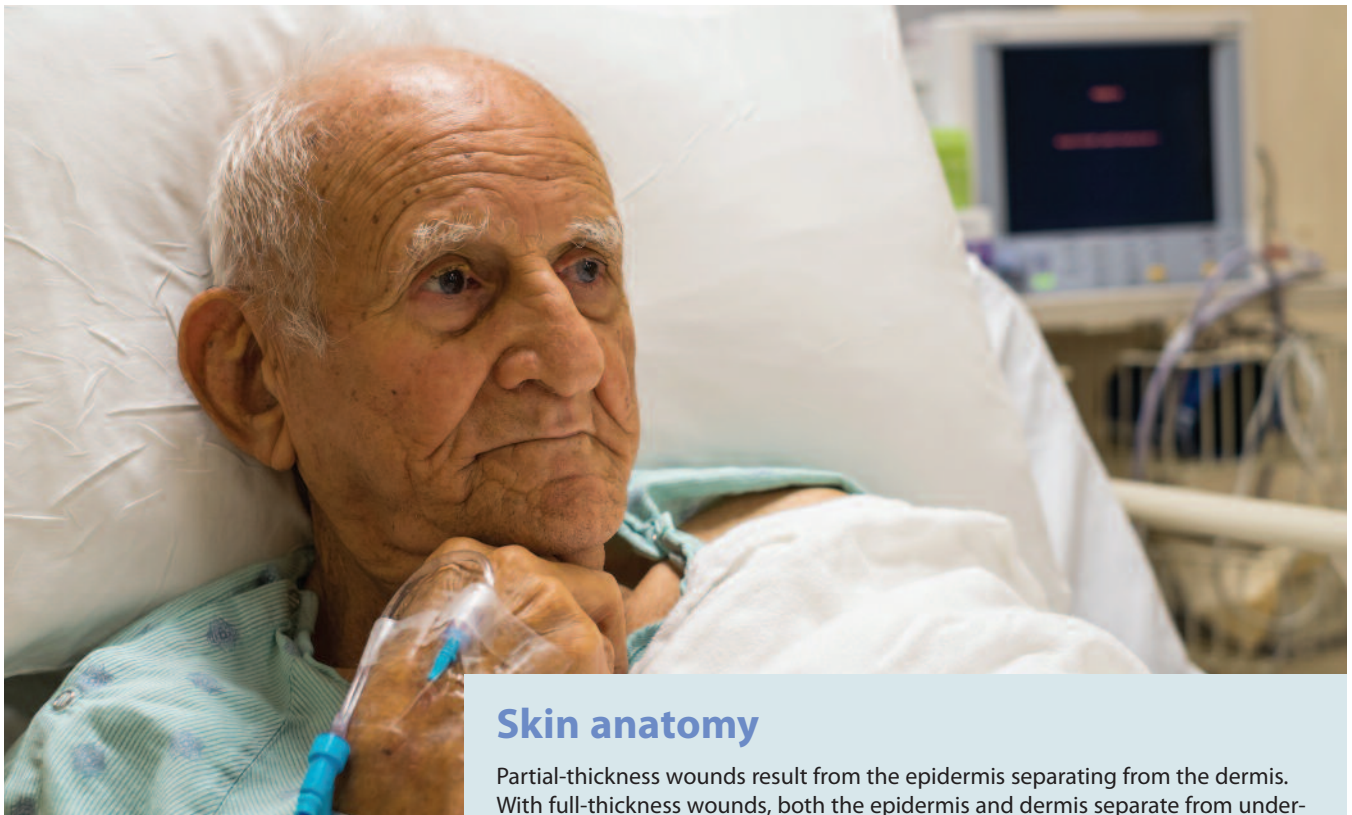


# STAMP out skin tears: Skin tear assessment, management, and prevention

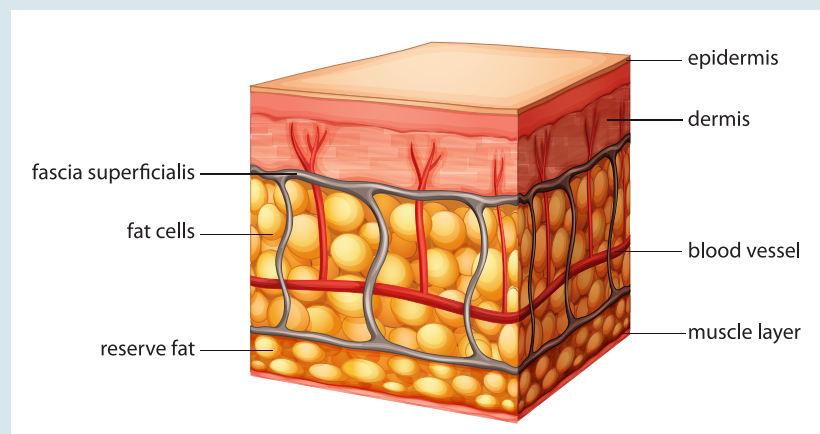
A complete skin tear program benefits patients, staff, and organizations.

By Joanne Laggan Davis, DNP, ANP-BC



## Skin anatomy

Partial-thickness wounds result from the epidermis separating from the dermis. With full-thickness wounds, both the epidermis and dermis separate from underlying skin layers.



*William Brown\* is a 78-year-old man with a history of diabetes, hypertension, and renal insufficiency. He recently suffered a hip fracture when he tripped on a rug in his home. After successful surgery, you admit Mr. Brown to your long-term care (LTC) facility for restorative nursing care. On admission, you notice that he has a large dressing on his right forearm. He tells you he injured it when he fell and that the dressing hasn't been changed since it was placed in the emergency department.*

## Risk factors and the elderly

### Intrinsic risk factors

- Gender—female
- Race—white
- Dehydration, poor nutrition
- Cognitive impairment—aggressive behavior
- Altered mobility/balance—unsteady gait, falls
- Sensory impairment
- Aging skin—dry, thin, fragile
- History of skin tears
- Disease processes—presence of edema

### Extrinsic risk factors

- Assistance needed with activities of daily living
- Dependence/assistance needed for transfer
- Dependence on assistive devices
- Dependence on prosthetic devices
- Dry skin
- Long-term corticosteroid use (oral or topical)
- Other factors: blood draws, dressing changes, tape, improper use of skin sealants

