



## All Wales Tissue Viability Nurse Forum

*Ffowm Nyrsys Hyfywedd  
Meinwe Cymru Gyfan*

*All Wales Guidance for the:*

# Prevention and Management of Skin Tears

*Endorsed by*




**All Wales Tissue  
Viability Nurse Forum**

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Meinwe Cymru Gyfan*

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# The All Wales Guidance for the Prevention and Management of Skin Tears

This guidance for the prevention and management of skin tears has been written in collaboration with the All Wales Tissue Viability Nurse Forum and Wounds UK.

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## All Wales Tissue Viability Nurse Forum

The All Wales Tissue Viability Forum was formed in September 2003 and has the following aims that form part of the six key principles from the Institute of Medicine (Welsh Assembly Government, 2005):

### Safety, Effectiveness, Patient-centred, Timely, Efficient and Equitable

1. To raise awareness of tissue viability in order to improve patient outcomes
2. To raise awareness of the impact of tissue viability in health economics
3. To promote evidence-based practice in tissue viability and influence appropriate policy across Wales
4. To be recognised by the Welsh Assembly Government as a knowledgeable and valuable resource
5. To contribute to the body of knowledge by initiating and participating in tissue viability research and audit
6. To improve patient outcomes by maintaining the links with academia and disseminating knowledge relating to tissue viability to all healthcare providers
7. To work in partnership with industry in order to improve patient care
8. To provide peer support to all tissue viability nurses working in Wales.

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Solutions with you in mind

September 2015

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## 1. Purpose

The purpose of these guidelines is to support qualified healthcare professionals within all Welsh NHS Trusts and Health Boards by providing up-to-date knowledge and guidance for the prevention and management of skin tears.

The guidance provided is updated from the previous document published in 2011 (All Wales Tissue Viability Nurse Forum, 2011) and is based on a review of the literature. This new updated edition incorporates the International Skin Tear Advisory Panel (ISTAP; LeBlanc et al, 2013) classification system for skin tears.

The aim of this new guidance is to simplify practice and improve the management of skin tears in Wales. It is not the intention of this document to discuss the treatment of lacerations and deep (full thickness) skin tear wounds that may require surgical intervention.

## 2. Introduction

Recognising and reducing the risk of skin tears remains an important issue. Skin tears are a common acute wound in patients with fragile skin (such as elderly people and neonates). However, they are frequently underreported; statistics are often not recorded accurately, but it has been reported that skin tears may have an incidence rate of 15.5% among patients over 65 years (Konya et al, 2010). With an increasing elderly population, it is estimated that the incidence of skin tears will become one of the largest problems in wound care (Bianchi, 2012). Identifying risk and following evidence-based care is therefore paramount.

## 3. What are skin tears?

Skin tears were first defined by Payne and Martin in 1993 as traumatic injuries that can result in partial or full separation of the skin's outer layers — the separation of the epidermis from the dermis (partial thickness wound), or both the epidermis and dermis from the underlying structures (full thickness wound) (Payne and Martin, 1993; Stephen Haynes and Carville, 2011). This may be caused by shearing and friction forces or a blunt trauma.

Some skin tears will be unavoidable but the risk can be minimised (LeBlanc and Baranoski, 2011). Patients suffering from skin tears report increased pain and decreased quality of life (LeBlanc et al, 2013). The populations at high risk of skin tears — commonly at extremes of age — are also at the highest risk of developing infections and comorbidities, which can cause skin tears to be significant and complex wounds.

The ISTAP Skin Tear Classification consensus (LeBlanc et al, 2013) classified skin tears into three simple types:

