Ten top tips: skin tears

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Skin tears are acute wounds with the potential to heal by primary intention (LeBlanc et al 2018). Skin tear prevalence in long-term care is estimated to be between 16–33% (USA), 10–54% (Australia), 14.7% (Canada; Woo and LeBlanc, 2018), 30% in palliative care, 25.7% in spinal cord injury patients, 20% in the community and 17% in paediatric acute care (Noonan et al, 2006; LeBlanc et al, 2008; Maida et al, 2012; Woo and LeBlanc, 2014; LeBlanc, 2017). Occurring on any anatomical site, skin tears are more common on the extremities, particularly the upper extremities (LeBlanc et al, 2013a; Hawk and Shannon, 2018). Skin tears can occur in any age group, being one of the most prevalent skin complications in ageing skin (Vanzi and Toma, 2018), but also in the very young (Lichterfeld et al, 2015). Furthermore, comorbidities in combination with aged skin can place an individual at increased risk of infection, resulting in complications and delayed wound healing (Baranoski et al, 2015). Such chronicity is related to intrinsic and extrinsic factors (LeBlanc et al, 2018) resulting in human costs, such as pain and decreased quality of life (LeBlanc et al, 2013b), and high health economic costs.

This article presents the Top Ten Tips based on the International Skin Tear Advisory Panel (ISTAP) best practice recommendations for the assessment, prevention and management of skin tears in aged skin (LeBlanc et al, 2018).

1 Use the updated ISTAP definition of a skin tear to recognise, diagnose and report skin tears accurately: 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). Skin tears are then further defined as uncomplicated or complicated. An uncomplicated skin tear is an acute wound that heals within approximately 4 weeks. A complicated skin tear is a complex, chronic wound that does not heal within 4 weeks.

2 Identify risk factors and causes of skin tears using an interdisciplinary approach: The first step in prevention is early recognition of at-risk patients by completing an individualised assessment (Holmes et al, 2013; Le Blanc et al 2018). The skin tear framework *[Figure 1]* indicates the important risk factors to consider (LeBlanc et al, 2013a). The presence of one or more factors places an individual at risk, prompting risk reduction actions (LeBlanc et al, 2018). Skin tear prevention needs nurses, physiotherapists, occupational therapists, speech therapists, dietitians, primary care providers, pharmacists and relatives/carers to work together in a coordinated manner as part of a risk reduction programme (LeBlanc et al, 2011).

One of the main causes of skin tears is trauma during activities of daily living (LeBlanc et al, 2011). For example, an individual with cognitive impairment may become distressed or antagonistic (McErlean et al, 2004; LeBlanc et al, 2008; 2011; Woo and LeBlanc, 2014), therefore, a calm environment is necessary. Practitioners and carers should minimise noise and distractions when performing care, speak slowly and calmly, and repeat directions as needed. Provision of protective sleeves or shin guards to prevent pulling or shearing can help prevent skin damage.

Many older patients are malnourished and dehydrated, including those whose BMI is above the normal range (Ahmed and Haboubi, 2010). Diarrhoea, vomiting, increased temperature, use of diuretics and draining wounds deplete fluid resources and patients will require increased fluid intake (LeBlanc et al, 2011). Adequate nutrition and hydration is, therefore, necessary.

Polypharmacy can lead to pharmacological interactions, cognitive decline, unsteady gait and cutaneous reactions (LeBlanc et al, 2013b). High-risk medications, such as antidepressants, dopaminergic medicines and antipsychotics can cause dizziness and confusion, potentially leading to falls (McErlean et al, 2004; LeBlanc et al, 2008, 2011;Woo and LeBlanc, 2014). Corticosteroids commonly affect skin integrity (LeBlanc et al, 2013b). Healthcare professionals need to be cognisant of the influence of medication on tear risk and potential for healing.

Falls are a common risk factor for skin tears. These can be avoided by providing an uncluttered environment, free from scatter rugs. Equipment should be padded and well maintained to reduce the risk of a skin tear, e.g. bed rails, wheelchairs foot rests and sides and corners of tables (LeBlanc et al, 2013b).

Use of adhesive products increases the risk of skin tears (McErlean et al, 2004; LeBlanc et al,

Table 1. Skin tear prevention strategies.

