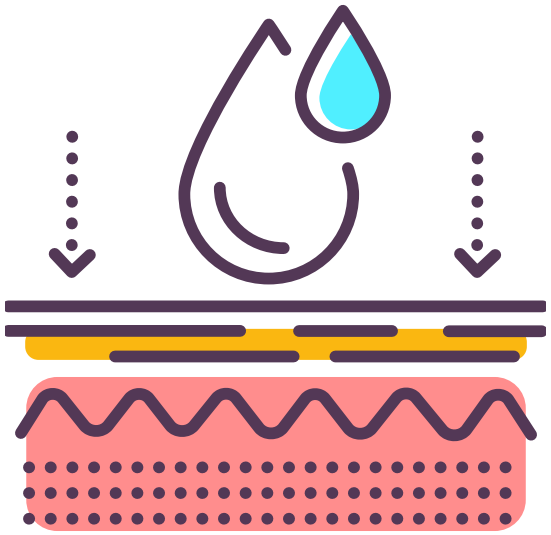
WOUNDS UK

Best Practice Statement

Managing ageing skin and maintaining skin integrity

2025



The importance of maintaining skin integrity

Skin assessment

Identifying signs and symptoms of compromised skin integrity

Prevention of skin damage

Understanding emollients

BEST PRACTICE STATEMENT: MANAGING AGEING SKIN AND MAINTAINING SKIN INTEGRITY

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Foreword

Changes in the skin associated with ageing, underlying conditions or other factors can compromise skin integrity, making it fragile and more prone to damage. While this is often dismissed as a minor or purely cosmetic concern, it needs to be acknowledged as a significant clinical issue.

When an individual is identified as being at risk, the focus should shift to risk reduction and prevention of skin damage. This should include a structured prevention programme and a consistent skincare regimen that uses emollients to maintain and protect skin health.

Moisturising remains underappreciated in clinical settings and is often viewed as a low-priority intervention. This misconception undermines efforts to implement effective, preventative skincare and must be challenged. Despite strong evidence, many patients do not receive appropriate emollient care.

An emollient-based skincare regimen can improve patient outcomes and quality of life while preventing damage and complications that are both distressing for patients and challenging for clinicians to manage.

Patients and clinicians need to be educated on the importance of monitoring the skin for changes, knowing the signs to look out for, and taking action to prevent damage that includes good skincare. Emollient application should be regarded as a standard component of routine skincare for all patients, particularly older adults and those with compromised skin. All clinicians, regardless of specialty, have a role to play in embedding this practice.

This document aims to raise awareness and provide practical strategies to protect skin integrity. It includes:

- A glossary of key terms to reduce confusion
- Best Practice Statements
- Practical tips and patient expectations
- Reflection prompts to encourage deeper understanding.

Jacqui Fletcher, Chair

GUIDE TO USING THIS DOCUMENT

This document is here to help you manage ageing skin and keep skin healthy. Each section offers practical guidance, reflective questions to encourage deeper thinking, Best Practice Statements and patient expectations.

GLOSSARY

Skin Structure and Physiology

- **Corneocytes** – Dead skin cells that make up the outermost layer of the skin; when dehydrated, they contribute to dryness and irritation
- **Dermoepidermal junction** – The interface between the epidermis and dermis. Normally wavy to increase contact area and strength, but flattens with age, making skin more vulnerable to shear forces
- **Lipid matrix** – Organised lipid structure in the stratum corneum that provides a protective barrier
- **Transepidermal water loss (TEWL)** – The process by which water diffuses and evaporates through the skin surface
- **Stratum corneum** – The outermost epidermal layer that protects underlying tissues from infection and damage

Common Skin Conditions and Symptoms

- **Debris** – Accumulated skin cells or substances on the surface of the skin, often needing gentle removal
- **Dermatitis** – Inflammation of the skin, often seen as erythema, swelling or irritation
- **Erythema** – Colour change of the skin caused by increased blood flow; may present as redness in light skin or other shades (purple, maroon) in dark skin
- **Excoriation** – Loss of upper skin layers due to prolonged exposure to alkaline fluids or proteolytic enzymes in wound exudate
- **Flaking skin** – Peeling of thin skin layers due to dryness, often with itching or irritation
- **Hyperkeratosis** – Thickening of the outer layer of the skin due to excess keratin, seen in calluses or plaques
- **Ichthyosis** – Group of skin conditions that cause dry, scaly skin
- **Maceration** – Softening and breaking down of skin resulting from prolonged exposure to moisture
- **Pruritis** – Medical term for itching
- **Xerosis** – Medical term for dry skin

Skincare Products and Types

- **Aqueous cream** – A traditional emollient now largely avoided as a leave-on product due to containing SLS (sodium lauryl sulfate), which can irritate skin
- **Emollient** – Medical moisturising treatments applied directly to the skin to soothe and hydrate it
- **Lotion** – A light emollient product, often preferred for daytime use; less greasy than ointments but less occlusive
- **Occlusive** – Describing a type of moisturiser that forms a barrier on the skin surface to reduce water loss (e.g. ointments, petroleum jelly)
- **Ointment** – A thick, greasy emollient with strong occlusive properties, often used at night or on very dry skin
- **Soap substitute** – A non-foaming cleanser designed to clean the skin without stripping natural oils or causing irritation
- **Steroid (topical)** – A prescribed anti-inflammatory cream or ointment used to treat inflamed skin; often applied after emollient use

Key Skincare Ingredients

- **Additives** – Ingredients added to emollients or skincare products to fulfil specific functions, e.g. urea for hydration
- **Humectant** – An ingredient in moisturisers that draws moisture into the skin (e.g. sodium PCA, glycerin, urea)
- **Paraffin** – An ingredient common in most emollients; acts to mimic the lipid barrier of the skin
- **Sodium lauryl sulfate (SLS)** – Detergent and foaming agent found in some creams and cleansers, known to irritate sensitive skin

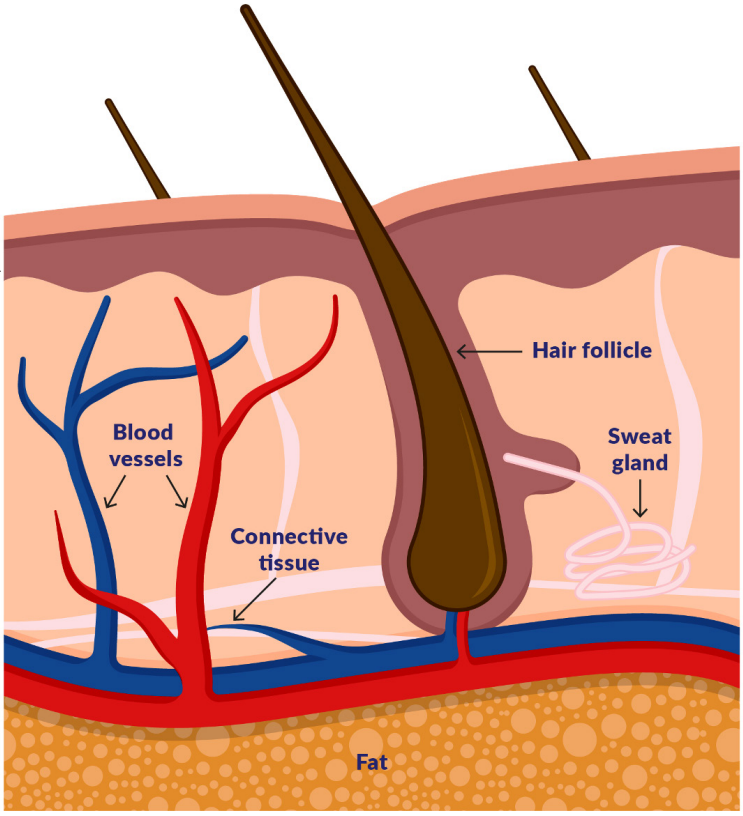
MAIN LAYERS OF THE SKIN

Dermoepidermal junction

- Provides structural adhesion between the epidermis and dermis

Dermis

- Beneath the epidermis
- Contains connective tissue, blood vessels, hair follicles, sweat glands and nerve endings



Epidermis

- Outermost layer (<1mm thick)
- Avascular
- Acts as a protective barrier against the external environment
- Target site for emollient therapy

Hypodermis

- Deepest layer
- Composed of fat and connective tissue
- Provides insulation and anchors skin to underlying structures (e.g. muscle and bone)