### Combination factors—When aging skin is combined with extrinsic factors, the risk of skin tears increases

- Aging skin is drier, thinner, and more fragile because of decreased sebum and sweat gland function, decreases in collagen and vascularity, and decreases in inflammatory and immune responses. It's more susceptible to friction and shearing.
- Avoid factors that increase drying of the skin; for example:
  - soaps that aren't pH neutral (can disrupt the skin's acid mantle and reduce natural lubrication)
  - frequent bathing
  - heat set at level that reduces skin moisture.

## Skin tear prevention strategies

Skin tear prevention requires strategies that focus on long-term care facility residents and staff.

### Resident-focused strategies

- Perform risk assessment on admission and with any significant status changes.
- Perform fall prevention risk assessment (for example, Morse Fall Scale).
- Maintain a safe environment with uncluttered pathways and adequate lighting.
- Pad furniture and equipment as needed.
- Ensure that patients wear proper footwear and protective clothing (long sleeves, long pants, knee-high socks).
- Provide protective sleeves and shin guards as indicated.

### Staff-focused strategies

- Learn safe patient handling and skin tear awareness to prevent pressure, friction, and shearing during routine care, such as dressing changes and blood collection.
- Keep fingernails short and avoid wearing jewelry to prevent trauma during routine care.
- Optimize the patient's nutrition and hydration.
- Alter the patient's bathing routines (less frequent bathing, shorter shower time, pH-neutral soaps).
- Apply hypoallergenic moisturizers to the patient at least twice daily.
- Avoid use of topical steroid creams due to their thinning properties.