Patient	Healthcare professional/care-giver
■ Actively participate in care when able ■ Be aware of the potential for skin changes with certain medications. Discuss all medications with the prescriber or a pharmacist ■ Avoid the use of adhesives on the skin ■ Hydrate skin with a hypoallergenic moisturiser twice a day, especially after bathing while the skin is damp (not wet) ■ Use warm water for bathing ■ Use soap-free, no-rinse and/or pH-neutral skin cleansers ■ If at risk, wear protective clothing, eg long sleeves, trousers, knee-high socks or shin pads/elbow guards ■ Keep nails short and file rough edges to prevent self-inflicted tears ■ Ensure a safe environment: remove unnecessary equipment and clutter and tie up cables to reduce the risk of trips and falls; pad bed rails, chair legs, furniture edges and objects that may lead to blunt trauma; ensure good lighting ■ Optimise nutrition and hydration ■ Have regular vision and hearing screening	■ Ensure equipment is used correctly and correct moving and handling techniques are used ■ Use repositioning slings and sliders to change the patient's position. Neonates and critically ill children in the intensive care unit should have occupational therapy consult for positioning ■ Perform daily skin assessment and monitoring for skin tears ■ Be aware that patients at the extremes of weight require extra care to prevent skin tears ■ Be aware of fragile skin in critically ill patients of all ages, including children ■ Implement a falls assessment and reduction programme; include the paediatric population, when appropriate ■ Avoid wearing clothing and jewellery that could injure the patient's skin and keep nails cut short and filed ■ Keep the patient's nails cut short and filed to remove rough edges to prevent self-inflicted skin tears ■ Consult a dietitian to provide a comprehensive assessment to optimise nutrition and hydration; promote and monitor nutrition and fluid intake as appropriate to age and physiological status; increase fluids as appropriate ■ Consult with a multidisciplinary team to monitor the effects of polypharmacy on the individuals' skin; complete a comprehensive medication review ■ Hydrate skin with a hypoallergenic moisturiser twice a day, especially after bathing while the skin is damp ■ Utilise soap free, no-rinse and/or pH-neutral skin cleansers and bathe the patient in warm water ■ Provide at-risk patients with protective clothing, eg long sleeves, long trousers or knee-high socks or shin/elbow pads ■ Avoid adhesive products. If dressings or tapes are required, use non-traumatic paper/silicone tapes, non-adherent contact layers, non-adherent/silicone foam dressings or other topical dressings specifically formulated for the management of fragile skin to avoid skin stripping or tearing. Ensure the proper removal of all adhesives ■ Communicate the risks of using adhesive tape to other healthcare professionals, such as laboratory services ■ Ensure a safe environment: remove unnecessary equipment and clutter and tie up cables; pad bed rails, chair legs, furniture edges and objects that may lead to blunt trauma; ensure good lighting ■ Educate all staff/caregivers (including transport services, porters and staff from departments such as radiology, dialysis and neonatal care) on the prevention and treatment of skin tears; communicate the need for gentle care

Table 2. Factors to assess (LeBlanc et al, 2018).

Patient	Skin tear
■ Demographic, eg extremes of age ■ Medical history ■ General health status and comorbidities ■ Skin conditions (presence of senile purpura, photo-ageing, fragile skin and diseases, etc) ■ Past history of skin tears ■ Medications and polypharmacy issues ■ Mental health issues ■ Psychosocial and quality of life factors ■ Mobility/dependence on assistance for activities of daily living ■ Nutrition and hydration ■ Drainage containment history ■ History of falls	■ The cause ■ Anatomical location ■ Duration of injury ■ Dimensions ■ Presence of bleeding or haematoma ■ Characteristics of the wound bed and percentage of viable/non-viable tissue ■ Conditions of flap viability

2008, 2011; Woo and LeBlanc, 2014). The ageing process causes skin fragility (Moncrieff et al, 2015), therefore, adhesive products should be avoided.

Education on risk factors should be provided to patients and individuals within their circle of care givers (LeBlanc et al, 2013b).

3 Prevent skin tears: This has long been considered the best approach (Le Blanc et al 2018). *Table 1* summarises the key strategies.