Figure 1. *Structure of the skin (Wounds UK, 2023)*

Skin accounts for ~15% of body weight

Average skin area: 2m^2

Contains ~300 million cells and 11 miles of blood vessels

Sheds >1 million cells daily, contributing to household dust

Functions of the skin

- **Protection:** Acts as a barrier against physical damage, pathogens and ultraviolet radiation
- **Temperature regulation:** Controls body temperature via sweat and blood flow; fat layer provides insulation
- **Sensation:** Detects touch, temperature, pain, and pressure through nerve endings
- **Vitamin D production**: Synthesises vitamin D from sunlight, essential for bone health
- **Excretion and absorption**: Removes waste through sweat and absorbs certain substances
- **Immunity**: Keratinocytes and immune cells support the body's defence against pathogens, while resident skin microbes provide an additional first line of defence

THE IMPORTANCE OF MAINTAINING SKIN INTEGRITY

Why skin health matters

- **11.8 million people in the UK** are **over the age of 65**, making up 18% of the population (Office for National Statistics, 2018)
- **54%** of the UK population experience a **skin condition each year** (Lawton, 2019)
- **With age**, the skin undergoes a natural structural and functional decline, including **reduced lipids, slower turnover, impaired barrier function and decreased microbiome diversity** (Woo and Kim, 2024)
- **These changes** weaken moisture retention and the skin's defence, leaving it **vulnerable to breakdown and injury**. While this is a normal physiological process, it requires **targeted and proactive management.**

Skin integrity

Skin integrity is defined as skin that is whole, intact and undamaged (Callaghan et al, 2018).

- In healthy individuals, the skin is resilient, capable of self-repair and functions as a barrier against chemical, physical and mechanical hazards, as well as microorganisms and allergens
- When damaged, epidermal cells can self-renew and differentiate to restore the barrier and maintain protection.

Skin health is integral to physical and psychosocial wellbeing, with a direct impact on quality of life and, indirectly, on partners, family and carers (International Skin Tears Advisory Panel [ISTAP], 2025). However, ageing, underlying health conditions and altered physiology can compromise integrity, leaving skin more vulnerable to external and internal hazards (Moncrieff et al, 2015).

Skin changes can be:

- **Extrinsic**: such as environmental damage (e.g. detergent use, sun exposure, pressure or cold weather)
- **Intrinsic**: such as the effects of skin conditions (e.g. psoriasis or atopic eczema), changes in blood supply or underlying illness (ISTAP, 2025).

See **Table 1** for a summary of common factors that can lead to impaired skin integrity.

It is important that clinicians understand the skin so they can recognise problems when they arise and take action to improve patients' quality of life and outcomes.

Best Practice Statement

How damage occurs

If the lipid matrix is damaged, cracks form, allowing moisture to escape and irritants to enter. This leads to dryness, inflammation and an increased risk of skin damage.

Corneocytes change with hydration. When hydrated, they resemble marshmallows (plump and swollen), creating a tight seal. When dehydrated, they resemble wrinkled grapes, shrunken with gaps that leave the skin vulnerable. These changes are often visible and can be assessed clinically.

The effect of ageing on the skin

Ageing makes skin progressively more fragile and prone to damage (**Figure 2** for the physiology of normal and ageing skin, and **Figure 3** for further information on these physiological changes). Key changes include (Wounds UK, 2015a):

- Thinning and flattening of the epidermis
- Loss of collagen and elastin **[Figure 4]**
- Atrophy and contraction of the dermis (causing the appearance of wrinkles and folds)
- Decreased activity of sweat and sebaceous glands (causing the skin to dry out)
- Thinning of blood vessel walls and reduced blood supply to the extremities
- Flattening of the dermoepidermal junction.

Table 1: Key factors that can affect skin integrity.

Factor affecting the skin	Effect on the skin
Ageing	As skin ages, dermal collagen and elasticity decline, leading to thinner, more fragile and less hydrated skin. The dermo–epidermal junction flattens, and the skin may appear looser or stretched
Ultraviolet damage	In sun-damaged skin, alterations occur in collagen and elastin. Connective tissue is damaged, and fewer feeding capillaries are present, leading to impaired healing capacity
Xerosis/ichthyosis (dry skin)	Dry skin affects the skin's natural barrier function, making it more vulnerable to infection and mechanical injury
Common skin conditions	Acute and chronic eczema, psoriasis and seborrhoeic dermatitis (as well as many less common conditions) make the skin more vulnerable to infection and injury
Inflammation	The inflammatory reaction, for example due to pressure damage causes inflammatory cells from surrounding tissues to infiltrate the skin, which can disrupt the skin barrier
Infection	Where the skin barrier is disrupted, rapid colonisation by bacteria, yeasts and fungi can occur, creating a vicious cycle of infection and inflammation
Irritants	Irritants from dressings, maceration due to incontinence and repeated cleansing can negatively impact skin health, leading to potential inflammation, maceration or infection
Mechanical injury	Scratching, pressure, shear and friction can cause skin tears and pressure wounds. Application and removal of dressings can also cause medical adhesive-related skin injury (MARSI)
Underlying diseases	Conditions such as diabetes, vascular disease or cardiac disease can impair the skin's ability to repair damage
Medications and treatments	Some medications can affect the skin. See below for examples and their effects on the skin (Gethin et al, 2022)

Medication type	Common skin-related side effects
Diuretics	Dry skin and dehydration
Long-term corticosteroids	Skin thinning, bruising, delayed healing
Chemotherapy	Photosensitivity, rashes
Immunosuppressants	Increased infection risk, delayed healing
Anticoagulants (e.g. Warfarin)	Bruising or bleeding that can make skin more vulnerable to damage; may prevent clot formation, extending healing time of non-healing wounds
Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)	Can delay healing by suppressing the inflammatory process, which is key to wound repair

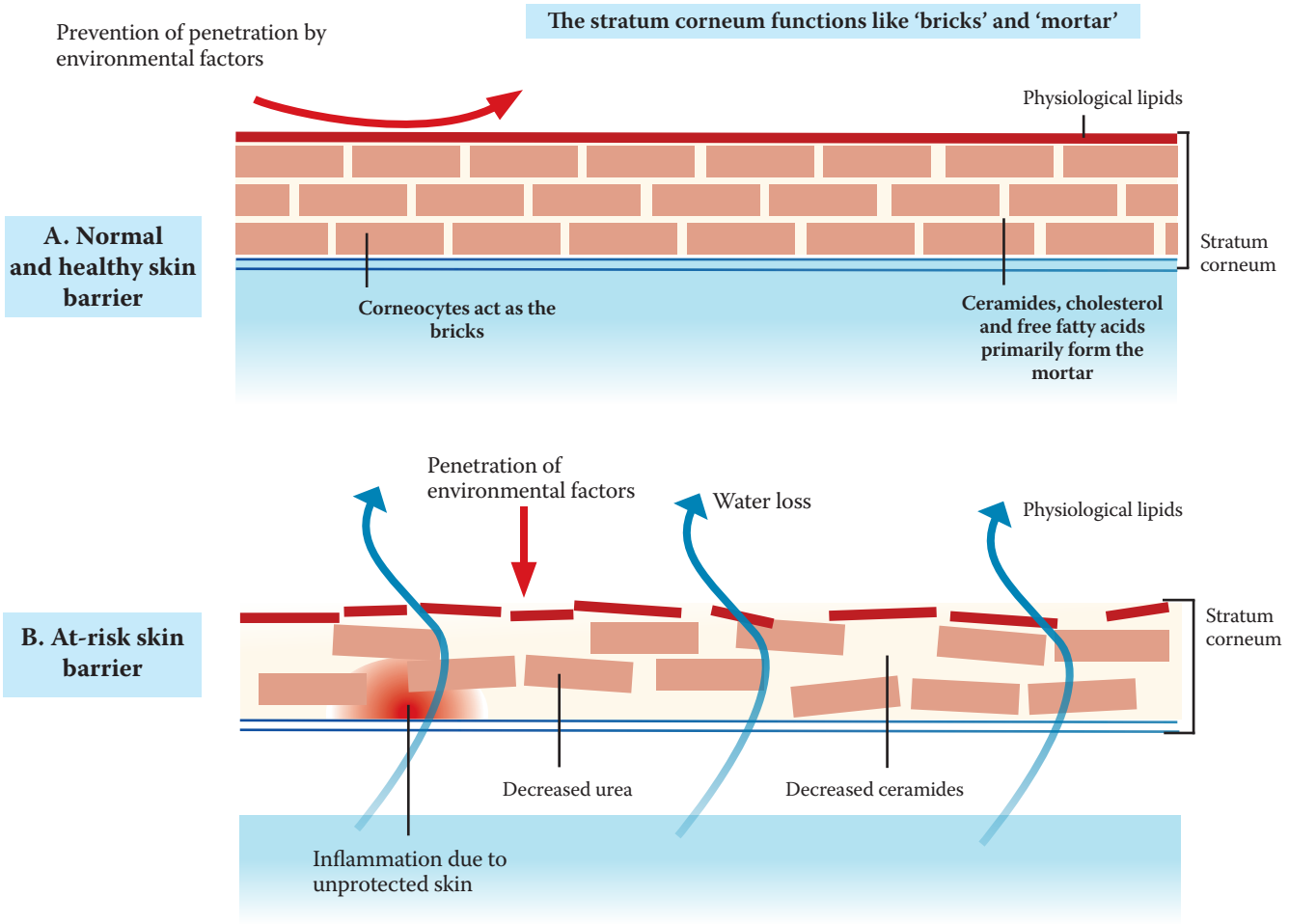


Figure 2. *The physiology of (A) normal and healthy skin barrier and (B) at-risk skin barrier (Moncrieff et al, 2015).*