*As you carefully peel away the dressing, you notice the gauze is stuck to the wound in several places, which causes bleeding. Mr. Brown cries out in pain. You use sterile saline to moisten the area and continue with removal. Once the dressing is off, you discover a large open wound with bruising and redness along the edges and a flap of skin bunched together at the proximal end. You know the wound would be in better condition if the flap had been repositioned over the wound bed when it was first assessed and dressed. Now, using saline to keep the area moist, you reposition the flap as much as possible. You plan to consult the wound care nurse to assess the flap for viability and possible debridement.*

### Skin tears in the elderly

The International Skin Tear Advisory Panel (ISTAP) defines a skin tear as “a wound caused by shear, friction, and/or blunt force resulting in separation of skin layers.” ISTAP expands the definition by describing the difference between partial-thickness (the epidermis and dermis are separated) and full-thickness wounds (the epidermis and dermis are separated from underlying skin structures). (See *Skin anatomy*.)

Skin tears are a frequent and painful reality for the elderly. A 1991 epidemiological study estimated that as many as 1.5 million skin tears occur in institutionalized residents in the United States every year. A 2013 study of the prevalence of skin tears in a Canadian LTC facility demonstrated a 22% prevalence. A study in Japan looked at elderly residents in a long-term medical facility. Over a 3-month period, 14 of 368 residents developed skin tears, a cumulative incidence rate of 3.8%.

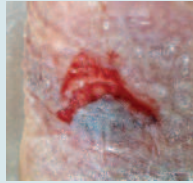
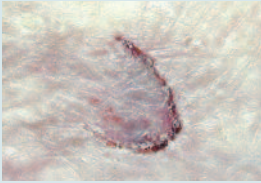
### Risk assessment and prevention

*As part of Mr. Brown's admission process, you perform a skin tear risk assessment. You note that he has several risk factors, including age, chronic disease, fragile skin, history of falls, history of previous skin tear,*

## ISTAP skin tear classification

The International Skin Tear Advisory Panel (ISTAP) developed this classification system to aid in categorizing wounds based on their characteristics.

- **Type 1** wounds are linear or have a flap with no loss of skin. If the wound has a flap, it should always be repositioned to cover the wound base.
- **Type 2** wounds have partial loss of skin, and the flap doesn't cover the wound base when repositioned.
- **Type 3** wounds have total loss of the flap.



## Skin tear dressing options

Base your dressing choice on the wound's characteristics.

Dressing type	Indications and considerations
<b>Calcium alginate</b>	<ul style="list-style-type: none"> <li>• For wounds with moderate to heavy exudate</li> <li>• Good initial option to achieve hemostasis</li> <li>• May dry wound if little to no exudate</li> </ul>
<b>Foam</b>	<ul style="list-style-type: none"> <li>• For wounds with moderate exudate</li> <li>• Allows for longer wear time</li> <li>• Use caution with adhesive borders</li> </ul>
<b>Hydrogel</b>	<ul style="list-style-type: none"> <li>• Provides moisture to dry wounds</li> <li>• Monitor for evidence of maceration</li> </ul>
<b>Nonadherent mesh (lipidocolloid, silicone, gauze mesh, petroleum)</b>	<ul style="list-style-type: none"> <li>• For dry or exudative wounds</li> <li>• Maintains a moist environment</li> <li>• Less traumatic removal</li> </ul>

Multiple intrinsic and extrinsic factors make older patients susceptible to skin tears, and, as with pressure injury and fall risk assessments, the goal of skin tear risk assessment is to identify factors that are amenable to prevention. (See *Risk factors and the elderly*.) For example, as we age (an intrinsic risk factor), several changes occur in the skin—thinning of the dermal and epidermal layers and decreased sebum and sweat gland function—that increase skin tear risk. And the need for assistance with activities of daily living (an extrinsic risk factor) increases the chance of injury that may result in a skin tear. Many extrinsic risk factors can be reduced through modifications and other preventive measures.

### Prevention

When developing a prevention plan based on your risk assessment, include all identified extrinsic risk factors, such as dependence on assistive devices and bathing habits. (See *Skin tear prevention strategies*.) For example, frequent bathing and using alkaline soap strips away natural lubricants and disrupts the acid mantle meant to protect the skin. To combat dry skin and prevent tears, decrease bathing frequency from daily to every other day, and use pH-neutral soaps. The incidence of skin tears in a Western Australian LTC facility was reduced by almost 50% when a twice-daily application of a pH-neutral moisturizer was implemented.