4 Assess the patient and the skin tear holistically: Assessment should consider systemic, local and environmental factors (Kennedy and Kerse, 2011; Stephen-Haynes and Carville, 2011; LeBlanc et al, 2011; 2018; Benbow, 2017; Strazzieri-Pulido et al, 2017). The factors that should be assessed and documented are given in *Table 2*. These should be recorded at the first and subsequent assessments to guide appropriate care pathways.

5 Classify skin tears using the ISTAP Skin Tear Classification System *[Figure 2]*: A systematic, standardised and validated approach is required to identify, document and guide treatment decisions. ISTAP proposes a working definition of a flap specifically related to skin tears 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" (LeBlanc et al, 2018).

6 Manage skin tears appropriately: Aim to preserve the skin flap, maintain the surrounding tissue, re-approximate the wound edges and reduce the risk of infection and further trauma (All Wales Tissue Viability Nurse Forum:,

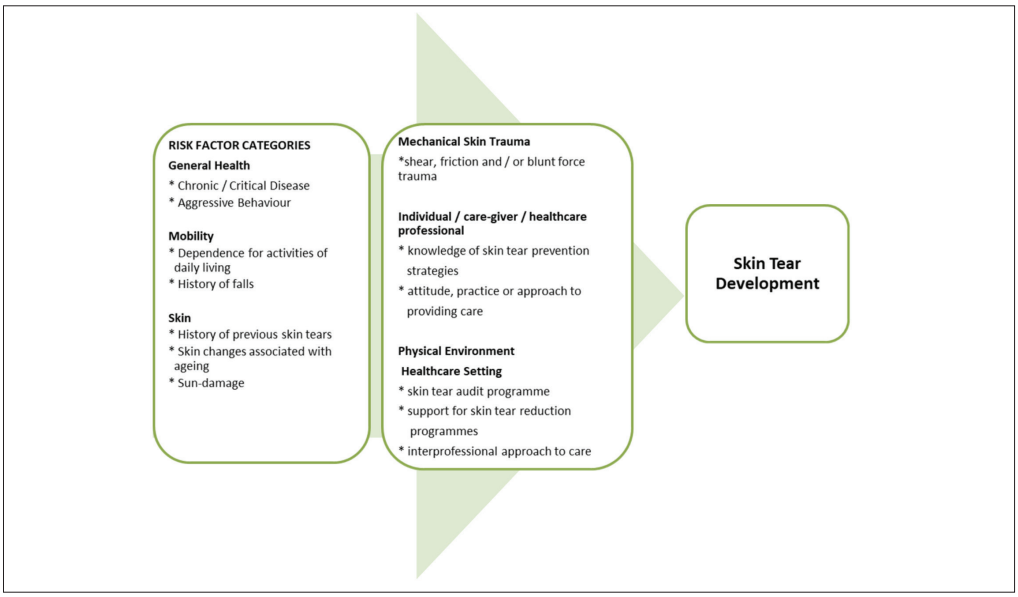

Figure 1. Skin Tear Framework — considerations when assessing patient risk.

2015). Commencing appropriate treatment as soon as possible will improve patient outcomes. Using the ISTAP Skin Tear Decision Algorithm *[Figure 3]*, consider the following (LeBlanc et al, 2018):