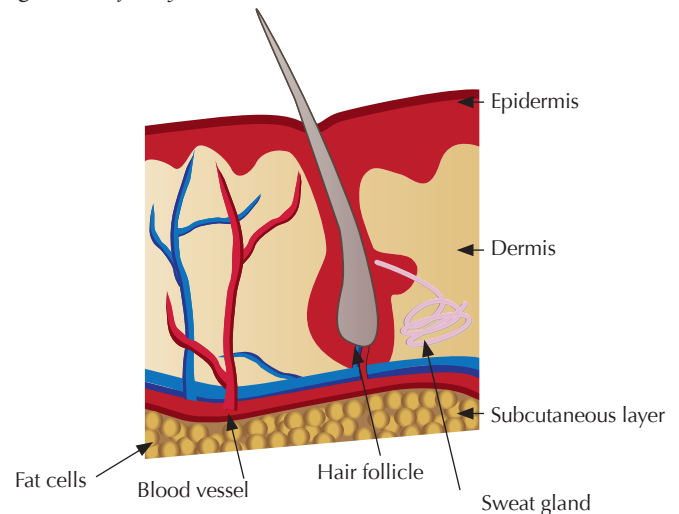
1. Type 1 (no skin loss)
2. Type 2 (partial flap loss)
3. Type 3 (total flap loss).

It is important that practitioners are aware of this classification system and the ISTAP Skin Care Tool Kit and use these to guide risk assessment, prevention and management, and treatment of skin tears.

## 4. Anatomy and physiology of the skin

The skin is the body's largest organ, comprising 15% of the body's total weight (Wounds UK, 2012). To prevent and manage skin tears, it is important to understand the basic anatomy and physiology of the skin.

Figure 1. Layers of the skin



The skin is made up of three main layers: the outer epidermis, the middle dermis and the subcutaneous hypodermis (Figure 1). The epidermis is only 0.1mm thick and is attached to the dermis below. It receives its nutrients and oxygen from the dermis. The dermis is made up of connective tissues (proteins, collagen and elastin) that give the skin its strength and elasticity. The hypodermis comprises blood vessels, adipose tissue and connective tissue.

## 5. Risk factors for skin tears

Skin tears are associated with falls, blunt trauma, poor handling and equipment injuries.

Skin tears can occur on any part of the body but are often sustained on the extremities (particularly in elderly patients), such as upper and lower limbs or the dorsal aspect of the hands. In neonates, skin tears are more likely to be associated with device trauma or use of adhesives, and often occur on the head and face as well as extremities (LeBlanc and Baranoski, 2011).

A number of intrinsic or extrinsic factors have been identified:

### Intrinsic factors

The normal ageing process causes changes in the skin that make it more fragile and therefore more vulnerable to skin tears (see Figure 2 for the physiology of normal and ageing skin; and Figure 3 for further information on these physiological changes). These changes include (Wounds UK, 2012):

- Thinning and flattening of the epidermis
- Loss of collagen and elastin
- 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 reduction of blood supply to the extremities.

In neonates, the dermis is still developing and at full term the skin is only 60% of adult thickness; neonatal skin is also less elastic and so more likely to be damaged by shear forces (Irving et al, 2006).

### Extrinsic factors

People who need assistance with mobility, washing and other daily activities are more at risk of skin tears, which means that

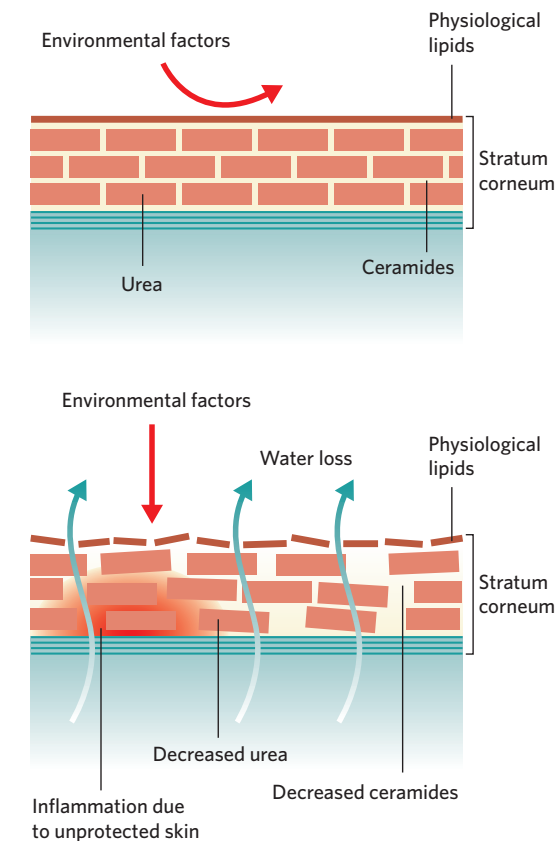


Figure 2. *The physiology of normal skin (a) and ageing skin (b)* (Moncrieff et al, 2015)

patients and carers can reduce the environmental risk by actions such as:

