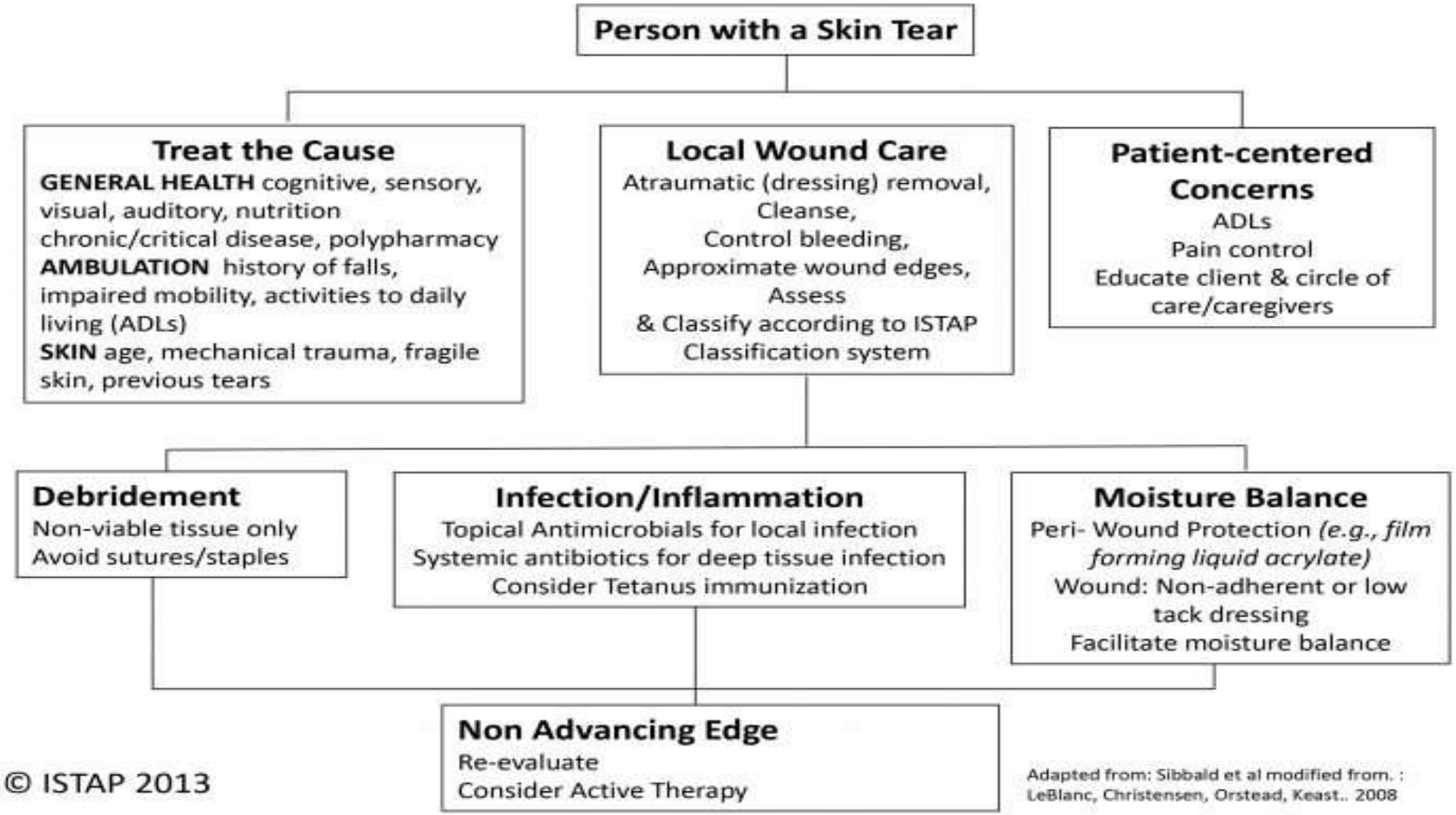
Total flap loss exposing entire wound bed