- Control bleeding (apply pressure and elevate the limb if appropriate) *[Figure 4a]*.
- Cleanse with normal saline and remove any debris *[Figure 4b]*.
- Re-approximate the viable skin flap to act as a biological dressing *[Figure 4c]*. Ease the flap back into place using a gloved finger, forceps or a silicone strip
- Debride non-viable tissue (LeBlanc et al, 2011). Take care during debridement to ensure viable skin flaps are left intact and fragile skin is protected
- Manage infection/inflammation:
  - Distinguish inflammation caused by trauma from wound infection
  - Diagnose the stage within the continuum of infection, managing covert and overt infection with a topical antimicrobial and systemic infection with both systemic and topical antimicrobials (International Wound Infection Institute, 2016)
  - Check tetanus immunisation status and manage accordingly
  - Continue to monitor for signs of wound infection.
- Consider moisture balance/exudate control. Skin tears are inclined to be dry wounds (LeBlanc et al, 2018); moist wounds heal two to three times faster than dry wounds (Swezey, 2014), therefore moisture balance is essential to promote wound healing. Observation of the volume and viscosity of exudate and its adverse effects is required, as there may be circumstances in which exudate becomes an issue, requiring the use of an appropriate dressing to protect the periwound skin from maceration preceding wound enlargement, pain or discomfort (World Union of Wound Healing Society, 2019).
- Monitor wound edge/closure:
  - Skin tears typically proceed to closure within 14–21 days (Bryant and Nix, 2007). Re-evaluate if a tear has not healed within this time frame
  - Monitor and address factors that delay wound healing, eg diabetes, peripheral oedema or nutritional issues
  - Consider compression therapy if the wound is on the lower leg. Perform a full vascular assessment, e.g. ankle brachial pressure index, before applying compression (LeBlanc et al, 2018).
- Manage pain (Stephen-Haynes and Carville, 2011):
  - Assess the degree and nature of the pain regularly, using a validated tool to identify the most suitable treatment plan

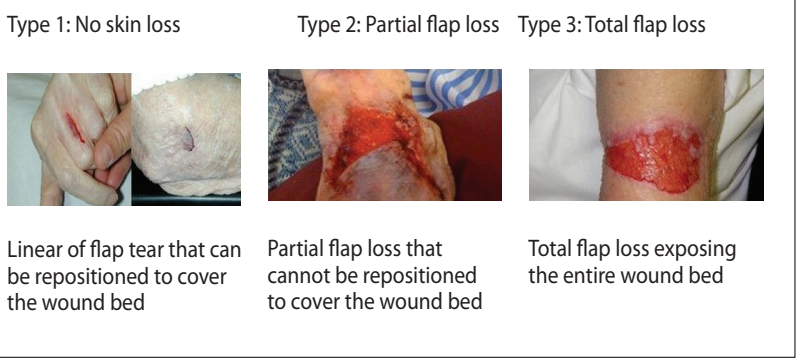

Figure 2. The ISTAP Skin Tear Classification System (LeBlanc et al, 2013a).

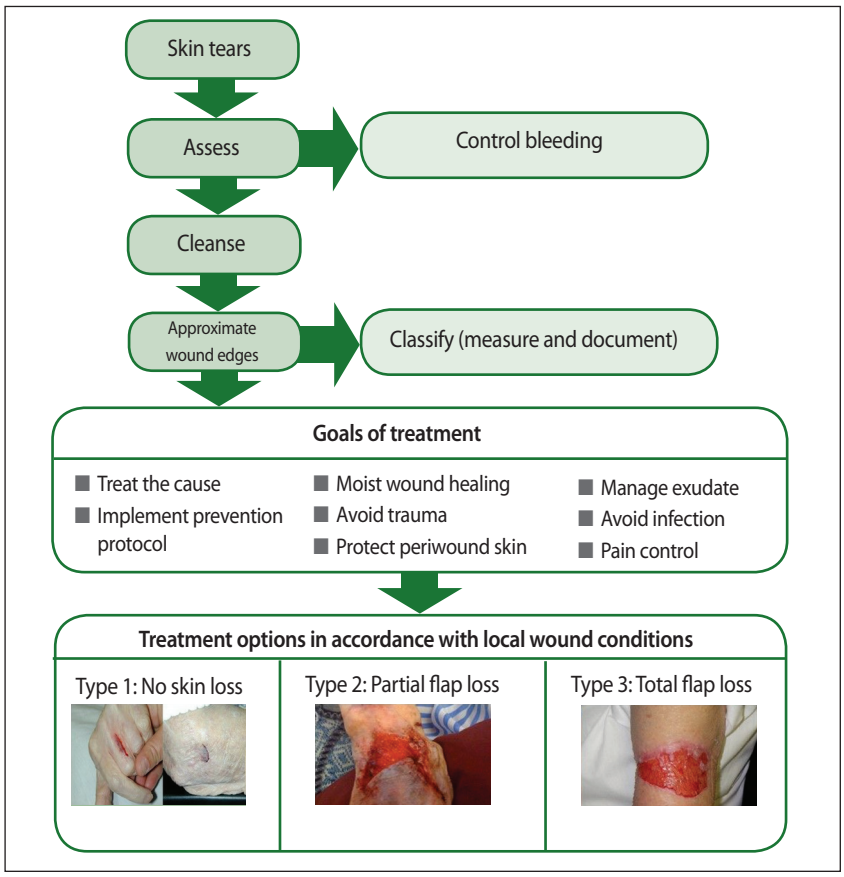

Figure 3. ISTAP Skin Tear Decision Algorithm (Le Blanc et al, 2013b).