- Keeping fingernails trimmed and not wearing jewellery when dealing with patients
- Padding bed rails and wheelchairs

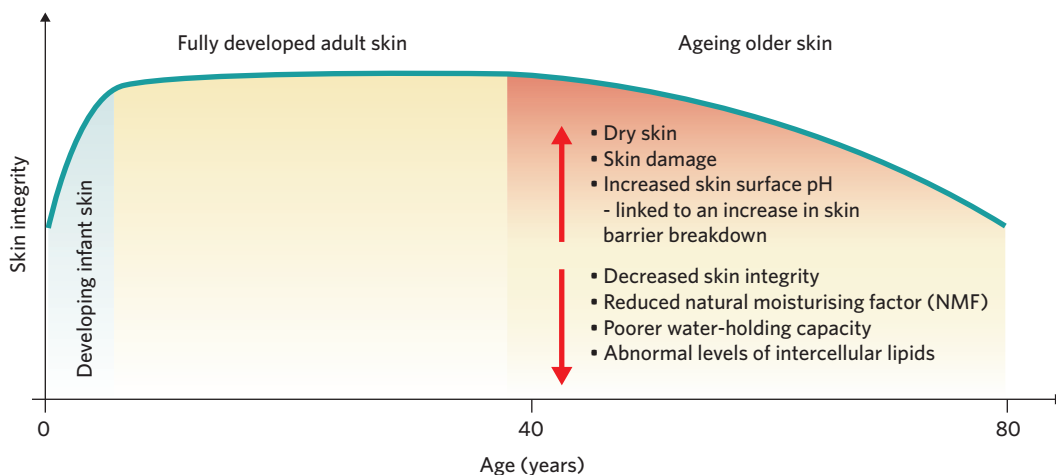


Figure 3. *Changes in the skin as it ages* (Moncrieff et al, 2015)

- Covering skin with appropriate clothing or retention bandages/stockinette in vulnerable patients
- Protecting the skin's general well-being by using skin-friendly products and preventative emollients where appropriate (not aqueous cream, as per MHRA guidance [2013]).

## 6. Risk assessment and prevention strategies

Early recognition of people who are at risk of developing skin tears is an essential part of prevention. Skin assessment should be conducted at the first visit or on admission to hospital in line with pressure ulcer prevention risk assessment guidelines (NICE, 2014). Ongoing inspection of the skin should be incorporated into an integrated care bundle, such as SSKIN (Surface, Skin, Keep moving, Incontinence, Nutrition) to ensure changes in patients' health status/skin integrity are not missed.

ISTAP (LeBlanc et al, 2013) recommend a multidisciplinary team approach to the implementation of a systematic skin tear prevention programme. This is based on three risk factor categories:

1. Skin
2. Mobility
3. General health.

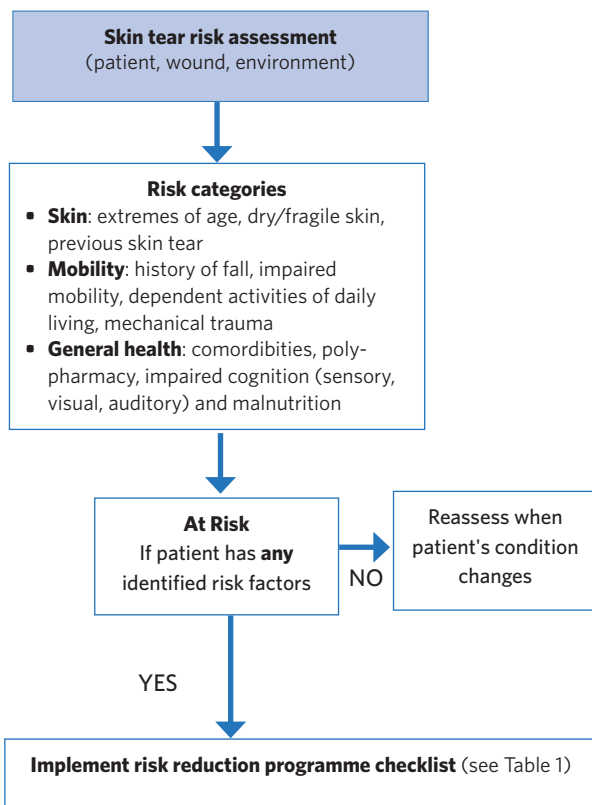


Figure 4. ISTAP skin tear risk assessment protocol (adapted from LeBlanc et al, 2013)

