

# Managing skin tears with Adaptic Touch™ Dressing

# made easy



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## Introduction

Skin tears are a significant problem for those with fragile skin but with appropriate skin management, they are mostly, although not always, preventable. The frequency and prevalence of skin tears, and thus the economic and patient burden, is believed to be under-reported.

An understanding of what is a skin tear, how they occur, how they can be avoided and the appropriate management of skin tears is an important consideration for practitioners who manage at-risk groups. This Made Easy covers the assessment, diagnosis and management of skin tears, as well as risk assessment and prevention of future skin tears. There are a range of products and dressing types that are suitable for the management of skin tears, here, products from the KCI – an Acelity company dressing portfolio have been used as examples.

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## What are skin tears?

The International Skin Tear Advisory Panel (ISTAP) defines skin tears as: "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 can occur anywhere on the body, but most often occur on the upper and lower limbs, especially the hand and foot (LeBlanc and Baranoski, 2011).

Skin tears can be very painful and distressing for the patient (Herbert, 2016; Wound Care Advisor, 2016), can often be prevented, and are often wrongly considered to be minor or straight-forward injuries. Skin tears are susceptible to infection, complications and delayed healing, especially if the patient has related comorbidities. If skin tears fail to achieve expected healing within 4 weeks, it should be considered a chronic wound (LeBlanc et al, 2018), which can place a considerable burden on healthcare resources (Holloway and LeBlanc, 2016).

## What are the prevalence and incidence of skin tears?

There are few incidence studies available on skin tears and the reported prevalence estimates vary widely between and within care settings (LeBlanc et al, 2018) and across countries (Holloway and LeBlanc, 2016). One US study reported 1.5 million skin

tears affect in-patients every year (Wound Care Advisor, 2016). However, what is clear is that skin tears are often underreported or misdiagnosed. There is some evidence that they may be more common than pressure ulcers (Carville and Smith, 2004), so the full economic and practical burden is unclear.

## What are the risk factors associated with skin tears?

A recent international consensus group developed consensus guidelines for the prevention and management of skin tears in aged skin (LeBlanc et al, 2018). Skin tears are caused by a combination of intrinsic (patient) and extrinsic (environmental) factors; it is important to define the exact cause of the wound for documentation and to avoid recurring skin tears:

- Blunt trauma
- Falls
- During activities of daily living (ADLs), such as dressing
- Dressing/treatment related
- During patient transfer or as a result of equipment injury (e.g. with a wheelchair, mobility aids, side-rail, bed).

### **Intrinsic risk factors**

Fragile skin is a major risk factor associated with skin tears. As skin ages, it has a reduced ability to regenerate, loses moisture, and becomes drier, which results in reduced skin integrity. These changes, coupled with a less efficient immune system, means that older patients are at an increased risk of skin breakdown, even from minor force or trauma (Voegeli, 2007; LeBlanc et al, 2018).

### **Extrinsic/environmental risk factors**

Extrinsic risk factors can be alleviated and avoided. For the patient with vulnerable skin or their carer, measures can be taken to avoid the risk of skin tears, including:

