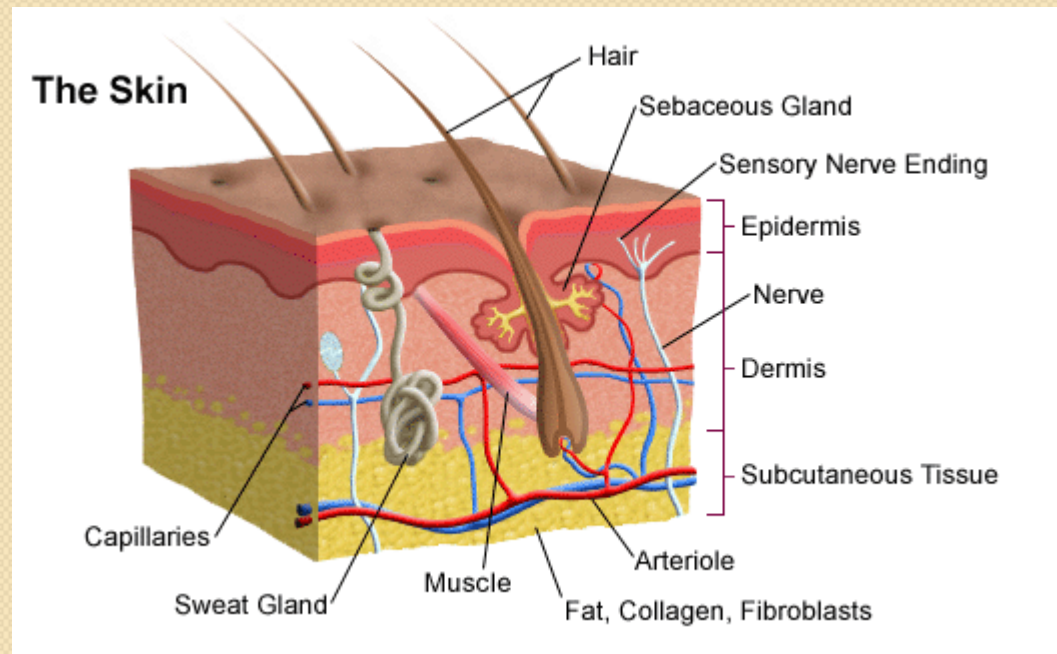


Skin Tear Management



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Anatomy of the skin



<http://childrenshospital.org/az/Site784/Images/SKINANATOMY.gif>

The role of the integumentary system

- Maintaining an internal environment by acting as a barrier to loss of water and electrolytes
- Protection from external agents that could injure the internal environment
- Regulation of body heat
- Acting as a sense organ for touch, temperature, and pain.
- Self-maintenance and wound repair
- Production of vitamin D
- Delayed hypersensitivity reaction to foreign substances

Aging Changes

- Epidermis thins (translucent, pale skin)
- Connective tissue changes reduces skin's strength and elasticity (elastosis)
- Melanocytes decrease but remaining increase in size (age spots, liver spots)
- Fragile blood vessels (bruising, bleeding under the skin – senile purpura)
- Sebaceous glands produce less oil (dryness and itching)

Aging changes – cond't

- Subcutaneous layer thins (increases risk of skin injury, reduces ability to maintain body temperature)
- Sweat glands produce less sweat (harder to keep cool)
- Ability to sense touch, pressure, vibration heat and cold (increased risk of skin injury)

Senile Purpura



Healthinset.com



crutchfielddermatology.com

What Are Skin Tears?

A skin tear is a wound caused by shear, friction and/or blunt force resulting in separation of skin layers. A skin tear can be partial-thickness (separation of the epidermis from the dermis) or full thickness (separation of both the epidermis and dermis from underlying structure). LeBlanc et al 2011

Prevalence and Incidence of Skin Tears

- 0.92% incidence rate reported in an elderly care facility in the USA
- 16% of the population sustained skin tears each month in a 120 bed facility in Australia
- 41.5% of known wounds were found to be skin tears in elderly care residents (mean age 80 years) in a 347 bed long-term care facility in Western Australia
- 8-11% skin tear prevalence reported in surveys in all WA public hospitals in 2007, 2008 and 2009

<http://www.woundsinternational.com/madeeasys/skin-tears-made-easy>

Who is at Risk and Why?

The Elderly

Intrinsic Factors

- Advanced age
- Gender
- Race
- Immobility
- Nutritional status
- Corticosteroid use
- Altered sensory
- Cognitive impairment

Extrinsic factors

- Dependence for ADL
- Assistive devices
- Tape
- Stockings
- Vascular problems
- Cardiac problems
- Visual impairment
- Blood drawn

Most important risk factors

- Senile purpura
- Ecchymosis
- Hematoma
- Evidence of previously healed skin tears
- Presence of edema
- Inability to reposition independently

Carville et al, 1990

What Causes Skin Tears?

- Wheelchairs (25%)
- Accidentally bumping into objects (25%)
- Transfers (18%)
- Falls (12.4%)

LeBlanc et al (2008)

Where Do They Occur?