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Figure 4. Initial management of a skin tear. (a) Control bleeding. (b) Clean and remove debris. (c) Classify wound (here, type 2 skin tear) and approximate the edges. (d) Gently apply an appropriate dressing for the type of wound (here, select a dressing for a type 2 skin tear). (e) Mark the dressing with an arrow to indicate the correct direction of removal (the direction of the pedicle to promote flap viability).

- Identify barriers to accurate assessment, e.g. loss of sensation
- Select dressings that minimise pain on application and removal.

Further research is required regarding skin tears and associated pain (LeBlanc et al, 2016).

7 Select the ideal dressing: Skin tears should be covered with a wound dressing selected to optimise wound healing and prevent further skin damage. Wound healing is a dynamic biological process that requires a delicate balance of various host and local wound factors. One of the challenges is to maintain a moisture balance to create an environment conducive to healing (Woo and Beeckman, 2018). While a desiccated wound surface can slow down cellular migration and impair healing, excessive moisture can damage wound edges and periwound skin. A number of dressings have been developed to provide a balance between moisture and absorbency, including foams, alginates, gelling fibres, hydrogels, hydrocolloids, acrylics and films. The choice of advanced dressing is a clinical decision based on:

- Dressing features, such as conformability, cushioning, ease of removal, and ability to minimise pain at the wound site and during dressing changes. All of these factors contribute to patient comfort
- Performance measures, such as ease of application, absorbency, wear-time, control of wound odour, barrier properties and the ability to protect the periwound area
- Cost.

As skin tears are common in people with fragile skin, careful selection of dressings with an atraumatic and non-adherent wound contact layer, such as silicone, can help limit skin damage/trauma on dressing removal and minimise pain at dressing changes (Matsumara et al, 2013). Other dressings recommended by ISTAP include non-adherent mesh, foam, alginate, acrylic and gelling fibre dressings, and hydrogels.

When local, spreading and systemic infection is a concern, dressings containing antimicrobials, such as silver, PHMB and *Leptospermum* honey, should be considered (Johnston and Katzman, 2015; International Wound Infection Institute, 2016; Salisbury et al, 2018).

8 Identify products not recommended for use with skin tears: Do not use:

- Iodine-based dressings (LeBlanc et al, 2016)
- Films/hydrocolloid dressings (LeBlanc et al, 2016)

- Skin closure strips (Holmes et al, 2013; All Wales Tissue Viability Nurse Forum, 2015; LeBlanc et al, 2016)
- Gauze (Meuleneire, 2003).

9 **Apply and remove the selected dressing appropriately:**

- On application, mark the dressing with an arrow to indicate the correct direction of removal *[Figure 4e]*. Remove the dressing in the direction of the pedicle to promote flap viability (Holloway and LeBlanc, 2017)
- Adhesive removers assist with minimising trauma on removal (Le Blanc et al, 2018)
- Remove dressings slowly to prevent further skin damage.

10 **Refer in good time:** A collaborative interdisciplinary approach is advised for skin tear prevention and management (LeBlanc et al, 2018). Patients should be promptly referred to an appropriate specialist as per local protocol if the wound fails to progress or deteriorates.

Conclusion

Skin tears are unique traumatic wounds commonly found at the extremes of age. It is important to recognise the risk factors and multifactorial aetiologies of skin tears as prevention is pivotal in maintaining the integrity of aged skin. Appropriate assessment is required to classify the degree of damage and implement the most appropriate management: maintain the viable skin flap where possible, prevent infection, minimise pain and ensure moisture balance to enhance wound healing within the predicted trajectory and prevent complications. WINT

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