SKIN TEAR RISK ASSESSMENT PATHWAY



* Strength of evidence C, expert opinion

PATHWAY TO ASSESMENT/TREATMENT



Adapted from: Sibbald et al modified from. : LeBlanc, Christensen, Orstead, Keast.. 2008

RISK FACTORS AND CAUSES

- **The populations at the highest risk of skin tears – particularly older patients with vulnerable, aged skin**
- **are also at the highest risk of developing infections and comorbidities, which can cause skin tears to be significant and often complex wounds (Wounds UK, 2015). Skin and tissue ageing is associated with structural and functional changes, increasing susceptibility to skin tear development. In aged skin, wounds take longer to heal and are associated with increased risk for deterioration (Moncrieff et al, 2015).**

INTRINSIC RISK FACTORS

- The normal ageing process causes changes in the skin that make it more fragile and therefore more vulnerable to damage, including skin tears (Figure 1 and Figure 2). With a reduced ability of the skin to regenerate and a less efficient protective immune system, older patients are at an increased risk of skin breakdown from even minor force or trauma (Voegeli, 2007). It is therefore vital that care of the older person's skin is seen as a priority for all HCPs.

- The changes to the skin associated with ageing include (Moncrieff et al, 2015):
- Thinning of the epidermis and flattening of the epidermal junction
- Loss of collagen, elastin and glycosaminglycans
- Atrophy and contraction of the dermis (causing appearance of wrinkles and folds)
- Decreased activity of sweat glands and sebaceous glands, causing the skin to dry out
- Thinning of blood vessel walls and a reduction of blood supply to the extremities (Wounds UK, 2012)
- Increased dermal LEP (low-echogenic pixels), including solar elastosis, may represent a risk factor for skin tears; this indicates that skin tear risk factors might not only represent chronological ageing but also photoageing (Koyano et al, 2016).

EXTRINSIC FACTORS

- Patients who require assistance with activities of daily living – such as mobility, washing, dressing – are at increased risk of skin tears due to handling and force or trauma (Wounds UK, 2015). These extrinsic, or environmental, risk factors may be combined with the intrinsic risks of aged skin detailed above.

- When caring for patients with vulnerable skin, therefore, it is possible to minimise extrinsic risk, by taking measures such as:
- Keeping fingernails trimmed and not wearing jewellery
- Padding and/or removing any potentially dangerous furniture or devices (e.g. bed rails and wheelchairs)
- Covering skin with appropriate clothing, shin guards or retention bandages/stockinette in vulnerable patients
- Protecting the skin's general integrity by using skin-friendly (pH balanced) products and preventative emollients (Wounds UK, 2015; Carville et al, 2014).

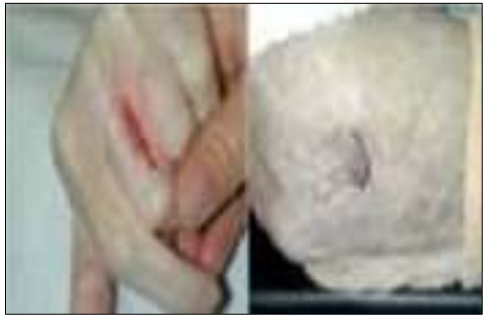
- **CAUSES**
- While generally caused by a combination of the intrinsic and extrinsic risk factors detailed above, it is important to establish the exact cause of the wound for identification and documentation purposes. Causes can vary (Figure 3) and are often undocumented on presentation, with almost half of skin tears found without any apparent cause (LeBlanc et al, 2013).