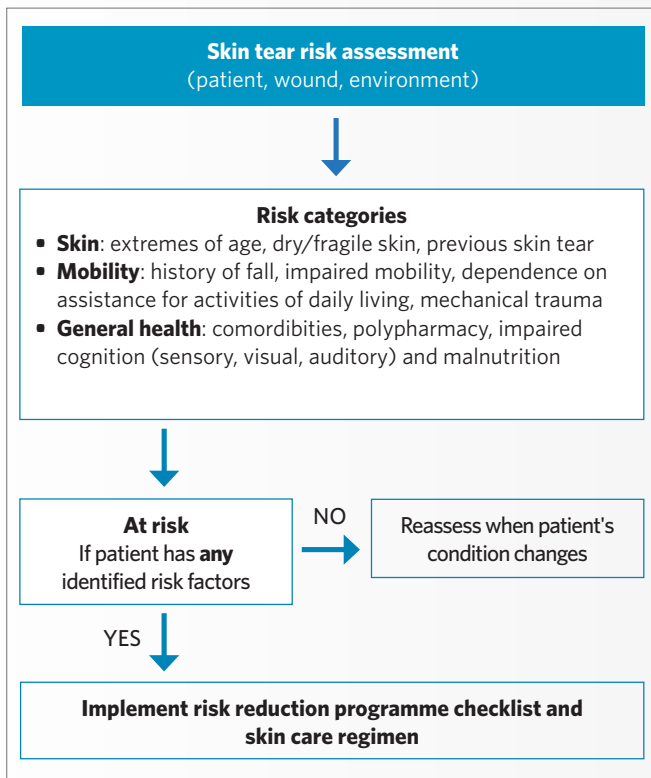
- Keep fingernails trimmed
- Avoid wearing jewellery
- Pad or remove any potentially dangerous furniture or devices
- Cover the at-risk person's skin with appropriate clothing
- Protect the skin's general integrity by using skin-friendly (pH-balanced) products and preventative emollients (Wounds UK, 2015; LeBlanc et al, 2018).

## Skin tear risk assessment

Early recognition of people who are at risk of developing skin tears is an essential part of prevention. Skin tear risk assessment should follow a holistic approach and consider the patient, wound and environment (LeBlanc et al, 2013a; Wounds UK, 2015; Wounds International, 2017; LeBlanc et al, 2018). Risk

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**Figure 1:** Protocol outlining the steps required during a skin tear assessment (LeBlanc et al, 2018)

assessments (Figure 1) should be conducted at admission to the clinical setting followed by ongoing inspection (LeBlanc et al, 2018).

## Classification of skin tears

Globally, there are two main skin tear classification systems in use, both of which are based on the first skin tear classification system developed by Payne and Martin (1990). The poor uptake of the original classification system and problems associated with inter-rater reliability led to the development of the STAR Classification (Carville et al, 2007), which incorporates monitoring the colour of the skin tear and is commonly used in Australia and Japan. The STAR classification system is validated and is used in research.

The ISTAP Skin Tear Classification System is also based on the work of Payne and Martin (1990) and was born out of a survey of over 1000 clinicians from 16 countries showing that 90% of respondents would favour a simplified classification system (LeBlanc and Baranoski, 2011). The ISTAP system was developed using a Delphi process and validated by 839 HCPs in practice, and is presently being validated in Chile and Brazil (LeBlanc et al, 2013b; LeBlanc et al, 2018). Both classification systems categorise skin tears into three groups (Table 1).

## Management of skin tears

Skin tears can be simple wounds that have the potential to be closed by primary intention (LeBlanc et al, 2018). The preservation of the skin flap and protection of the surrounding tissue is key to skin tear management. The edges of the skin tear should be gently reapproximated without undue stretching. Reapproximation should occur as soon as possible after the skin tear occurs to preserve the viability of the skin flap. Therefore, it might be appropriate to educate the patient or caregiver on how to perform first aid for a skin tear. Due to the fragile skin and shallow nature of the wound, traditional wound closing technologies (e.g. sutures, staples or adhesive strips) are not suitable. Topical skin glue or application of a gentle non-adhering dressing may be more appropriate (LeBlanc et al, 2018).

Using the treatment algorithm (Figure 2) as a guide to treatment, the principles of moist wound healing are promoted in the following guidelines from ISTAP (LeBlanc et al, 2018):