Include staff education as an integral part of your prevention program. Important components include information about skin anatomy, aging skin, skin tear risk factors, and safe patient handling.

### Skin tear assessment

*Three weeks after admission, a nursing assistant (NA) reports an injury to Mr. Brown's left arm. The injury occurred when Mr. Brown lost his balance transferring with a walker from his bed to a chair. When the NA reached for his arm to help, Mr. Brown's skin tore "like paper." On*

*impaired mobility, and the need for an assistive device. You determine Mr. Brown is at high risk for skin tears, communicate this to the inter-professional treatment team, and implement a skin tear prevention plan.*

The first step in preventing painful skin tears is risk assessment, using tools such as:

- **Skin Integrity Risk Assessment Tool**—This checklist includes 24 skin tear risk factors, divided into three categories. Based on the number of positive responses

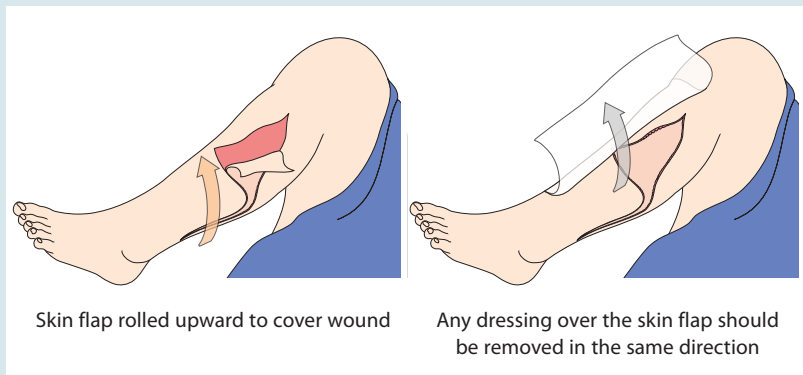
in each category, a risk reduction program is implemented. You can access an adapted version of this tool at [www.ddsn.sc.gov/providers/manualsandguidelines/Documents/HealthCareGuidelines/SkinIntegrity.pdf](http://www.ddsn.sc.gov/providers/manualsandguidelines/Documents/HealthCareGuidelines/SkinIntegrity.pdf).

- **ISTAP**—The three categories included in this skin tear risk assessment tool include general health, mobility, and skin. This tool is available at [skintears.org/education/tools/risk-assessment-pathway](http://skintears.org/education/tools/risk-assessment-pathway).



## Repositioning and protecting

Good skin care management includes repositioning the flap and removing the dressing in a way that protects the skin.



assessment, you note minimal bleeding that you're able to control with gentle pressure. You clean the wound and reposition the skin flap. You estimate that approximately 40% of the skin flap is missing and document it as a type 2 skin tear.

The most commonly used tool for skin tear classification is the ISTAP system (See *ISTAP skin tear classification*.) Using this system, you can categorize skin tears based on wound characteristics, including the presence and condition of the skin flap.

### Skin tear management

As you assess Mr. Brown's skin tear, you begin to formulate a management plan, following the same evidence-based principles used to treat pressure injuries but with a few additional best practices:

- Approximate skin flap back into place, if possible.
- Avoid using wound closure strips, hydrocolloids, and transparent films.
- Remove dressings in the same direction as the flap.
- On the outside of the dressing, illustrate the flap with an arrow indicating the direction of dressing removal.

You remove debris using normal saline (your other option is a non-ionic wound cleanser) and then apply the dressing. Your dressing

**You want to prevent infection, minimize trauma to the wound and surrounding skin, and optimize your time.**

choice is based on the wound's characteristics. (See *Skin tear dressing options*.)

The goal of wound management is to maintain a moist environment, control exudate, and minimize pain. You also want to prevent infection, minimize trauma to the wound and surrounding skin, and optimize your time. The ISTAP tool kit includes a product selection guide to help you make the best dressing choice ([skin-tears.org/education/tools/product-selection-guide](http://skin-tears.org/education/tools/product-selection-guide)).

Additional best practices include reapproximating the skin flap and protecting it during subsequent dressing changes. (See *Repositioning and protecting*.)