Table 1. Risk reduction programme checklist (adapted from LeBlanc and Baranoski, 2013)	
RISK FACTOR	ACTION
Skin	<input type="checkbox"/> Inspect skin and investigate previous history of skin tears <input type="checkbox"/> If patient has dry, fragile, vulnerable skin, assess risk of accidental trauma <input type="checkbox"/> Remove dry skin and use emollient to rehydrate limbs as required <input type="checkbox"/> Implement an individualised skin care plan using a skin-friendly cleanser (not traditional soap) and warm (not hot) water <input type="checkbox"/> Prevent skin trauma from adhesives, dressings and tapes (use silicone tape and cohesive retention bandages) <input type="checkbox"/> Consider medications that may directly affect skin (e.g. topical and systemic steroids) <input type="checkbox"/> Be aware of increased risk due to extremes of age <input type="checkbox"/> Discuss use of protective clothing (e.g. shin guards, long sleeves or retention bandages) <input type="checkbox"/> Avoid sharp fingernails or jewellery in patient contact
Mobility	<input type="checkbox"/> Encourage active involvement/exercises if physical function is impaired <input type="checkbox"/> Avoid friction and shearing (e.g. use glide sheets, hoists), using good manual handling techniques as per local guidelines <input type="checkbox"/> Conduct falls risk assessment <input type="checkbox"/> Ensure that sensible/comfortable shoes are worn <input type="checkbox"/> Apply clothing and compression garments carefully <input type="checkbox"/> Ensure a safe environment — adequate lighting, removing obstacles <input type="checkbox"/> Use padding for equipment (as per local policy) and furniture <input type="checkbox"/> Assess potential skin damage from pets
General health	<input type="checkbox"/> Educate patient and carers on skin tear risk and prevention <input type="checkbox"/> Actively involve the patient/carers in care decisions where appropriate <input type="checkbox"/> Optimise nutrition and hydration, referring to dietician if necessary <input type="checkbox"/> Refer to appropriate specialist if impaired sensory perception is problematic (e.g. diabetes) <input type="checkbox"/> Consider possible effects of medications and polypharmacy on the patient's skin

Follow the ISTAP skin tear risk assessment protocol (Figure 4) to identify risk. If the patient is deemed to be at risk, use the risk reduction programme checklist (Table 1, page 4).

## 7. Implementing a skin care protocol

Simply applying emollients once or twice a day can reduce skin tear prevalence by 50% (Carville et al, 2014). See Box 1 for practical tips for using emollients; for more information, refer to the British Dermatological Nursing Group Best Practice Statement (BDNG, 2012).

A major function of healthy skin is to act as a physical barrier to the external environment. Ageing and dry skin conditions disrupt the normal functioning skin barrier, making the skin more vulnerable to traumatic injury and skin tears (Wounds UK, 2012). Emollients are important in promoting skin health and can be used as the first-line treatment for patients with fragile, dry or ageing skin. They are available as creams, ointments and lotions, bath oils, gels and soap substitutes (NICE, 2004).

Emollients should be used as both soap substitutes and leave-on treatments. There are different types of emollient available:

- Simple emollients work by 'trapping' moisture into the skin and reducing water loss by evaporation. These may be available as creams or ointments and contain oils (e.g. petrolatum or mineral oil)
- Emollients that include additional substances known as humectants (e.g. urea) work in a different way by actively drawing water from the dermis to the epidermis and compensating for the reduced levels of natural moisturisers in the skin
- Ointments contain more oil than cream emollients, which can make them more effective, but they are greasier; however, emollients containing humectants produce similar rehydration effects but are less 'heavy' and more cosmetically acceptable for patients.