### Control bleeding

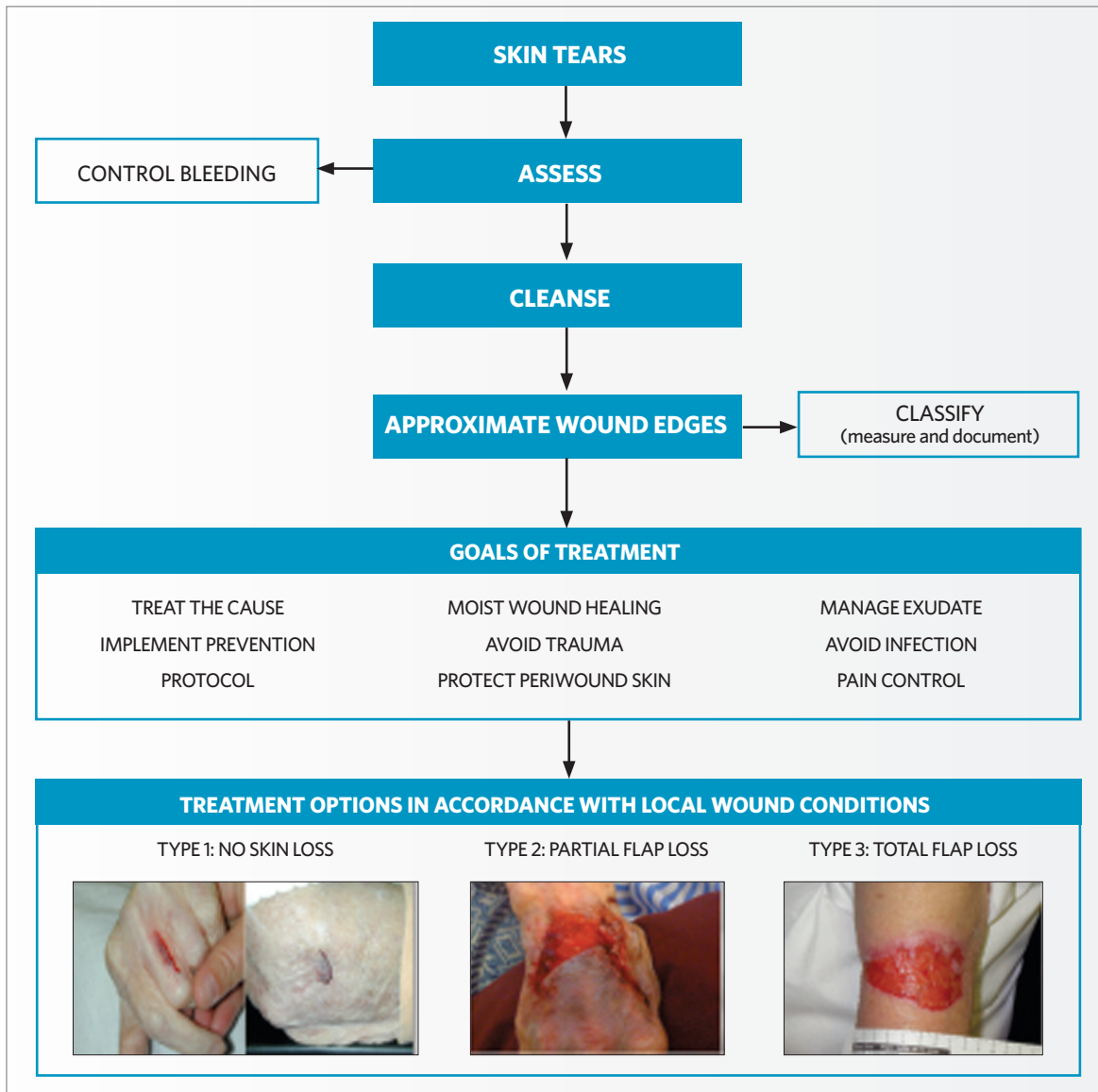
- Apply pressure and elevate the limb if appropriate
- If bleeding continues, cover with an alginate and apply a pressure dressing making sure that the cover dressing is suitable for fragile skin
- Select a dressing that is suitable for fragile skin.