- Arms - especially forearms (80%) (Mason et al, (1997)
- Anywhere else on the body but can be mistaken for Stage 2 pressure ulcer (McGough-Csamy et al, 1998)
- Likely to occur during peak activity hours i.e. 0600-1100 and 1500-2100 hrs. (White et al 1994)

Terminology

- Linear skin tear – a skin split in a straight line
- Flap skin tear – a segment of skin and underlying tissue that is separated from the underlying structure
- Pale, dusky or darkened skin or flap colour – when compared to the individual's normal surrounding skin, may indicate ischemia or the presence of a hematoma – may affect the viability of the flap
- Realign – to replace the skin or flap into the normal anatomical position without undue stretching

Skin Tear Classification System

(Payne Martin Classification System for Skin Tears, 1993)

Category 1: skin tears without tissue loss

Category 2: skin tears with partial tissue loss

Category 3: skin tears with complete tissue loss

Skin Tear Classification System

Category I: skin tears without tissue loss

- Linear (full thickness)
 - Epidermis and dermis are pulled in one layer
 - The wound is incision-like in appearance
- Flap (partial thickness)
 - Epidermis and dermis are separated
 - Can be approximated or expose no more than 1 mm of dermis

Category IA - Linear



Category IB - Flap



Skin Tear Classification System

(continued)

Category 2: skin tears with partial tissue loss

- Scant tissue loss type
 - 25% or less of the epidermis flap is lost
- Moderate to large tissue loss type
 - More than 25% of the epidermis flap is lost

Category 2A and 2B



Skin Tear Classification System

(continued)

Category 3

- Skin tears with complete tissue loss
- Complete tissue loss
- Epidermal flap is absent



Category 3



STAR CLASSIFICATION SYSTEM (2006)

Category IA

A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is not pale, dusky or darkened.



Category IB

A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is pale, dusky or darkened.



STAR CLASSIFICATION SYSTEM

Category 2A

A skin tear where the edges **cannot be** realigned to the normal anatomical position and the skin or flap colour **is not pale,** Dusky or darkened.



Category 2B

A skin tear where the edges cannot be realigned to the normal anatomical position and the skin or flap colour is pale, dusky or darkened



STAR CLASSIFICATION SYSTEM (2006)

Category 3

A skin tear where the skin flap is completely absent.



Skin Integrity Risk Assessment Tool

Criteria for a Skin Tear Risk Prevention Plan is as follows:

- **Group I:** history of skin tears in the last 90 days and an actual number of skin tears
- **Group II:** decision-making skills impaired, extensive or total dependence for ADLs, bed or chair confined, unsteady gait and bruises
- **Group III:** physically abusive, resists ADL, agitated, mechanically lifted, contractures, inability to balance or turn body, pitting edema of legs, open lesions on extremities

A Skin Tear Risk Prevention Plan is developed for patients with:

- any criteria in Group I
- 4 or more in Group II
- 5 or more in Group III
- combination of 3 in Group II with 3 or more in Group III

White et al, 1994

Prevention

Strategies for those at risk:

- Recognize and use caution
- Proper positioning/turning/lifting/transferring
- Padding/pillows/blankets
- Nutrition & hydration
- Long sleeves & pants
- Avoid tapes/dressings
- Consider silicone based adhesive products
- Protect fragile skin with protective devices
- Moisturizers
- Safe environment
- Patient/family education

Treatment for Skin Tears

Local Wound Care

- Based on Assessment:
 - control bleeding
 - clean the wound/irrigate
 - approximate edges
 - cover and protect
 - promote moist wound healing
 - pain management

Approximate the Skin Flap

- If the skin flap is viable, gently ease the flap back into place
- If the flap is difficult to align – don't stretch it
- Monitor for changes in the wound and where the skin or flap is pale, dusky or darkened reassess every 24-48 hrs
- Non viable flaps may need to be debrided

Treatment for Skin Tears

Never consider suturing a skin tear – skin is too thin to hold a suture and any edema will cause tension resulting in further tearing

Current regimens – lipido-colloid based mesh and foam dressings, soft silicone based mesh or foam dressings, calcium alginate dressings, absorbent clear acrylic dressings and skin glue (2-octylcyanoacrylate)

Not recommended – hydrocolloids, and transparent films, gauze

Outdated – steristrips

Tetanus Status, Vascular status

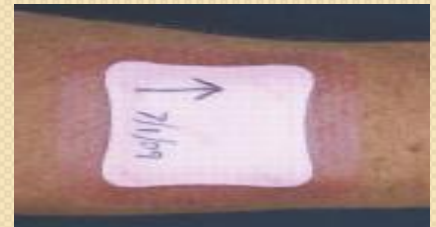
Choosing the ideal dressing

- Easy to apply
- Provides a protective anti-shear barrier
- Optimizes the wound healing environment (moist wound healing)
- Is flexible and mouldable to contours
- Provides secure not aggressive retention
- Has an extended wear time
- Does not cause trauma on removal
- Optimizes quality of life and cosmesis
- Is cost effective

Stephan-Haynes et al 2011

Review and Reassess

- At each dressing change, gently lift a remove dressing, working away from the attached skin flap
- In the direction of the skin flap, draw an arrow on the dressing
- When cleansing the



Wound take care not to disrupt the flap

- Monitor for condition of the flap, infection and pain

Questions?



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