## 8. Assessment and classification of skin tears

When a patient presents with a skin tear, the initial assessment should include a full holistic assessment of the patient as well as the wound — e.g. investigating the patient's medical history, general health status, and any underlying comorbidities. It is also important to establish the cause of the injury. This forms part of the risk assessment and checklist (Figure 4 and Table 1, page 4).

### Box 1. Practical tips for using emollients

- Each patient should have an individualised regimen including emollient wash products and leave-on creams/ointments.
- Recommend using emollient products as soap substitutes when washing and bathing.
- If necessary, emollient products can be used that include anti-bacterials (recommended for short-term use if skin is infected or to prevent recurrent infection), or anti-pruritics (to reduce itching).
- Patient choice is important in choosing emollient products to use — considering ease of use and cosmetic acceptability.
- Leave-on emollients should be applied in downward strokes (in the direction of hair growth to avoid folliculitis).
- Advice is to apply emollients 'frequently and liberally, so that the skin glistens' (BAD/PCDS, 2006); the recommended amount is 500g per week for adults. However, optimal frequency of application will vary for different products.
- Do not use aqueous cream (MHRA, 2013).

### Wound assessment

The wound should be examined for the following factors (Stephen-Haynes and Carville, 2011) and documented as part of formal wound assessment:

- Anatomical location and duration of injury
- Dimensions (length, width, depth)
- Wound bed characteristics and percentage of viable/non-viable tissue
- Type and amount of exudate
- Presence of bleeding or haematoma
- Integrity of surrounding skin
- Signs and symptoms of infection
- Associated pain.



a: Type 1 — No skin loss  
b: Type 2 — Partial flap loss  
c: Type 3 — Total flap loss

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### Classifying skin tears

The skin tear should then be classified and documented. The ISTAP (LeBlanc et al, 2013) classification system provides an updated and simplified method for assessing skin tears. Skin tears can be categorised as Type 1, Type 2 or Type 3.

#### Type 1 — No skin loss

A Type 1 skin tear is a linear tear where the flap can be repositioned to cover the wound bed.

#### Type 2 — Partial flap loss

In a Type 2 skin tear, partial flap loss means that the skin flap cannot be repositioned to cover the whole of the wound bed.

#### Type 3 — Total flap loss

A Type 3 skin tear involves total flap loss that exposes the entire wound bed. Please note that deep Type 3 skin tears (i.e. total thickness wounds) will require specialist intervention, so this standard guidance does not apply.

## 9. Goals of treatment

Treating of skin tears should aim to preserve the skin flap and maintain the surrounding tissue, reapproximate the edges of the wound (without stretching the skin), and reduce the risk of infection and further injury.

The skin tear decision algorithm (Figure 6) is designed to help practitioners in the assessment and treatment of skin tears, maintaining a continuous link between preventing, assessing and treating skin tears.

#### Control bleeding

Apply pressure and elevate the limb if appropriate.

#### Irrigate the wound

Irrigate the wound as per local protocol and remove any residual debris or haematoma. Pat the surrounding skin dry gently to avoid further injury.

#### Approximate the skin flap

- First, perform a wound assessment and categorise the skin tear, documenting all findings.
- Cleanse inner aspect of flap to remove any debris.
- If viable, use the skin flap as a 'dressing.' Ease the flap back into place using a gloved finger, dampened cotton tip, tweezers or a silicone strip (Figure 5a).
- Consider using a moistened non-woven swab if the flap is difficult to align. Apply for 5-10 minutes to rehydrate the flap.

- Consider using a skin barrier product to protect the surrounding skin if required (e.g. if the wound is heavily exuding, to prevent maceration).
- Consider using an emollient to protect wider skin area and prevent further tears.

#### Apply the dressing

- Select an appropriate dressing — the ideal dressing should optimise the healing environment and provide a barrier to protect against shear forces. Dressings should be easy to apply and minimise trauma on removal/dressing change; select either an atraumatic wound contact layer or atraumatic all-in-one dressing. When required, a non-adhesive dressing pad can be used over the atraumatic wound contact layer to absorb exudate and held in place by a tubular bandage, cohesive retention bandage or stockinette.