### Cleanse and debride

- Cleanse/irrigate the wound as per local protocol and remove any residual debris or haematoma; gently pat the surrounding skin dry to avoid further injury
- If the skin flap is present but necrotic it may need to be debrided; care should be taken during debridement to ensure that viable skin flaps are left intact and fragile skin is protected
- If viable, re-approximate the skin flap to cover as much of the wound as possible. Ease the flap back into place using a gloved finger, dampened cotton tip, tweezers or a silicone strip.

### Manage infection/inflammation

- Wound inflammation from trauma should be distinguished from wound infection
- Wound infection can result in pain and delayed wound healing; diagnosis of infection should be based on clinical assessment and appropriate infection control measures taken
- Check tetanus immunisation status and take further steps if necessary.



**Figure 2: Skin tear treatment algorithm developed by ISTAP (LeBlanc et al, 2013a; 2018)**

### Manage moisture balance/exudate control

- Moisture balance is essential to promote wound healing and to protect the peri-wound skin from maceration
- Consider the volume and viscosity of the exudate when selecting a topical wound dressing.

### Monitor wound edge/closure




- Skin tears are acute wounds that should typically proceed to closure in a timely fashion and follow an acute wound closure trajectory of 14–21 days
- Ensure that all potential factors that could delay healing (e.g. diabetes, peripheral oedema, nutritional issues) have been addressed

- Compression therapy should be considered if the wound is on the lower leg. Before applying compression, a full leg assessment including vascular assessment – e.g. ABPI – should be carried out.

### Dressing selection

Dressing selection for any wound depends on the assessment outcomes and goals of care, and dressing selection for skin tears is no different. Wound care products for skin tear management should optimise wound healing and not increase the risk of further skin damage. This includes specialist dressings and products to cleanse and moisturise the skin (LeBlanc et al, 2018).

**Table 1: Skin care classifications and appropriate dressing selection using examples from the KCI – an Acelyty company dressing portfolio (Wounds International, 2018)**

STAR skin tear classification system	ISTAP skin tear classification system		Skin tear treatment options based on recommendation by ISTAP	Available dressing options from KCI-an Acelyty Company
<p><b>Category 1A and 1B</b>  <b>1A:</b> A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is not pale or darkened  <b>1B:</b> A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is pale or darkened. (Image represents STAR 1B)</p>	<p><b>Type 1: Skin tear without tissue loss</b>                      No skin loss; linear or flap tear, which can be repositioned to cover the wound bed</p>		<p><b>Based on assessment</b>                      Control bleeding; approximate edges.                      Cover wound with a silicone contact layer.                      Apply appropriate secondary dressing when required, such as a non-adhesive or silicone foam, depending on wound exudate and location.</p>	<ul style="list-style-type: none"> <li>ADAPTIC TOUCH™ Non-Adhering Silicone Dressing*</li> <li>ADAPTIC DIGIT™ Non-Adhering Digit Dressing</li> <li>TIELLE™ Non Adhesive Hydropolymer Dressing with LIQUALOCK™ Technology</li> <li>TIELLE ESSENTIAL™ Silicone Adhesive Foam Dressing</li> <li>TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing</li> <li>For infection or risk of infection, consider SILVERCEL™ NON-ADHERENT in conjunction with a secondary dressing such as TIELLE™ Foam Dressings</li> </ul>
<p><b>Category 2A and 2B</b>  <b>2A:</b> A skin tear where the edges cannot be realigned to the normal anatomical position and the skin or flap is not pale or darkened  <b>2B:</b> A skin tear where the edges cannot be realigned to the normal anatomical position and the skin or flap colour is pale or darkened. (Image represents STAR 2B)</p>	<p><b>Type 2: Partial flap loss</b>                      Flap cannot be repositioned to cover the wound</p>		<p>Control bleeding; approximate edges.                      Cover wound with a silicone contact layer.                      Apply appropriate secondary dressing when required, such as a non-adhesive or silicone foam, depending on wound exudate and location.</p>	
<p><b>Category 3</b>                      A skin tear where the skin flap is completely absent</p>	<p><b>Type 3: Total flap loss</b>                      Entire wound bed is exposed</p>		<p>Control bleeding; cover wound with a non-adhering silicone contact layer.                      Apply appropriate secondary dressing when required, such as a non-adhesive or silicone foam, depending on wound exudate and location.</p>	<ul style="list-style-type: none"> <li>ADAPTIC TOUCH™ Dressing*</li> <li>TIELLE™ Non Adhesive Dressing</li> <li>TIELLE ESSENTIAL™ Silicone Dressing</li> <li>TIELLE ESSENTIAL™ Silicone Border Dressing</li> <li>For partial or total flap loss: PROMOGRAN™ Protease Modulating Matrix can be used on bleeding wounds; and PROMOGRAN PRISMA™ Wound Balancing Matrix™ can be used when infection is a risk. In both instances, use in conjunction with a secondary dressing such as TIELLE™ Foam Dressing</li> </ul>