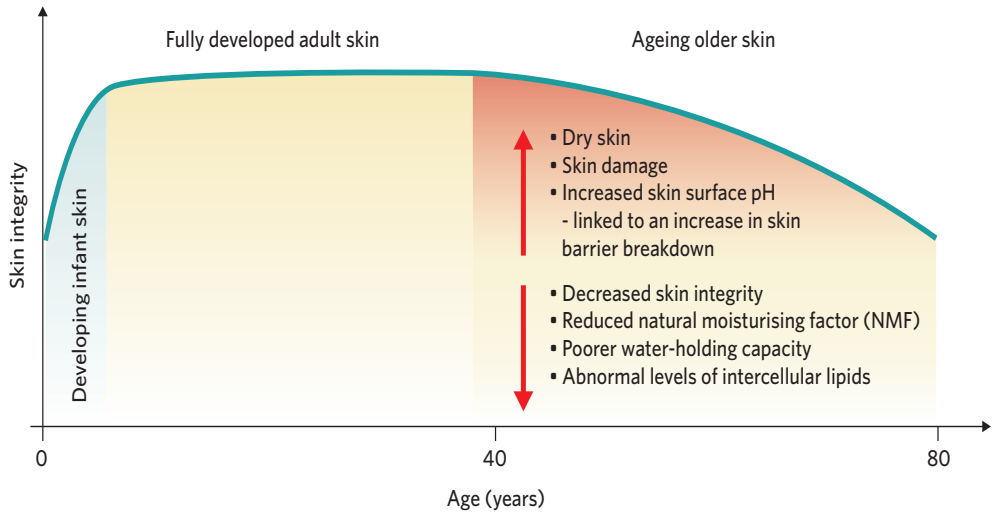


Figure 3. *Timeline of changes to the skin with age (Moncrieff et al, 2015).*

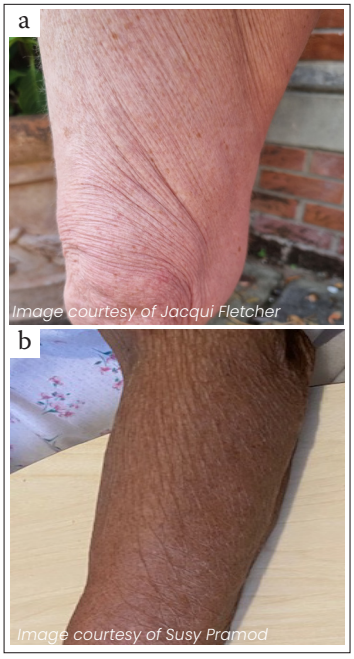


Figure 4. *Frail elderly skin showing loss of elasticity in (**4a**) knee and thigh region; (**4b**) arm region.*

Not just skin deep

Age-related skin changes are normal, but damage is not inevitable. Fragile or thinning skin should be recognised as a significant clinical concern rather than a cosmetic issue. Damage such as skin tears, pressure ulcers or non-healing wounds should not be viewed as normal or acceptable. The skin must be proactively protected and included as a core element of every person-centred care plan.

Despite its importance, moisturising is often dismissed as a cosmetic measure rather than recognised as a clinical intervention critical to maintaining skin integrity, particularly in older or clinically vulnerable adults.

Impact on quality of life

Chronic dry skin conditions can have a significant impact on people's lives.

They may cause:

- Persistent itching, leading to sleep disturbance and reduced concentration
- Discomfort when moving, which can limit independence
- Emotional distress due to visible skin changes or feelings of stigma
- Increased risk of infection.

Dry skin is not the result of poor hygiene, but patients may feel judged or embarrassed, especially when their condition is visible.

Conditions such as eczema and dermatitis can affect dignity and emotional wellbeing. These patients are at high risk of experiencing symptoms of depression, anxiety and decreased quality of life (Christensen and Jafferany, 2023).

The general management approach should include acknowledgement and validation of the patient's experience, realistic education on management and prognosis, and psychotherapeutic support where needed. Improved understanding, identification and management of the psychological aspects of chronic skin conditions may positively affect patient outcomes (Christensen and Jafferany, 2023).

Terminology

Skin integrity is a widely known concept, but there is often confusion and overlap in terms used to describe skin vulnerability or frailty (Beeckman et al, 2020). Skin frailty is generally used as an umbrella term for at-risk or vulnerable skin. Recognising this concept is important to support a proactive approach to protecting frail skin and preventing damage.

It is important not to confuse skin frailty with overall frailty, which may carry negative connotations for some people (Beeckman et al, 2020). Frailty is characterised as 'a health condition of decreased functional reserves leading to a vulnerable state with the inherent risks of a multitude of adverse outcomes' (Junius-Walker et al, 2018).

Beyond age: other groups at risk of skin frailty

Age is not the only factor contributing to skin frailty. While older adults are particularly vulnerable, many other patient groups **[Table 2]** are also at high risk of skin breakdown and its complications (Wounds UK, 2015b).

Individuals at risk of MASD

Moisture-associated skin damage (MASD) may be present or a risk in people with vulnerable, frail skin. Excessive moisture is known to damage the skin, but replenishing natural moisture remains important. Appropriate moisturisers can be used without increasing the risk of maceration (Beeckman et al, 2020). In some cases, it may be beneficial to use products containing amino acids, ceramides or essential fatty acids if available and cost-effective (Woo et al, 2017).

Excessive moisture should not be seen as a reason to avoid using moisturising products, as they protect the skin and improve its overall integrity (Woo et al, 2017), even in the context of MASD. In fact, using both a moisturiser and a skin protectant is recommended in many care pathways. This dual approach supports both skin restoration and protection (Cork

Moisturise proactively, not reactively. Do not wait for the skin to become visibly dry or broken. Support patients to moisturise daily, even when their skin appears healthy.

Best Practice Statement

When assessing skin integrity, consider the wide range of intrinsic and extrinsic factors that may compromise the skin barrier. Take time to review each patient's individual risks, such as age, underlying conditions, medications and environmental exposures and tailor prevention and management strategies accordingly.

Best Practice Statement

Address moisture; do not ignore it. Moisture-associated skin damage (MASD) can be just as harmful as dryness. Manage perspiration, incontinence or wound exudate using appropriate barrier products and a gentle cleansing routine.

Best Practice Statement

and Danby, 2009). For example, some protocols (e.g. the moisture-associated skin damage [MASD] pathway by South Tyneside and Sunderland NHS Foundation Trust) advise cleansing the skin with a moisturising wash product (e.g. Hydromol® Ointment, Alliance Pharmaceuticals Ltd) to replenish hydration, followed by application of a barrier product (e.g. Hydromol® Cream) to protect against further breakdown.

Causes of excess moisture need to be addressed, and the skin protected alongside an appropriate skincare regimen (Beeckman et al, 2020). Moisture may result from sweating, incontinence, wound exudate or environmental humidity. Persistent moisture can increase local bacterial or fungal load, particularly in skin folds. Fungal infections such as candidiasis are common in these areas. In some cases, astringent agents (e.g. zinc oxide or aluminium salts) may be used to help reduce moisture and support skin resilience. Where relevant, appropriate products should also be used to support continence management (Beeckman et al, 2020). Reinforcing normal hygiene routines and ensuring the skin is thoroughly dried after cleansing remain essential steps in preventing skin damage.