Figure 5a

*Skin flap rolled upward to cover wound*

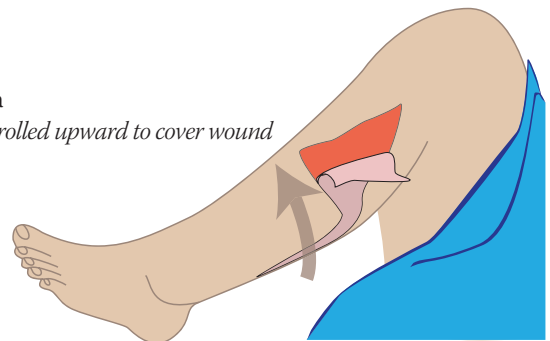


Figure 5b

*Dressing applied with arrow to indicate correct direction of removal*

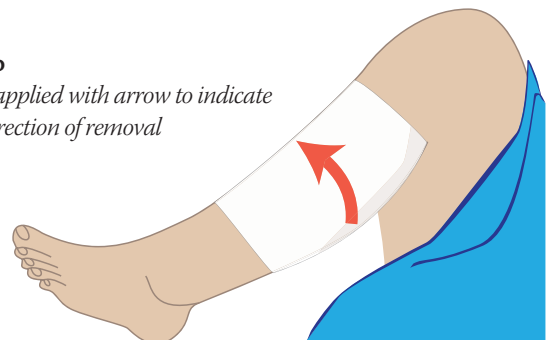


Figure 5c

*Any dressing over the skin flap should be removed in the same direction*

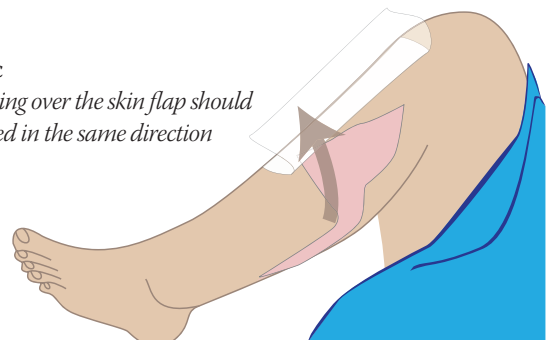
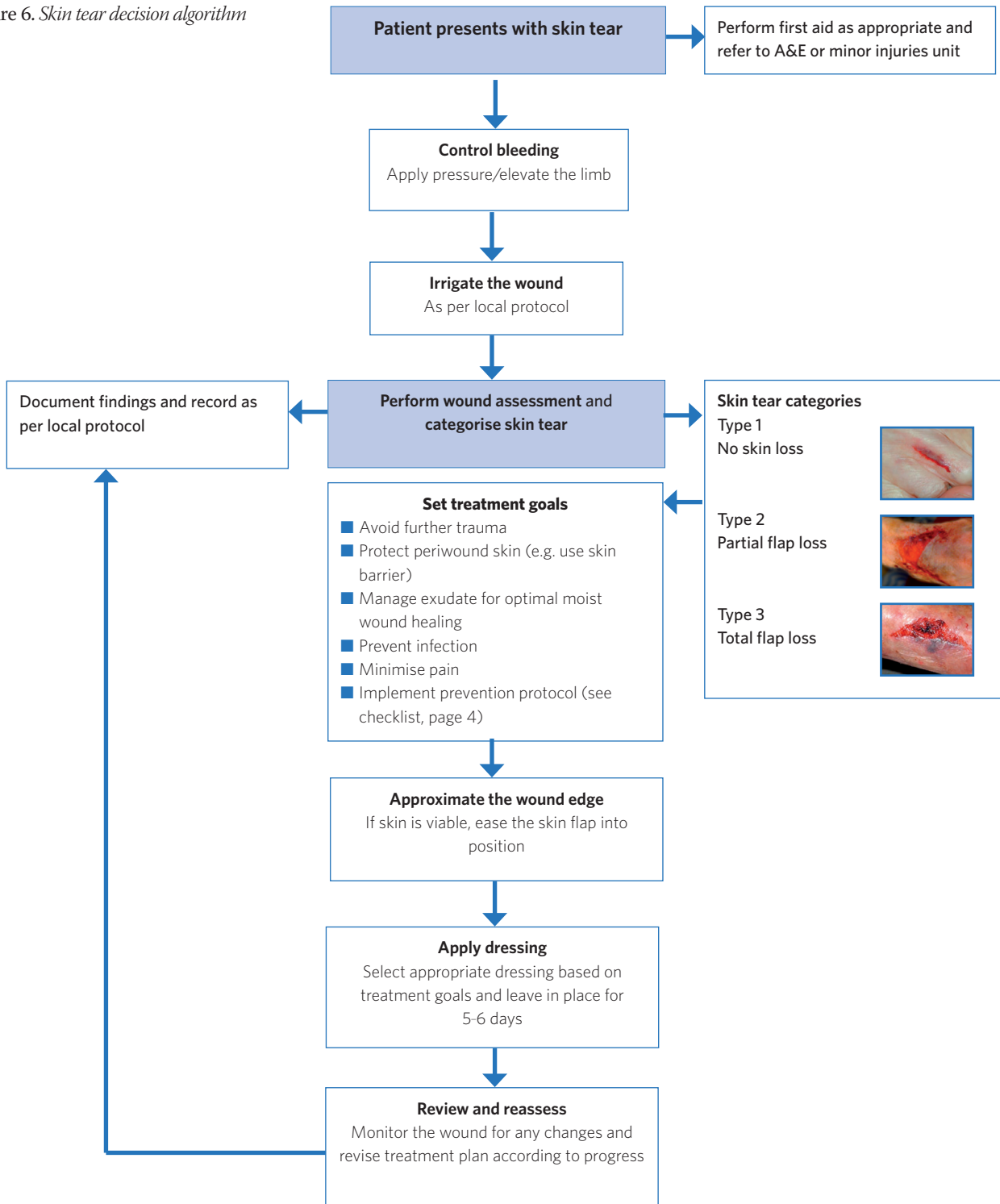