\*Apply as a primary wound contact layer, then cover with an appropriate secondary dressing.

**NOTE: Specific indications, contraindications, warnings, precautions and safety information may exist for KCI – an Acelyty company products. Please consult a healthcare provider and product instructions for use prior to application.**

Dressing selection is a key element of managing skin tears and it is important to select the appropriate dressing with treatment goals in mind. The ideal dressing for managing skin tears should:

- Manage bleeding
- Be easy to apply and remove
- Be non-adherent and not cause trauma to the skin or the flap to lift upon removal
- Provide a protective anti-shear barrier
- Minimise pain
- Optimise the physiological healing environment (e.g. moisture, bacterial balance, temperature, pH)
- Be flexible and mould to contours
- Provide secure, but not aggressive, retention
- Afford extended wear time

- Optimise quality of life and cosmetic factors
- Be non-toxic
- Be cost-effective (Carville and Smith, 2004; Wounds International, 2017)

When considering dressing types, collagen ORC and alginate dressings may assist with haemostasis and when the peri-wound skin is fragile, adhesive dressings are best avoided. Non-adherent mesh dressings facilitate fluid transfer to secondary dressings and help to protect the wound while minimising patient pain and trauma on removal (Box 1). Foam or fibre dressings assist with exudate management. Antimicrobial dressings aid infection control if the wound is infected, and may be considered if the skin tear is at risk of infection. Tubular or roller bandages can be used to secure dressings or provide additional protection (Stephens-Haynes and Carville, 2011).



### BOX 1. ADAPTIC TOUCH™ NON-ADHERING SILICONE DRESSING

Non-adherent mesh dressings are recommended for use on ISTAP Skin Tear Types 1, 2 and 3 (LeBlanc et al, 2016; LeBlanc et al, 2018). Adaptic Touch™ Non-Adhering Silicone Dressing (KCI – an Acelity company) is a flexible, open-mesh primary wound contact layer composed of cellulose acetate coated with a soft-tack silicone (Bianchi and Gray, 2011). A secondary dressing or retention product should be used to keep the mesh dressings in place (Wounds International, 2018).

The following case study uses Adaptic Touch dressings as part of a holistic skin tear management regimen.

An 85-year-old female patient, with a history of osteoarthritis and depression, sustained a skin tear just below the elbow on her right forearm after a fall earlier in the day (Figure 3). The skin tear was classified as Type 1 according to the ISTAP Skin Tear Classification system. The wound and peri-wound were cleansed with normal saline. Following re-approximation of the skin flap (Figure 4), the

wound measured 5 cm (length) x 0.2 cm (width) x 0.1 cm (depth).

Adaptic Touch was selected for use as a skin-friendly, atraumatic dressing, in order to avoid injuring the peri-wound skin or lifting the flap during dressing change. An absorbent dressing with a silicone border was chosen as the cover dressing and the dressing was changed twice per week.