REFLECT AND BE BOLD

Consider the patient groups listed in this table and reflect on your own clinical practice. Which of these populations do you encounter most frequently? Are there additional risk factors for skin breakdown that you have noticed in your patients? Think back to recent cases – how did you identify early signs of skin compromise, and what interventions did you implement? Use this as an opportunity to connect the evidence with your everyday practice and challenge yourself to proactively prevent skin damage in high-risk individuals.

Table 2: Patient groups at risk of skin breakdown (adapted from Callaghan et al, 2018).

Patient group	Skin changes	Potential problems
Older adults	Skin becomes thinner, loses elasticity, reduced blood supply, decreased subcutaneous fat and lower skin hydration	Skin tears, pressure damage, infection, inflammation, dryness or flaking, issues related to nutrition or dementia, cellulitis
Spinal cord injury/paralysis	Altered vascular supply, impaired temperature control, moisture, maceration, collagen loss, muscle atrophy, impaired sensation (Rappl, 2008)	Skin tears, pressure damage, infection, inflammation
Critically ill and injured children	Changes due to prolonged pressure, shear and friction, poor perfusion and maceration	Nappy dermatitis, skin tears, pressure damage
Patients with spina bifida and cerebral palsy	Decreased skin perfusion, cutaneous drug reactions, perineal dermatitis, inflammation due to incontinence	Pressure injuries, incontinence-associated dermatitis (IAD), saliva-related dermatitis
Bariatric patients	Altered epidermal cells, increased transepidermal water loss, dry skin, maceration, increased skin temperature, reduced lymphatic flow and perfusion	Pressure damage, skin tears, diabetic ulcers, psoriasis, moisture lesions, intertrigo and fungal infections
Oncology patients	Radiation-induced inflammation, epidermal damage, reduced perfusion (Wounds UK, 2015b)	Pressure damage, delayed wound healing, skin infections, cellulitis, chemotherapy extravasation

SKIN ASSESSMENT

Skin assessment [**Box 1, 2, 3 and 4**] should be carried out for all patients, ideally at the first visit or hospital admission and integrated into ongoing care bundles such as SSKIN (Surface, Skin, Keep moving, Incontinence, Nutrition) to ensure changes in health status or skin integrity are identified promptly (Wounds UK, 2015b). A holistic, integrated approach should consider the patient's mobility, nutrition, psychosocial and socio-economic factors (Beeckman et al, 2020).

The primary aim of skin assessment is early identification of people with frail skin who may be at risk of developing damage, so that preventive action can be taken. In at-risk individuals, skin should be monitored regularly as part of routine care.

REFLECT AND BE BOLD

Take a moment to look at your own skin. Where is it thinnest? What happens when you press gently with your finger? What about your patients? How often do you pause to check skin health before damage occurs?

Box 1: Components of a full skin assessment.

1. Patient medical and skin condition history

- ☐ How long has the patient had the skin condition, and how frequently does it occur?
- ☐ Are there seasonal variations?
- ☐ Is there a family history of skin disease?
- ☐ Could the patient's occupation or hobbies affect their skin (e.g. chemical exposure, repeated handwashing)?
- ☐ What medications is the patient taking, particularly long-term treatments such as corticosteroids?
- ☐ Does the patient have intrinsic risk factors for vulnerable skin, such as advanced age, diabetes, atopy (heightened immune response to allergens) or thin skin?
- ☐ Is the patient exposed to extrinsic risk factors such as increased sun exposure, tobacco or alcohol?
- ☐ What previous treatments have been used, and how effective were they?
- ☐ Are there any treatments, actions or behaviours that influence the condition?

2. Patient knowledge and perception

- ☐ Does the patient understand their skin condition and how to manage it?

3. Visual skin assessment

- ☐ Is the skin intact, broken or compromised?
- ☐ Are there visible changes such as rash, dryness, redness, bruising, lesions or unusual colour changes?
- ☐ Is there evidence of soreness, itchiness or tenderness?
- ☐ Are there wound-related risk factors such as varicose eczema, infection, high exudate, excessive moisture, oedema or pitting?
- ☐ Is there any odour present?

4. Tactile assessment

- ☐ Is the skin temperature within normal range (or as measured by infrared thermography)?
- ☐ How does the skin feel? Is the texture smooth, dry, rough or thickened?
- ☐ Does the skin show normal turgor and elasticity?
- ☐ Are any abnormalities detected by gentle touch or pressure?

5. Sensory and olfactory observations

- ☐ Is there warmth, swelling or an unusual odour suggesting infection?
- ☐ Does the patient have any challenges that affect their ability to care for their skin, such as reduced mobility, limited dexterity or larger body size?

Ideally, carry out the skin examination in a warm, private room, although it is recognised that this may not always be possible.

REFLECT AND BE BOLD

Think about your own skin and how you would like someone to communicate with you about it – consider language, tone of voice and expression.

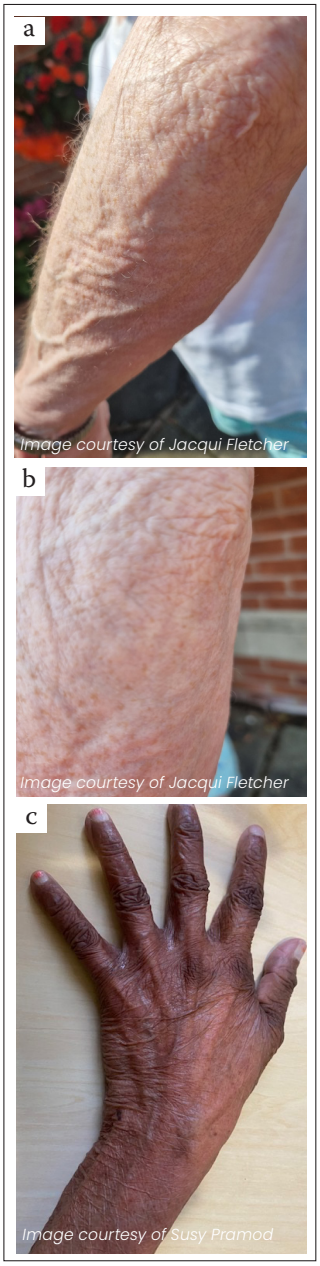


Figure 5. *Frail elderly skin showing a tile-like pattern. (**5a**) Overview; (**5b**) Zoomed-in view; (**5c**) Tile-like pattern in dark skin tone.*

Box 2: How to involve a patient in a skin assessment.

Engaging patients in their skin assessment helps identify early changes that may not be visible to clinicians. Asking simple, direct questions can provide valuable insights into how the patient's skin looks, feels and functions.

Questions to ask the patient:

- ☐ Have you noticed any changes in the colour of your skin?
- ☐ Are any areas of your skin sore or painful?
- ☐ Does any part of your skin feel warmer or cooler than usual?
- ☐ Does your skin feel spongy, firm or different to the touch?
- ☐ Does your skin look or feel shiny or tight?
- ☐ Have you noticed any swelling?
- ☐ Has the texture of your skin or the tissue underneath changed?
- ☐ How would you describe the overall condition of your skin?
- ☐ Do you have any itchiness, pain or changes in sensation (e.g. numbness, tingling)?

Visual assessment for frail skin

Clinicians should look for signs of compromised hydration, such as flaky or rough patches, scaling, a 'tile-like' texture [Figure 5], dullness, colour changes and areas of irritation or erythema. For example, dry, flaky skin on the lower legs that appears dull and discoloured may indicate early barrier impairment. Scarring and callus formation should also be noted, as these may result from repeated pressure due to a person's occupation or from ill-fitting footwear (e.g. a patient with diabetes developing calluses on the soles of the feet).

Recognising what healthy skin looks like is equally important. In younger people, skin is usually smooth, supple and relaxed. In older adults, skin may naturally appear wrinkled or less taut. This does not necessarily indicate deterioration. These observations provide a benchmark for identifying early compromise.

The importance of the senses in assessment

The senses, especially touch, should form part of skin inspection and assessment (Dhoonmoon et al, 2021). Using touch alongside visual assessment allows clinicians to build a more complete understanding of the patient's skin and its condition.

Did You Know?

Although the skin turgor or pinch test has historically been used to assess hydration, it is now considered unreliable (Goehring et al, 2022). The test primarily reflects skin elasticity, which can be affected by factors other than hydration, and should not be used as a sole indicator of skin condition.

Recognition of skin tone

Skin assessment should include identification of the patient's baseline skin tone as part of a holistic evaluation that considers overall health, medical history and any wounds (Dhoonmoon et al, 2021). Establishing a baseline makes it easier to detect and monitor changes.