Figure 6. Skin tear decision algorithm



- If possible, use a dressing with extended wear time, so that it can be left in place to avoid disturbing the skin flap (ideally for 5-6 days). Dressings need to be changed more frequently if high exudate or signs of infection are present.
- It is important to mark with an arrow to indicate the correct direction of removal and make sure that this is clearly explained in the notes (Figure 5b and 5c). Adhesive removers can be used when changing the dressing to minimise trauma.

### Review and reassess

- Monitor the wound for signs of infection (e.g. increased pain, exudate, erythema, heat, oedema and malodour). If the wound becomes locally infected, this should be managed using an atraumatic antimicrobial (using systemic antibiotics only where appropriate, e.g. spreading erythema).
- If there are no signs of infection or deterioration, leave contact layer in place to avoid disturbing the flap. Monitor the wound for any changes, assessing the flap and surrounding skin.
- Where the skin or flap is pale or dusky/darkened, reassessment should be made as soon as possible within 24-48 hours.
- If the flap is non-viable, debridement and/or additional dressing may be required — refer to local Trust formulary.
- If there is no improvement (e.g. after four assessments) or the flap deteriorates, refer to appropriate specialist as per local protocol.

### Documentation

It is important to document wound assessment findings and the treatment goals. These should be used to develop a care plan, which should be individualised for the patient (see Appendix 1 and 2, page 9). Seeking and including the patient's experiences and priorities in the assessment process, and sharing the consequent decision-making, are important ways of empowering patients (Wounds International, 2012).

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## Appendix 1: Checklist for patients at risk of skin tears

- Have I been given an individualised skin care plan?
- Am I using an emollient every day?
- Am I eating sensibly and drinking enough water?
- Am I keeping as active and mobile as possible?
- Have I thought about wearing clothing to protect my skin — e.g. long sleeves or tubular bandages?
- Has my environment been made as safe as possible — e.g. adequate lighting, no obstacles and using padding on furniture if required?
- Discuss use of protective clothing — e.g. shin guards, long sleeves or retention bandages
- Am I wearing sensible/comfortable shoes to avoid falls?

## Appendix 2: First aid treatment for skin tears by carers and non-specialists

- First ensure the patient is safe from further trauma.
- Prompt treatment of skin tears is essential — it is important to replace the flap as soon as possible, to ensure it remains viable. Do not attempt to remove the damaged tissue.
- Take the patient to Accident and Emergency or a minor injuries unit as soon as possible, or report the injury to a community nurse or GP.
- Do not use dressings, as they may adhere to the skin and cause problems later.