RISK REDUCTION PROGRAM(LEBLANC AND BARANOSKI, 2011

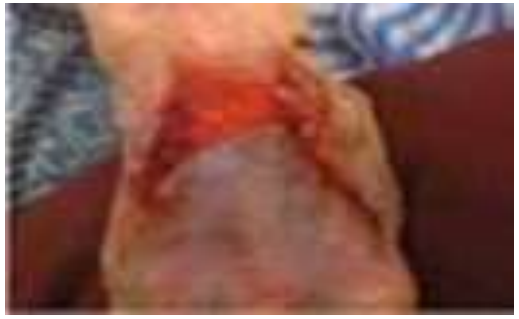
Risk factors	Action
Skin	• Inspect skin and investigate previous history of skin tears • **If patient has dry, fragile, vulnerable skin, assess risk of accidental trauma Manage dry skin and use emollient to rehydrate limbs as required** • **Implement an individualised skin care plan using a skin-friendly cleanser (not traditional soap) and warm (not hot) water** • **Prevent skin trauma from adhesives, dressings and tapes (use silicone tape and cohesive retention bandages)** • **Consider medications that may directly affect skin (e.g. topical and systemic steroids) Be aware of increased risk due to extremes of age** • **Discuss use of protective clothing (e.g. shin guards, long sleeves or retention bandages) Avoid sharp fingernails or jewellery in patient contact**
Mobility	• **Encourage active involvement/exercises if physical function is impaired** • **Avoid friction and shearing (e.g. use glide sheets, hoists), using good manual handling techniques as per local guidelines** • **Conduct falls risk assessment** • **Ensure that sensible/comfortable shoes are worn Apply clothing and compression garments carefully** • **Ensure a safe environment — adequate lighting, removing obstacles Use padding for equipment (as per local policy) and furniture Assess potential skin damage from pets**
General health	• **Educate patient and carers on skin tear risk and prevention** • **Actively involve the patient/carer in care decisions where appropriate** • **Optimise nutrition and hydration, referring to dietician if necessary** • **Refer to appropriate specialist if impaired sensory perception is problematic (e.g. diabetes) Consider possible**

ISTAP SKIN TEAR CLASSIFICATION

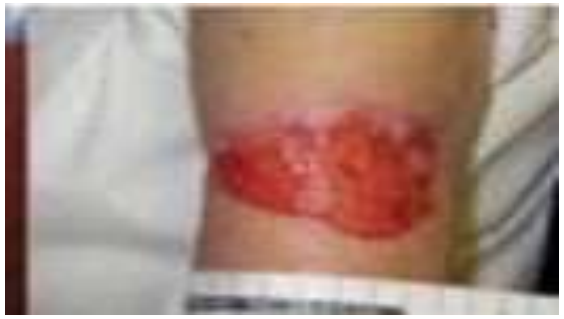
Type 1: No skin loss



Type 2: Partial Flap loss



Type 3: Total flap loss



PRODUCT SELECTION GUIDE (LEBLANC ET AL), 2016

Product Categories	Indications	Skin Tear Type	Considerations
Nonadherent mesh dressings (e.g. lipidocolloid mesh, impregnated gauze mesh, silicone mesh, petrolatum)	Dry or exudative wound	1, 2, 3	Maintains moisture balance for multiple levels of wound exudate, atraumatic removal, may need secondary cover dressing
Foam dressing	Moderate exudate, longer wear time (2-7 days depending on exudate levels)	2, 3	Caution with adhesive border foams, use nonadhesive versions when possible to avoid periwound trauma (not applicable to silicone border products)
Hydrogels	Donates moisture for dry wounds	2, 3	Maintains moisture balance for multiple levels of wound exudate, atraumatic removal, may need secondary cover dressing
2-Octyl cyanoacr- ylate topical bandage (skin glue)	To approximate wound edges	1	Use in a similar fashion as sutures within the first 24 h after injury, relatively expensive, medical directive/ protocol may be required
Calcium alginates	Moderate to heavy exudate Haemostatic	1, 2, 3	May dry out wound bed if inadequate exudate, secondary cover dressing required
Gelling fibres	Moderate to heavy exudate	2, 3	No haemostatic properties, may dry out wound bed if inadequate exudate, secondary cover dressing required
Acrylic dressing	Mild to moderate exudate without any evidence of bleeding, may remain in place for an extended period	1,2,3	Care on removal, should be used only as directed and left on for extended wear time