The Skin Tone Tool (adapted from Ho and Robinson, 2015) is a validated classification resource that displays a range of skin tones [Figure 6]. Clinicians can use it to identify the tone that most closely matches the patient's inner upper arm. The tool is simple, cost-effective and suitable for use across care settings (Dhoonmoon et al, 2021).

Skin tone is not uniform across the body. The palms and soles are typically lighter, while areas of high friction or contact, such as between the buttocks, are often darker than surrounding skin.

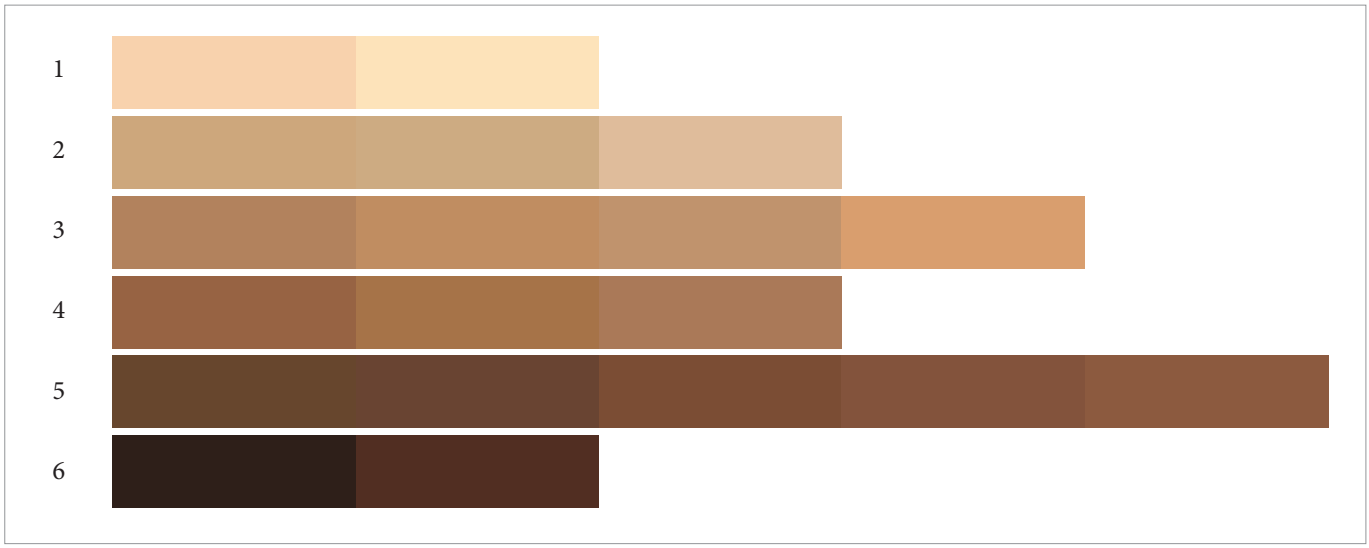


Figure 6. *Skin Tone Tool (adapted from Ho and Robinson, 2015).*

Box 3: Roles in skin assessment and care.

Skin assessment is a shared responsibility across the multidisciplinary team (MDT), carers, families and individuals. Each group contributes to maintaining skin health and preventing deterioration.

Group	Key responsibilities
Registered staff (e.g. nurses, doctors)	Lead comprehensive assessments and management plans. Review risk factors systematically and coordinate interventions
Unregistered staff and social care workers	Often have the most frequent contact with patients and should perform routine skin checks, escalate concerns promptly and ensure skincare regimens are followed
Pharmacists	Support patients by recommending appropriate products and developing personalised care plans in line with local guidance (e.g. Pharmacy First in Scotland)
Individuals and families	Monitor skin regularly for changes such as dryness, redness or itchiness, and report concerns early. For those with dry or vulnerable skin, self-assessment is a key first step. Daily moisturising and early recognition of problems enable timely escalation (e.g. moving to medical-grade emollients or seeking professional advice) (World Union of Wound Healing Societies, 2020)

All members of the MDT (e.g. nurses, doctors, healthcare assistants, occupational therapists, physiotherapists, pharmacists) should be trained to recognise risk factors and implement strategies to protect skin integrity (ISTAP, 2025).

REFLECT AND BE BOLD

Assess your own skin tone using the skin tone tool. Reflect on how you might notice changes in your own skin and what form this may take – e.g. suntan/sunburn, moles and freckles or age-related changes.

Patients should expect to have their baseline skin tone assessed so that changes can be identified and monitored over time.

Patient expectation

REFLECT AND BE BOLD

Consider whether your documentation captures not only what you see, but also what you feel, smell and observe about the individual's overall condition.

Thorough documentation of a skin assessment helps track changes over time, supports timely interventions and ensures clear communication across the care team — preventing deterioration and promoting patient safety.

Best Practice Statement

Know what you are looking for. Dryness, redness, scaling and small skin breaks are not just cosmetic — they are early warning signs. Build confidence in assessing the skin thoroughly and regularly.

Best Practice Statement

Box 4: Warning signs to look out for (adapted from Callaghan et al, 2018)

Colour/ appearance	☐ Rapidly spreading rash or change in skin colour – may appear as redness or, in darker skin tones as subtle to deep discolouration (e.g. purple, maroon, or dark red; Dhoonmoon, 2023; Harte and Marshall, 2025) ☐ Unusual spots, lumps or moles that change shape, size or colour ☐ Unexpected bruising or bleeding
Skin integrity	☐ Blisters with no clear cause ☐ Open sores or ulcers that do not heal ☐ Skin breakdown over bony areas (e.g. heels, hips) ☐ Peeling skin or large areas of redness
Symptoms	☐ Skin painful to touch (even if it appears normal) ☐ Persistent itching or burning
Infection signs	☐ Cellulitis ☐ Leaking pus or fluid ☐ Fever or feeling unwell associated with skin change
Allergic reaction	☐ New rash after starting medication ☐ Swelling of lips, face or eyes
Dryness	☐ Very dry, cracked or worsening flaky skin despite moisturising

If in doubt, escalate.
Early referral prevents deterioration and promotes faster recovery.

IDENTIFYING SIGNS AND SYMPTOMS OF COMPROMISED SKIN INTEGRITY

There are common signs and symptoms that indicate an individual's skin integrity is compromised or vulnerable to damage, signalling the need for timely action [Table 3].

Table 3: Key signs of skin damage and their clinical implications.

Skin sign	Description	Relevance and recommended actions	Image
Callus formation	Localised thickening or hardening of the skin due to repeated friction or pressure. Common over feet, hands or bony prominences.	**Indicates:** Mechanical stress or pressure; may mask underlying tissue injury. **Actions:** Review footwear, positioning or mobility aids. Reduce friction. Monitor surrounding skin for breakdown or ulceration.	 Image courtesy of Jacqui Fletcher
Cracking and fissures	Superficial cracks may appear as fine surface lines, often around heels, knuckles or fingertips. Deeper fissures extend into the dermis, may bleed, cause pain and expose underlying tissue.	**Indicates:** Advanced dryness and loss of barrier integrity. Deep fissures increase risk of bacterial or fungal infection. **Actions:** Apply emollients to restore moisture. Protect with dressings or barrier films. Assess for fungal infection (especially on the feet). Escalate if fissures are deep, painful or show signs of infection.	 Image courtesy of Jacqui Fletcher  Image courtesy of Susy Pramod
Dry or flaking skin (xerosis)	Skin appears dull, rough, flaky or peeling. May feel tight, itchy or sensitive even without visible cracks. Common on lower legs, arms, hands or trunk. May cause visible shedding and discomfort.	**Indicates:** Impaired barrier function, reduced lipid or water content. The itch-scratch cycle can worsen inflammation and lead to breaks or infection **Actions:** Apply emollients at least twice daily. Avoid harsh soaps, over-washing and hot water. Encourage gentle drying and hydration. Monitor for fissures, redness or secondary infection.	 Image courtesy of Mid Yorks NHS Teaching Trust  Image courtesy of Jacqui Fletcher

