

Incontinence: How It Affects the Skin

**Satellite Conference and Live Webcast
Tuesday, October 26, 2010
2:00 - 4:00 p.m. Central Time**

**Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division**

Faculty

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Objectives

- **The participant will be able to:**
 - **Discuss the function of skin**
 - **Identify the three layers of skin**
 - **Identify common skin problems related to incontinence**
 - **Discuss prevention and treatment strategies for skin breakdown due to incontinence**

Skin Is an ORGAN

- **Did you know the skin is an organ?**
 - **Largest organ**
 - **Heaviest organ**
 - **15% of body weight**
 - **In a 150 pound person, the skin weighs about 12 pounds and can cover 18 square feet**

Skin Is an ORGAN

- **1 square inch of the skin contains:**
 - **100 sebaceous glands**
 - **65 hairs**
 - **78 yards of nerves**
 - **650 sweat glands**
 - **19 yards of blood vessels**
 - **9,500,000 cells**

Skin Is an ORGAN

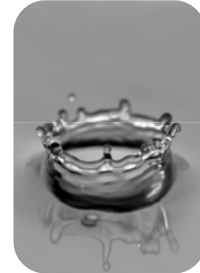
- **1,300 nerve endings**
- **20,000 sensory cells**
- **32,000,000 bacteria**

Functions of the Skin

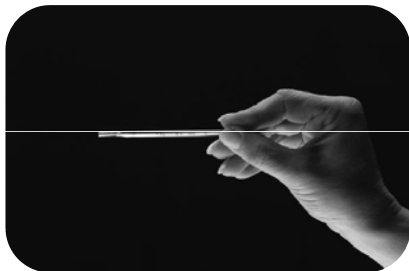
- Protection and immune response



Protection Against Dehydration



Body Temperature Regulation



Sensation



Storage and Metabolic Functions



Absorption



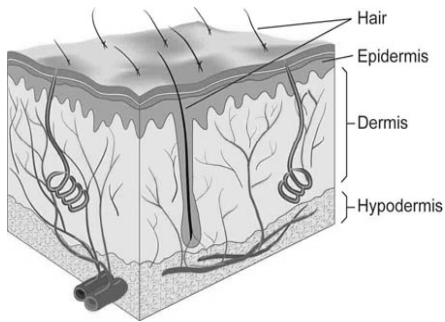
Excretion



Skin Layers

- Epidermis
- Dermis
- Subcutaneous tissue

Skin Layers



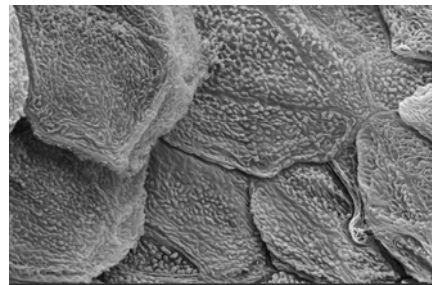
Epidermis

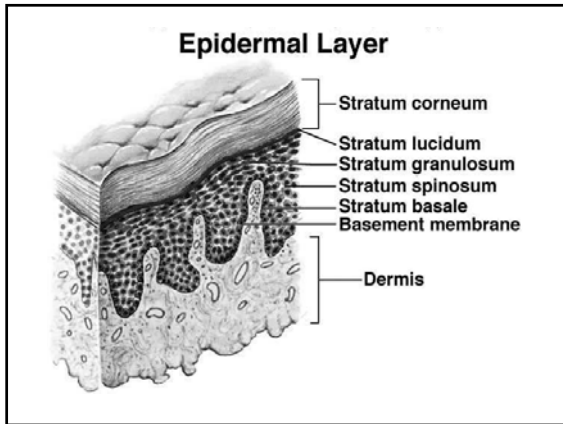
- There are 5 layers in the Epidermis
 - Stratum corneum
 - Stratum lcidum
 - Stratum granulosum
 - Stratum spinosum
 - Stratum basale