SPECIAL CONSIDERATION FOR INFECTED SKIN TEAR

Product Categories	Indications	Skin Tear Type	Considerations
Methylene blue and gentian violet dressings	Effective broad-spectrum antimicrobial action, including antibiotic-resistant organisms	1, 2, 3	Nontraumatic to wound bed, use when local or deep tissue infection is suspected or confirmed, secondary dressing required
Ionic silver dressings	Effective broad-spectrum antimicrobial action, including antibiotic-resistant organisms	1, 2, 3	Should not be used indefinitely, contraindicated in patients with silver allergy, use when local or deep infection is suspected or confirmed, use nonadherent products whenever possible to minimise risk of further trauma

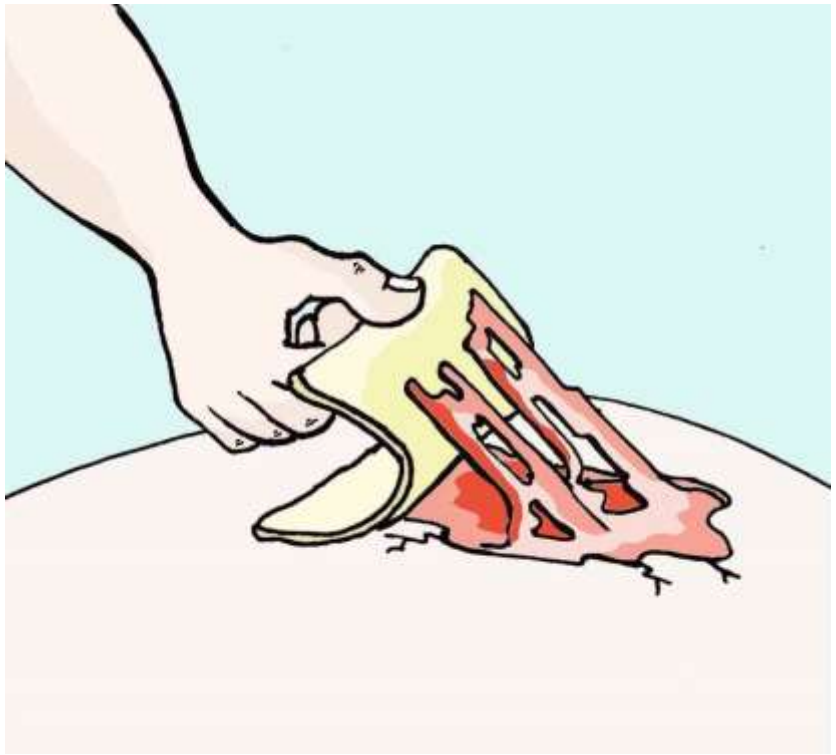
OTHER DRESSING RECOMMENDATIONS

Leptospermum honey dressings

- Johnson and Katzman (2015) reported comparable healing rates using Leptospermum honey-based dressings to those of products on the ISTAP product guide.
- Leptospermum honey acts through osmosis and it is thought that its low pH (3.5–4.5) helps modulate the pH of the wound, contributing to an acidic environment conducive to wound healing (Acton and Dunwoody, 2008; Chaiken, 2010).
- he application of honey provides a supply of physiologically non-toxic hydrogen peroxide to the wound bed, and the osmotic activity of honey pulls interstitial fluid from the wound and promotes autolytic debridement (Amaya, 2015).
- Leptospermum honey dressings are available in various formats, including calcium alginates and hydrogel colloidal sheet dressing.