### Best outcomes

*Mr. Brown's skin tear is dressed*

using a hydrophilic polyurethane foam pad. Dressing changes occur on days 3, 7, 11, and 14. On day 14, you note that the skin tear has healed without complications.

Mr. Brown's experience is an excellent example of how a skin tear program that includes risk assessment, prevention, assessment and documentation tools, and management strategies can benefit everyone—residents avoid painful skin tears and nursing staff gain confidence in caring for skin tears and decrease their workload when skin tears are prevented. In addition, LTC facility costs decrease, and the public's perception of quality care increases. ★

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# Preventing pressure injuries in medical-surgical patients

How to overcome competing priorities to provide nurse education.

By Catherine Spader, RN

*An interview with Jill Cox, PhD, RN, APN-C, CWOCN/APN, clinical associate professor, Rutgers School of Nursing, Newark, NJ. Cox is also a wound, ostomy, continence (WOC) advanced practice nurse at Englewood Hospital and Medical Center. She serves on the board of directors of the National Pressure Ulcer Advisory Panel.*



**M**edical-surgical (med-surg) units aren't what they used to be, and neither are the methods needed to educate nurses about preventing pressure injuries (PIs). Keeping the staff of these busy units up to date with the most recent PI prevention practices requires vigilance and ingenuity. "Educating nurses is always a challenge because we have so many competing educational priorities in the med-surg setting, including falls prevention, infection control, and the latest innovations and practices," Cox says.

## High acuity, high risk

High patient acuity also competes with educational demands for every moment of a med-surg nurse's valuable time. Ironically, many factors that keep these nurses so busy are the same ones that increase the risk of PIs. "Med-surg patients have so many comorbidities that increase risk," Cox says. "The ICU [intensive care unit] patient of the late 1980s is often the med-surg patient of today."

Patients who require extra diligence to prevent PIs include those transferred from long-term care (LTC) facilities and the ICU. They often

## Effective performance improvement

Every quarter, the med-surg council members at the Englewood Hospital and Medical Center monitor compliance with the facility's Skin Integrity Protocol, looking for recurring concerns.

"We do have some recurring themes," says Jill Cox, PhD, RN, APN-C, CWOCN/APN, WOCN advanced practice nurse at the hospital, "such as issues with heel elevation and the use of chair cushions."

Cox is always looking for innovative ways to translate performance improvement into effective pressure injury (PI) prevention education for the staff. In this case, she helped develop a campaign for the use of chair cushions designed to prevent PIs. Using a staff nurse as a model, she demonstrated "Five things you can do with a chair cushion" to prevent PIs, including proper heel elevation.

have myriad acute and chronic conditions—including nutritional deficiencies, cognitive impairment, limited mobility, numerous comorbidities, and a history of lengthy or multiple surgeries—that put them at high risk for PIs.

"Patients transferred from the ICU are beginning to overcome a critical illness, which can place them at higher risk for pressure injuries," Cox says. "Recognizing this when they're transferred to the med-surg unit is important."

Med-surg nurses also need to be aware of nutritional deficits of patients transferred from the ICU or an LTC. "This puts them at high-risk, and I think it's underappreciated and understudied in terms of how much of a risk that can be," Cox says.

## Education on the fly

Unique approaches are needed to ensure busy med-surg nurses learn and retain vital information to prevent PIs. Cox believes that the key is to educate creatively, be flexible, and meet med-surg nurses where they

are. “Nurses are stretched and don’t have time anymore to attend lengthy on-unit in-services,” Cox says.

She uses a combination of strategies to boost learning and retention, including online self-guided modules and classroom sessions during the orientation process. Staff nurses also are required to complete mandatory education on PIs as part of their annual competency requirements.

Cox has investigated whether a difference exists between a traditional classroom lecture and computer-based instruction in PI knowledge retention. The study revealed that computer modules, which can be completed when nurses have time, are a viable option. Quarterly education to maintain knowledge also was recommended.