The wound edges remained well approximated, and the wound did not become infected or re-open. Adaptic Touch dressing allowed moisture to pass through to the secondary dressing to avoid pooling. Throughout treatment, the dressing was easy to apply and remove with no pain or damage to the wound bed or peri-wound area, and no residue was left on the skin. The dressing regimen of Adaptic Touch dressing and the secondary dressing held the flap in place and remained in situ between dressing changes. By day 29, the wound had completely epithelialised (Figure 5) and Adaptic Touch dressings were discontinued.



Figure 3: Immediately after fall



Figure 4: Initial assessment following re-approximation

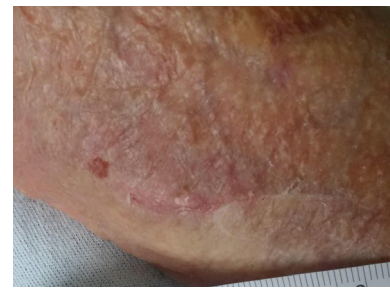


Figure 5: Review 4 (+29 days)

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## BOX 2. PATIENT GROUPS AT HIGH RISK OF SKIN TEARS

- Older people with fragile skin
- Neonates and the very young
- Those who are critically or chronically ill with multiple risk factors (LeBlanc et al, 2011).

### Skin tear prevention

Skin tears are largely preventable, so prevention should be the aim of skin tear management. The skin of at-risk patients (Box 2) must receive good skin care as part of a skin tear prevention regimen to maintain skin health and avoid injury.

#### *How to minimise risk*

It is recommended that an inter-disciplinary team approach to the implementation of a systematic skin tear prevention programme is followed, focusing on the three risk factor categories: skin, mobility and general health (LeBlanc et al, 2013a; 2018).

#### *Skin*

Good skin care is vital to maintaining skin integrity – keeping the skin well hydrated with adequate nutritional and fluid intake. Twice daily emollient application has been shown to reduce skin tear incidence by 50% (Carville et al, 2014), therefore, ISTAP recommends the use of emollient therapy for patients with aged skin. Emollients are available in different formats, for example moisturisers (creams, ointments and lotions), bath oils, gels and soap substitutes. When choosing an emollient availability, cost and most importantly patient choice, must be considered. To reduce the risk of skin tears, the frequency of bathing should be minimised ensuring that the water temperature is not too

hot. Soft towels and cloths should be used to pat, rather than rub, the patient's skin dry (LeBlanc et al, 2018).

#### *Mobility*

Patients should be encouraged to be as active as possible, with appropriate selection and use of assistive devices as necessary. Make certain the home or care environment is safe by ensuring lighting is adequate and furniture is not an obstacle. Padding to sharp borders of furniture and counters may also be helpful. A bed sheet should never be used to move a patient as this can contribute to damage by dragging the skin (Beldon, 2006), instead a lifting device or slide sheet should be used. Pressure relieving devices and positioning techniques can also be used to reduce or eliminate pressure, shear and friction. A fall prevention programme should be developed and implemented for at-risk patients (LeBlanc et al, 2018).

#### *General health*

A skin tear prevention regimen should also involve holistic elements considering the patient's general health, such as optimising the patient's nutrition and hydration. Polypharmacy issues and patients with comorbidities, dementia or mental health conditions will require extra care and consideration to prevent skin tears (LeBlanc et al, 2018).

#### *Patient self-care*

Where possible, patients should be encouraged to monitor their own skin health, and be aware of potential skin tear risks in their environment to avoid self-injury. Patients can be encouraged to apply emollients as part of their daily routine and take small steps to minimise risk of skin tears, such as wearing clothing that covers the skin (i.e. trousers rather than skirts) and wearing sensible/comfortable shoes to avoid falls (LeBlanc et al, 2018).

## Summary

Skin tears are a growing issue in wound care especially with a growing aging population; they are painful, and are at risk of complication and delayed healing causing further distress to the patient. Dressing selection should take into account managing the wound appropriately, as well as avoiding further trauma to the wound and surrounding skin. Key to skin tear management is prevention; while not all skin tears will be avoidable, education and increased awareness for HCPs, patients and their carers can alleviate the impact of skin tears.