Table 3: Key signs of skin damage and their clinical implications. *(Continued)*

Skin sign	Description	Relevance and recommended actions	Image
Erythema and inflammation	Redness and warmth due to increased blood flow. In darker skin tones, may appear purple, grey or brown. Swelling or oedema can occur due to vascular leakiness.	**Indicates:** Trauma, infection, pressure or irritation. May be an early sign of tissue damage or infection. **Actions:** Assess baseline skin tone and temperature. Reposition or relieve pressure. Check for pain, heat or swelling. Escalate if discolouration does not fade, extends or becomes painful.	 Image courtesy of Mid Yorks NHS Teaching Trust  Image courtesy of Mid Yorks NHS Teaching Trust
Hyperkeratosis	Thickening of the outer skin layer due to increased keratin production and maturation of skin cells, often on feet, elbows or lower legs. Skin becomes rough, hard or cracked. Note: excessive debris is not always hyperkeratosis.	**Indicates:** Chronic friction, pressure or impaired barrier function. Can increase risk of breakdown if untreated. **Actions:** Gentle removal of skin debris or thickened areas using soft cloths, emollients or soft debridement pads where appropriate. Escalate to specialists for more advanced care if needed.	 Image courtesy of Mid Yorks NHS Teaching Trust  Image courtesy of Jacqui Fletcher
Skin tears	A traumatic wound caused by mechanical forces, including removal of adhesives and patient handling. Depth may vary (not extending through the subcutaneous layer). Most common at the extremes of age (older adults and neonatal population).	**Indicates:** Fragile skin or mechanical stress. High risk of delayed healing and infection. **Actions:** Protect with appropriate dressings, minimise trauma and assess surrounding skin. Escalate if extensive, deep or if signs of infection are present.	 Image courtesy of Samantha Holloway  Image courtesy of Christina Harris
Itch (pruritus)	Persistent urge to scratch, commonly reported in dry skin and eczema. Can occur even if skin appears visually normal.	**Indicates:** Barrier disruption or underlying inflammation. **Actions:** Identify triggers, encourage emollient use, skincare and protective measures (cotton gloves at night). Consider topical or systemic treatment if appropriate.	 Image courtesy of Jacqui Fletcher

Identifying dermatitis

'Dermatitis' refers to inflammation of the skin and is an umbrella term encompassing a range of conditions. It is not a single diagnosis and may have different causes and presentations. Dermatitis may present as dry, red, flaky or itchy skin. See **Table 4** for more information on common types of dermatitis and how they can be identified.

Table 4: Identifying common types of dermatitis.

Type	Description/key features
Atopic dermatitis	Often hereditary, commonly linked to allergies or asthma. Presents with dry, itchy, inflamed skin, typically on flexural areas.
Irritant contact dermatitis	Results from repeated exposure to irritants such as soaps, detergents or chemicals. Skin may appear red, dry or cracked.
Allergic contact dermatitis	Triggered by an allergic reaction to a specific substance, e.g. nickel, fragrance or topical medications. Presents with redness, itching and sometimes vesicles.
Xerotic eczema	Characterised by very dry, cracked skin due to lipid deficiency. Common in older adults and often associated with rough, flaky patches.
Venous (stasis) eczema	Associated with chronic venous insufficiency, typically affecting lower legs **[Figure 7]**. Skin may appear red, scaly and itchy, often with pigmentation changes or oedema. Often exacerbated by standing or immobility.

Figure 7. *Dermatitis/venous eczema.*

Identifying senile purpura

Senile purpura **[Figure 8]** is a benign skin condition characterised by ecchymotic patches resulting from age-related dermal thinning and cumulative photodamage, which reduce vascular support and resilience. It occurs most commonly in older adults, particularly those with chronic sun exposure or on long-term corticosteroid or anticoagulant therapy.

Clinically, it presents as irregular, dark purple, bruise-like lesions on sun-exposed areas such as the forearms and hands, often arising after minimal trauma. These lesions are non-tender, do not progress to inflammation and typically resolve slowly over one to three weeks, leaving residual brown pigmentation. Recognition is important to distinguish it from bruising due to systemic bleeding disorders.

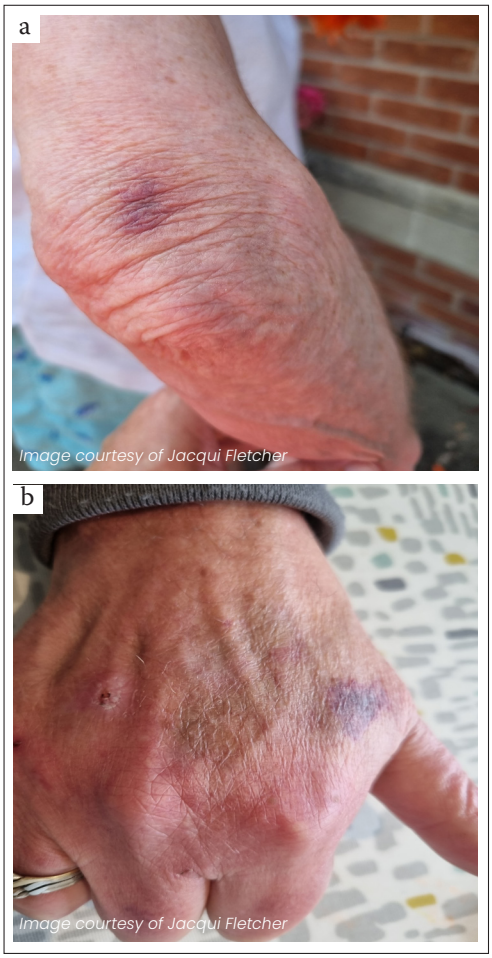


Figure 8. *Senile purpura presenting as irregular, dark purple patch on (**8a**) extensor surface of the elbow and (**8b**) hand.*

PREVENTION OF SKIN DAMAGE

REFLECT AND BE BOLD

If you find yourself thinking, "What can I do to help this patient's skin?", focus on what risk factors you can modify, acknowledge those you cannot and take simple, practical steps that suit the person in front of you.

Figure 9. *Skin debris.*

Wherever possible, prevention should be the main aim, especially in at-risk populations (Beeckman et al, 2020; Konya et al, 2024).

1. Risk assessment and context

- Evaluate the patient's risk factors: mobility, comorbidities, living environment, support networks and daily activities
- Consider psychosocial and mental health factors that may affect the individual's ability to maintain skincare.

2. Skincare and emollient use

- Regular moisturising is essential to maintain skin barrier integrity and prevent dryness. Emollient therapy is preferred, especially for frail skin (pages 18–22)
- Emollient use should underpin all other preventive measures.

3. Local hygiene and skin debris management

- Maintain healthy skin through regular cleansing and removal of surface debris [Figure 9]
- Avoid over-exfoliation, as this can worsen dryness or irritation.

Approach by severity:

- **Normal debris**: Manage with routine cleansing using mild soap substitutes
- **Visible debris:** Particularly in skin folds or intertriginous areas, may require gentle removal using soft debridement pads or cloths. Toe flossing can help remove debris between toes (International Wound Infection Institute, 2025)
- **Significant build-up:** May require soaking, emollient-based ointments or referral to a specialist.

4. Physical reduction of risk

- Reduce sun exposure
- Limit frequent bathing and ensure water temperature is not too hot
- Pat skin dry with a soft towel rather than rubbing (ISTAP, 2025)
- Review positioning, pressure relief and mobility aids to minimise friction and pressure.

5. Risk reduction programme

ISTAP (2025) recommends a structured risk-reduction programme for skin tears, focusing on general health, mobility and skin. This approach can also be applied more broadly to maintaining overall skin integrity [Table 5].

Table 5: Adapted ISTAP risk reduction programme (ISTAP, 2025).

Risk factor	Individual	Caregiver/provider [Box 6]
General health	■ Educate patient (if they have capacity) ■ Optimise nutrition and hydration	■ Safe patient environment ■ Educate caregivers ■ Protect from self-harm ■ Consult a dietitian ■ Review polypharmacy
Mobility	■ Encourage active involvement (if physical function not impaired) ■ Appropriate selection and use of assistive devices	■ Perform regular skin assessment and monitor for damage ■ Safe patient handling/equipment, including proper transferring and repositioning ■ Falls prevention programme (remove clutter, proper lighting) ■ Use padding on equipment ■ Avoid grabbing with fingertips
Skin	■ Encourage awareness of medication-induced skin fragility ■ Wear protective clothing ■ Frequently moisturise skin ■ Keep fingernails short ■ Manage comorbidities	■ Skin hygiene — warm/tepid water, soap-free pH-neutral cleansers, moisturise skin ■ Avoid strong adhesives, dressings, tapes ■ Avoid grabbing with fingertips ■ Routinely use adhesive removers and liquid skin sealants

Practical tips: for patients

- **Be brave and ask for help.** If you notice discomfort, dryness or changes to your skin, let someone know. Skincare is an important part of staying well
- **Keep moisturising,** even if your skin feels fine. Prevention is easier than repair and regular moisturising helps keep the skin strong and flexible
- **Don't be embarrassed.** Dry or fragile skin is common, especially as we age.