In addition, Cox uses teaching tools to educate nurses during their day-to-day practice. These tools include:

- posters that display easily digestible bites of information, highlighting key educational points
- smaller signs that target a specific topic (signs have included pictures that illustrate the difference between PI and incontinence-associated dermatitis)
- pictures that guide nurses in the proper selection of a bed/mattress when the WOC nurse isn’t available.

“It’s education on the fly. It’s the way nurses flow today,” Cox says.

### PI prevention protocol

Englewood Hospital and Medical Center has a comprehensive Skin Integrity Protocol based on the National Pressure Ulcer Advisory Panel guidelines.

As a Magnet®-recognized organization, Englewood participates in the National Database of Nursing Quality Indicators prevalence tracking for PIs. Data collection, which is conducted by staff nurses, includes tracking the admission PI risk and skin condition for all patients in the med-surg and critical-care areas. In addition, nurses conduct a skin assessment, risk assessment, and evaluation of the

## How to stage a pressure injury



According to the Scope and Standards of Nursing Practice, staging pressure injuries is an assessment skill that RNs can perform. You can find more information at the National Pressure Ulcer Advisory Panel (NPUAP) web site:

### NPUAP pressure injury stages

[npuap.org/resources/educational-and-clinical-resources/npuap-pressure-injury-stages/](http://npuap.org/resources/educational-and-clinical-resources/npuap-pressure-injury-stages/)

### Frequently asked questions about pressure injury staging

[npuap.org/resources/educational-and-clinical-resources/complimentary-educational-webinars/](http://npuap.org/resources/educational-and-clinical-resources/complimentary-educational-webinars/)

### National Pressure Ulcer Advisory Panel position paper on staging pressure ulcers

[npuap.org/wp-content/uploads/2012/01/NPUAP\\_position\\_on\\_staging-final.pdf](http://npuap.org/wp-content/uploads/2012/01/NPUAP_position_on_staging-final.pdf)

### Other resources

#### 2014 Prevention and treatment of pressure ulcers: Clinical practice guideline

[npuap.org/resources/educational-and-clinical-resources/prevention-and-treatment-of-pressure-ulcers-clinical-practice-guideline/](http://npuap.org/resources/educational-and-clinical-resources/prevention-and-treatment-of-pressure-ulcers-clinical-practice-guideline/)

#### The Braden Scale—for predicting pressure sore risk

[in.gov/isdh/files/Braden\\_Scale.pdf](http://in.gov/isdh/files/Braden_Scale.pdf)

prevention strategies in use on the day of data collection.

“Consistent risk assessment is crucial,” Cox says. “In our facility, this includes performing a repeat Braden scale [Braden Scale for Predicting Pressure Sore Risk] every shift.”

The Skin Integrity Protocol also addresses:

- standard preventive care
- PI staging
- topical therapies indicated for treatment of each PI stage
- support surface and specialty bed selection.

“When patients are admitted, nurses have the ability to start topical treatment based on the protocol and can order a WOC nurse consult,” Cox says. “Using this protocol provides them with elements of pressure injury treatment so patient care isn’t delayed.”

All PI dressing supplies are stored on the unit for easy nurse access, which saves time and expedites care. In addition, nurses can order specialty beds or mattresses when the WOC nurse isn’t available and a specialty surface is deemed appropriate. These products are generally used for:

- stage 3 or 4 PIs
- unstageable wounds
- any patient the nurse believes may be at high risk for PI.

“I always tell the nurses, if in doubt, go ahead and order the mattress,” Cox says. “We can always remove it if necessary, which we rarely do.”

The benefit of the Skin Integrity Protocol is threefold, according to Cox. “It’s educational, it drives nursing care, and it standardizes care in med-surg and critical care.”

### Education = prevention

PI prevention education in the med-surg unit must meet the needs of busy staff nurses. Flexible learning opportunities, collaboration with WOC nurses, and a PI protocol can enhance staff nurse understanding of PIs and increase knowledge retention. The end result is improved PI prevention in high-risk patients. ★

*Editor’s note:* This is an excerpt from the supplement “Pressure injuries... Prevention across the acute-care continuum,” which can be accessed at [americannursetoday.com/?p=45646](http://americannursetoday.com/?p=45646).

*\*Name is fictitious*

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