Polyhexamethylene biguanide (PHMB) dressings

- PHMB has been incorporated into a range of wound products including gels, non- adherent contact layers, foams and gauze dressings (Butcher, 2012).
- PHMB was not included into the ISTAP product guide as it did not receive >80% agreement for its use in the management of skin tears. ISTAP hypothesised that this could have been related to lack of familiarity globally of the various forms available (LeBlanc et al, 2016).
- Given that hydrogels, non-adherent contact layers and foams were included on the ISTAP product guide and PHMB is an effective antimicrobial product, HCPs may want to consider its use if they deem it is appropriate for the wound bed conditions



PRODUCTS NOT RECOMMENDED FOR USE IN SKIN TEARS

Film/hydrocolloid dressings

- Films and hydrocolloids have traditionally been used for partial thickness wounds and as secondary dressings; however, they did not receive 80% agreement and were not included as a result in the ISTAP product guide (LeBlanc et al, 2016).
- Films and hydrocolloid dressings have a strong adhesive component and have been reported to contribute to medical-adhesive related skin tears (McNichol et al, 2013).
- Films and hydrocolloid dressings are not recommended for use in those who have, or are at high risk of, a skin tear.

Skin closure strips

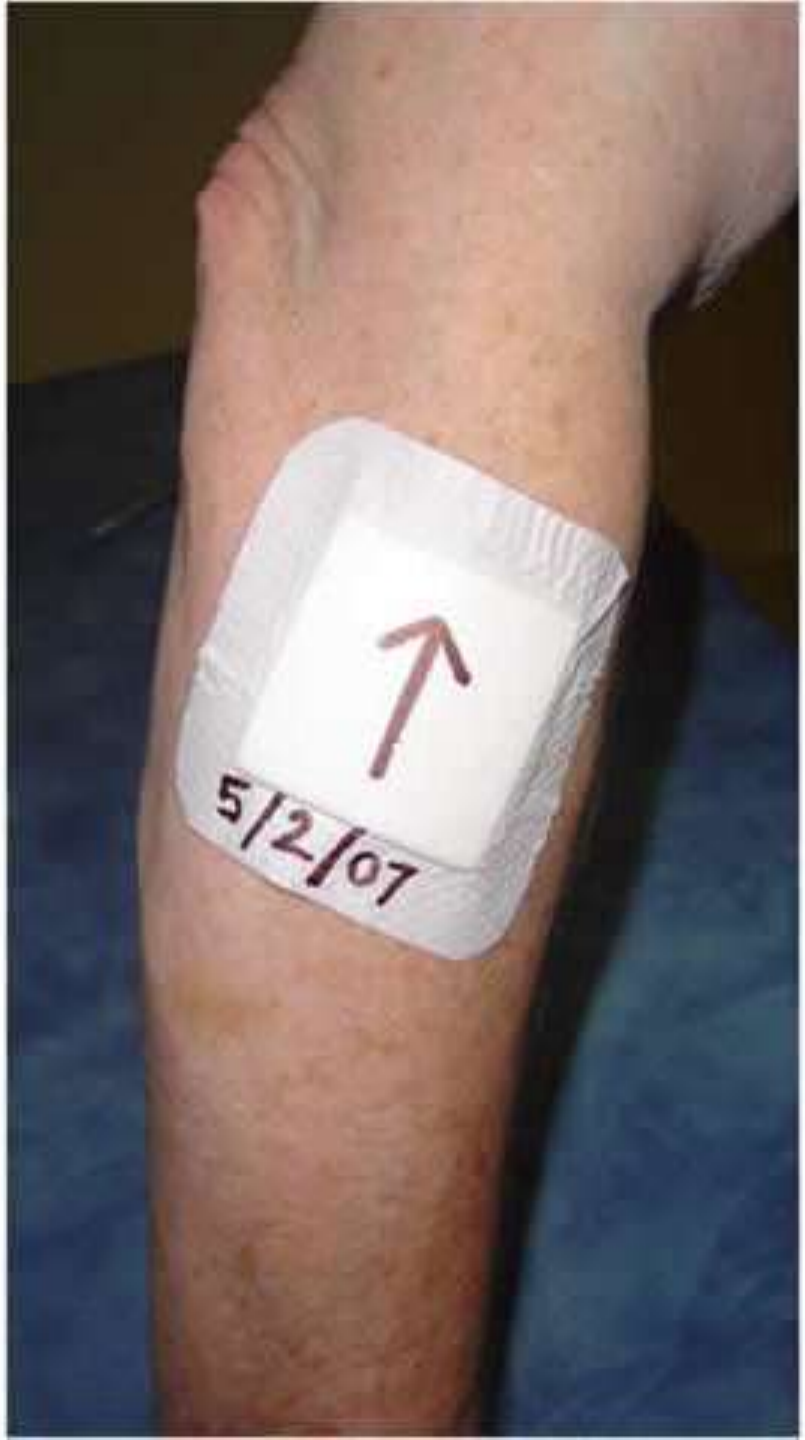
- Expert opinion suggests that adhesive strips are no longer a preferred treatment option of choice for skin tears (LeBlanc et al, 2016; Holmes et al, 2013; Wounds UK, 2015).