Practical tips: for healthcare professionals

- **Assess the skin** regularly, especially in high-risk areas such as the lower legs, heels and skin folds. Use your clinical judgement to spot early signs of dryness or irritation
- **Be confident** in raising concerns or recommending daily moisturising as part of a care plan. Skincare is not 'just cosmetic' – it's a core part of maintaining health and comfort
- **Offer clear, practical advice** to patients and families. Explain why moisturising matters, how to apply it and when to seek further help. Don't assume people know how to use these products
- **Support choice.** Where possible, allow patients to choose a texture and format they prefer. This encourages regular use and engagement.

Cleanse gently using a non-soap cleanser or emollient-based product that preserves the skin's natural lipids. Avoid hot water, scrubbing or perfumed washes.

Best Practice Statement

UNDERSTANDING EMOLLIENTS

MYTH

Emollients are only for people with eczema.

TRUTH

Emollients help protect and repair all dry, fragile or irritated skin, not just eczema. They soothe, reduce dryness and help prevent the itch-scratch cycle.

The use of emollients plays a key role in the prevention and treatment of skin damage. They help restore barrier function, improve hydration, reduce itching and enhance comfort. While their therapeutic benefits for specific conditions are established, emollients should also form part of routine skincare for individuals at risk of breakdown (Callaghan et al, 2018).

Moisturisers versus medical-grade emollients

The terms "moisturiser" and "emollient" are often used interchangeably, but they are not the same.

Term	Function
Moisturiser	Hydrates surface layers; may include humectants and occlusives
Emollient	Replenishes lost lipids, reduces transepidermal water loss and supports barrier recovery

All emollients are moisturisers, but not all moisturisers have the therapeutic qualities of medical-grade emollients.

Box 5: Composition of natural moisturising factors (NMFs; Clar and Fourtanier, 1981)

Component	% of total NMF
Amino acids (free)	40
Pyrrolidone carboxylic acid (PCA)	12
Lactates	12
Other undetermined fractions	8.5
Urea	7
Chlorides	6
Sodium	5
Potassium	4
Ammonia	1.5
Calcium	1.5
Magnesium	1.5
Phosphate	0.5
Citrates, formates	0.5

Mechanism of action

Depending on their constituents, emollients work either by:

- **Occlusion** – 'trapping' moisture in the skin to slow evaporation
- **Humectant action** – drawing moisture into the stratum corneum from the dermis through the effect of humectants in an active way (Moncrieff et al, 2015).

Many over-the-counter moisturisers hydrate the skin temporarily but lack the appropriate ratio or concentration of lipids to restore barrier function. To effectively repair the skin barrier, lipid-rich, medical-grade emollients are required – not just simple moisturisers.

Humectants and natural moisturising factors (NMFs)

Many emollients contain humectants, which attract and retain water within the skin. Some humectants (e.g. urea and sodium PCA) are naturally present in the skin's natural moisturising factors (NMFs), while others (e.g. glycerol and isopropyl myristate) mimic this function by drawing water into the stratum corneum and holding it there.

NMFs are substances found within the stratum corneum that help attract and retain water, supporting skin hydration and barrier function (Clar and Fourtanier, 1981). See **Box 5** for a detailed breakdown of NMF composition.

Some formulations may also include anti-itch or antiseptic agents, which can be useful for conditions such as eczema (Moncrieff et al, 2015). These additions should be used only when clinically indicated.

Types and properties of emollients

Emollients are available in different formulations, including ointments, creams, lotions, as well as liquid body washes and gels, which should be pH-balanced (i.e. with a pH of 4.5–6.5), fragrance-free and non-sensitising (Callaghan et al, 2018; Carville and Ousey, 2025).

The choice depends on the degree of skin dryness and patient preference. For example, very dry skin may require thicker ointments, whereas mildly dry skin may respond well to creams or lotions.

Barrier creams, often used for conditions such as incontinence-associated dermatitis (IAD), create a protective layer that shields the skin from irritants. However, they differ from regular emollients, which primarily focus on hydration.

The ideal emollient should:

- Hydrate the skin and decrease transepidermal water loss
- Restore and maintain the lipid barrier
- Be fragrance-free and hypoallergenic
- Avoid blocking pores
- Affordable and accessible in routine care settings (Sethi et al, 2016; National Library of Medicine, 2024).

Choosing the right emollient

Selecting the right product should be a person-centred decision, made in collaboration with the patient to optimise engagement and outcomes.

Consider:

- The degree of skin dryness
- Product texture, scent and ease of application
- Cost and availability
- Allergies and sensitivities.

Refer to **Table 6** for a decision-making framework for emollient selection based on intended use, formulation and key ingredients. Multiple options may be combined to meet individual needs.

The product format can also influence adherence. For example, some patients may prefer a tub, others a tube or pump. Being flexible and offering options can help encourage use. Thinking about practicalities, such as keeping one emollient at home and another in a handbag or pocket, can also support daily use.

Cultural considerations and traditional practices

Patients and families may use traditional remedies to manage dry skin, such as turmeric, aloe vera or plant and seed oils, which have been used for centuries (Ayanlowo et al, 2022).

Top Tip

Fragranced or perfumed products should be avoided unless specifically requested. Ingredients such as sodium lauryl sulfate (SLS) or chlorhexidine can cause irritation, especially in dry or damaged skin. It is good practice to check for allergies and sensitivities and to be familiar with common ingredients in emollients.

Olives, a staple of Mediterranean culture, hold significant historical, spiritual and cultural importance, especially within Islamic tradition, where olive oil remains a widely valued and commonly used element in daily life. Its effect on the skin barrier has long been debated; a systematic review found mixed evidence but highlighted the health benefits of olives and their potential in dermatological conditions, particularly in bridging traditional beliefs with modern medicine (Alam et al, 2025).

A separate literature review exploring the use of plant and seed oils for skincare found that many have several benefits due to their constituents (e.g. free fatty acids, triglycerides, ceramides, phospholipids, vitamins and antioxidants), which have been shown to promote healthy skin barrier function, wound healing and have anti-inflammatory and antimicrobial effects. However, they are not without potential adverse effects, which may be mainly due to processing and storage hygiene (Ayanlowo et al, 2022).

It is important to discuss preferences openly with the individual, respecting their beliefs and practices while ensuring they do not interfere with recommended care. Refer to local formularies to ensure access to effective emollients that protect the lipid barrier while respecting patient preferences.

Top Tip

Consider tools such as applicators to support patients with limited dexterity or difficulty applying products independently.

The saying that using 'anything is better than nothing' holds some truth; however, for vulnerable or compromised skin, choosing a medical-grade emollient is essential.

Best Practice Statement

Did You Know?

NMF production naturally declines with age or skin damage. Using humectant-containing emollients can restore hydration and support barrier function, especially in older adults or those with compromised skin.

MYTH

Emollients are not necessary if the skin doesn't feel dry.

TRUTH

Regular use helps maintain healthy skin and prevent damage, even before dryness appears.

Common irritants and allergens found in skincare products

Common irritants and allergens	Notes/potential effect
Sodium lauryl sulfate (SLS)	SLS helps preserve an emollient's creamy texture but is also a known skin irritant that can cause local reactions (e.g. stinging and contact dermatitis), particularly in children with atopic eczema (Edwards and Imison, 2015). To avoid irritation, almost all ointments containing an emulsifying wax are SLS-free, such as Hydromol® Ointment, which is free of SLS, colours, fragrances and preservatives
Fragrances/essential oils	Added to many skincare products for scent. For people with sensitive and dry skin, these can cause irritation or allergic contact dermatitis (Wounds UK, 2023).
Preservatives	Can contribute to adverse skin irritations and reactions. Ointments typically don't contain preservatives, so they are less likely to cause problems for people with sensitive skin (Wounds UK, 2023)