Iodine-based dressings

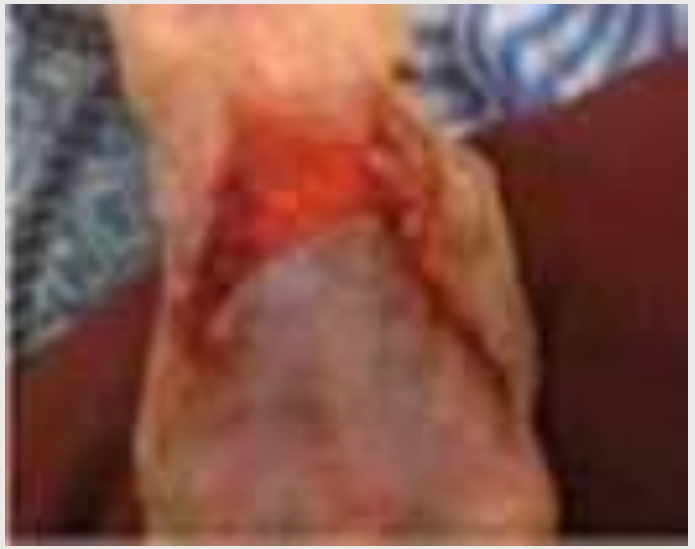
- Iodine causes drying of the wound and peri-wound skin. The international review group maintained that as a major risk factor for skin tear development is listed to be dry skin, iodine-based products should not be used for the management of skin tears or for those who are deemed at risk for skin tears (LeBlanc et al, 2016).

Gauze

- Using gauze is not recommended, as it does not secure the flap and there is increased risk of flap displacement when changing the secondary dressing, increasing the risk of skin necrosis (Nursing Times, 2003).



ARROW GOING TOWARDS DIRECTION OF THE FLAP



❖ TIPS IN PRACTICE

- Mark the dressing with an arrow to indicate the correct direction of removal and make sure that this is clearly explained in the notes.
- Adhesive removers can be used when removing the dressing to minimise trauma.
- Take time to remove dressings slowly.
- Consider using a skin barrier product to protect the surrounding skin (e.g. to prevent maceration if the wound has high exudate levels).
- Use an emollient to soften and smooth wider skin area and prevent further tears.
- Continue to monitor the wound for changes or signs of infection; if there is no improvement (e.g. after four assessments) or the wound deteriorates, refer to appropriate specialist as per local protocol.

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WITHOUT EDUCATION OF HEALTHCARE PROFESSIONALS ANY ATTEMPT TO IMPROVE WOUND CARE FOR PATIENTS IS LIKELY TO BE FRUSTRATED. THE EDUCATIONAL REQUIREMENT IS AN AREA THAT MERITS URGENT ATTENTION

-Keith Harding

THANK YOU!!