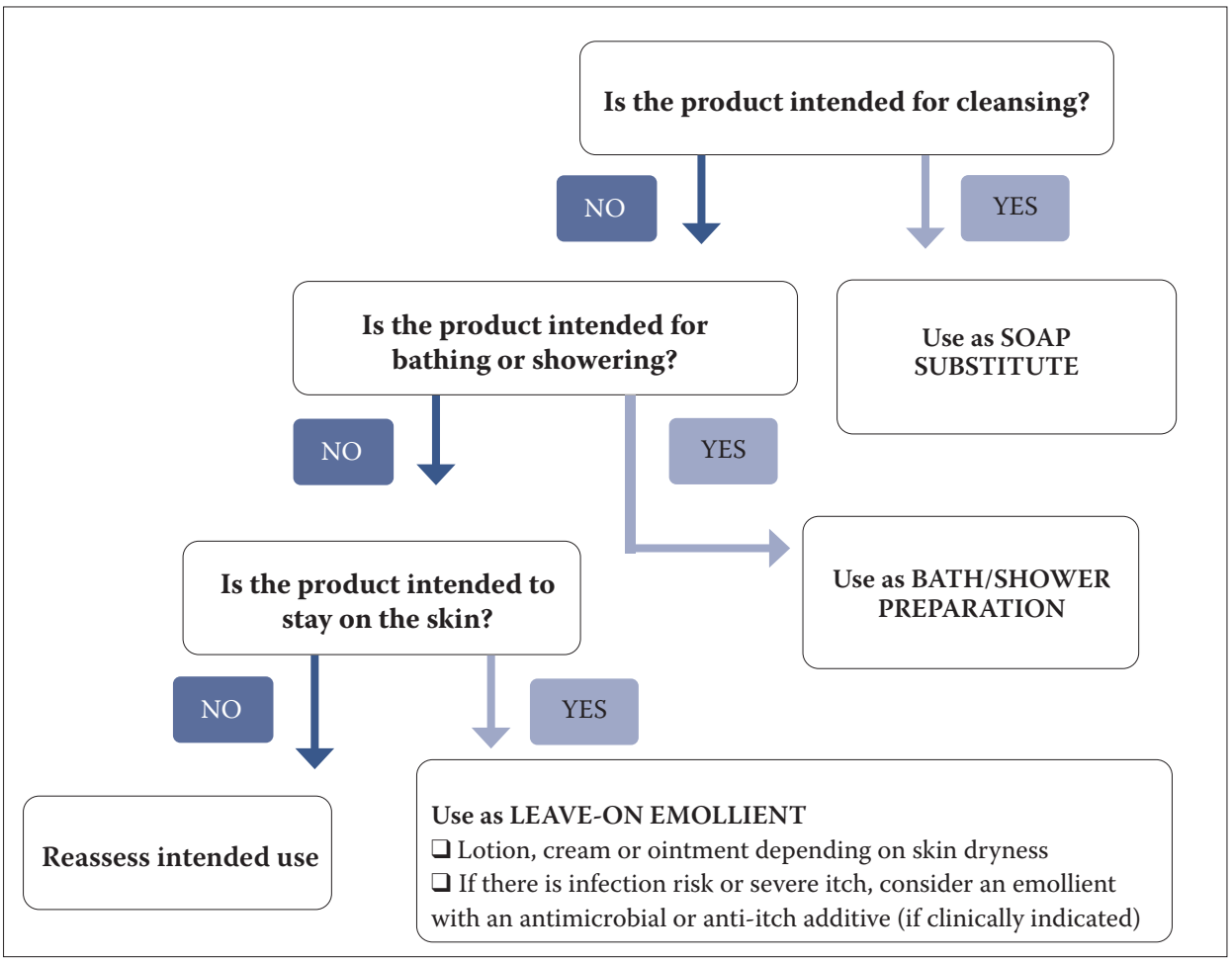


Table 6: Decision-making framework for emollient selection (adapted from National Health Service, 2024)

MYTH

Emollients are highly flammable and unsafe.

TRUTH

While emollients themselves do not catch fire, when they soak into fabrics (such as clothing or bedding) and dry, they can make those materials more flammable. This increases risk if exposed to sparks, embers or open flames. Smoking should be avoided to reduce this risk, particularly due to falling ash.

Application Tips

- Apply gently, in the direction of hair growth to reduce friction and the risk of folliculitis
- Apply on damp skin when possible
- Use enough to leave a visible layer
- Check skin regularly for dryness, redness, itching or cracks
- Report new soreness, itching or damage early to prevent complications
- If regular moisturisers are insufficient, consider medical-grade options.

Application and treatment timeframe

The epidermis typically regenerates every 28 days (Abdo et al, 2020), though this can range from 14 to 28 days depending on age and skin condition. To see meaningful structural improvement, consistent use of emollients should be sustained for at least two weeks. It is therefore recommended to review the treatment regimen and assess the skin's progress after 14 days.

Educating patients and carers on this timeline and being able to give a timeframe for when improvement can be seen will support engagement and expectation management.

Steroid and emollient use

Topical steroids may often be required in conjunction with emollient therapy. The authors recommend the following approach:

1. Cleanse the skin thoroughly
2. Apply emollients and allow them to absorb
3. Once the emollient has absorbed, apply topical steroids

Top Tip

As time can be limited, activities such as documentation can be completed during waiting periods. These moments can also be valuable opportunities to communicate with patients about their skin health, which may improve engagement and outcomes in the long term.

If possible, wait **at least 20–30 minutes** before applying steroids. This delay helps prevent dilution and reduced efficacy of the steroids (National Health Service, 2023). There are no definitive studies directly comparing emollient types, so choice often depends on availability and patient preference. Regular application, at least twice daily and ideally after bathing, is recommended for best effect, although this may depend on the product, so refer to the instructions for use.

Safety and side effects

Emollients are generally extremely safe and well tolerated. Minor side effects may include smarting, stinging, itching, dryness or irritation (Bhanot et al, 2019), and occasionally folliculitis (van Zuuren et al, 2017).

However, they can create a slipping hazard. For example, emollients may make small babies slippery and difficult to hold (Dyble and Ashton, 2011), and for older adults, they can increase the risk of falls in the bath or on hard floors. Individuals should be advised to exercise caution when applying emollients at home.

Importantly, all emollients carry some degree of flammability risk when dried onto clothing or fabrics, regardless of paraffin content. This applies not only to paraffin-containing emollients but also to those made from natural oils or containing other flammable ingredients (Medicines and Healthcare Products Regulatory Agency, n.d.). Healthcare practitioners should inform patients and carers of this risk and provide clear guidance on safe handling and storage practices.

Self-care and empowerment

In suitable individuals, emollient therapy can be incorporated into the individual's own daily routine: for example, they can apply emollients themselves and optimise their bathing regimen to incorporate suitable skincare measures that reduce risk of damage (Beeckman et al, 2020).

A cluster randomised controlled trial evaluated the effectiveness of a twice-daily moisturising regimen compared with 'usual' skincare for reducing skin tear incidence in an aged care facility (Carville et al, 2014). This seminal study found that application of a commercially available, standardised, pH-neutral, perfume-free moisturiser on the extremities, applied twice daily, reduced incidence of skin tears by almost 50%.
A further study that introduced twice-daily application of pH-friendly (pH 4.5–6.5),

non-perfumed moisturiser to the extremities in patients aged 65 or older with at-risk skin, also found that incidence of skin tears was reduced (Finch et al, 2018). Care staff applied the moisturiser twice daily in patients where this was required; where possible, patients or their relatives were provided with education on application and encouraged to apply the moisturiser themselves. The time of application of moisturiser was recorded with each application: documentation and consistency are key to success. The study demonstrated that this regimen, an affordable intervention, led to a reduction in overall healthcare costs while simultaneously enhancing care outcomes.

It is important that a holistic view is taken on self-care, ensuring that the patient is as healthy as possible. Nutrition and hydration are key to skin health and can help to prevent skin damage. Mobility should also be encouraged wherever possible. Polypharmacy issues should also be taken into consideration where necessary, as some medications can cause changes to the skin that need to be managed appropriately (ISTAP, 2025).

What can I do now as a patient or carer?

- **Check skin regularly:** Look for signs like dryness, redness, itching or cracks. These are clues that skin needs extra care
- **Keep your skin moisturised every day:** Use creams or lotions recommended by your healthcare team to keep skin hydrated and comfortable
- **Be gentle when washing:** Avoid harsh soaps or very hot water, which can strip away natural oils and dry out skin
- **Protect your feet:** Wear comfortable, well-fitting shoes to reduce pressure and prevent calluses, blisters or skin breakdown
- **Speak up about changes:** Tell your healthcare provider if you notice changes such as new soreness, itching or skin damage
- **Seek help early:** Early intervention can prevent complications later
- **Understand your risk factors:** Certain medications, illnesses or mobility issues can affect your skin. Discuss with your care team how to protect your skin
- **Ask about next steps if moisturisers aren't enough:** If regular moisturisers are insufficient, medical-grade options may be needed.

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