Stratum Corneum

- Outside layer
- Provides protection
- Sloughs off about every 2 weeks
- Call the “horny” or “crusty” layer

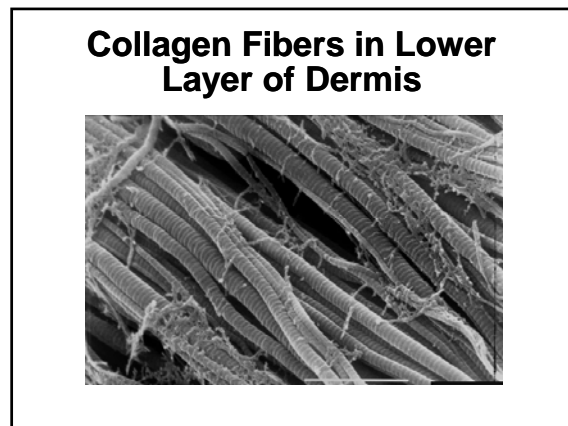
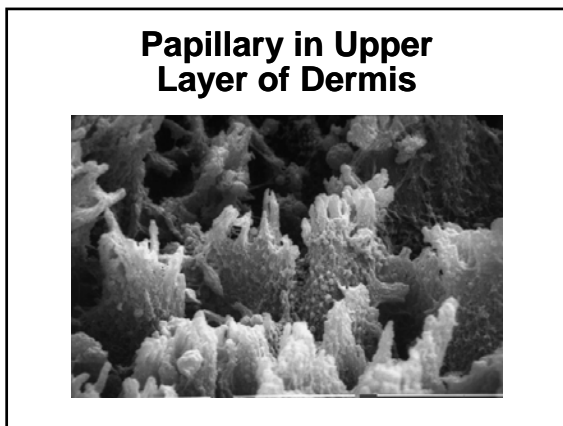
Epidermis





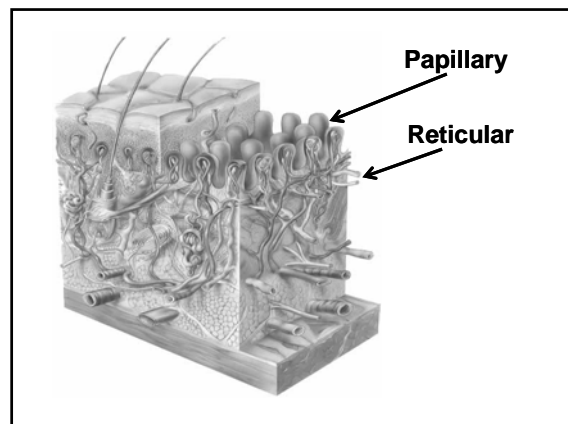
Layers of the Dermis

- **Papillary**
 - Contains a thin arrangement of collagen fibers
- **Reticular**
 - Thicker and made of thick collagen fibers that are arranged parallel to the surface of the skin



Specialized Cells and Structures

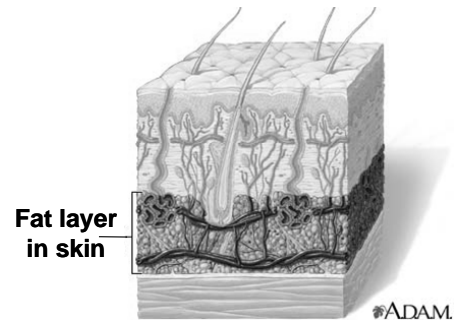
- Hair follicles
- Muscles on each hair follicle
- Oil, sebaceous, and sweat glands
- Blood vessels
- Lymph vessels
- Nerves



Subcutaneous Tissue

- Primarily consists of fat cells
- Shock absorber and heat insulator
- Structures
 - Muscles attached to hair follicles
 - Sweat glands
 - Blood vessels
 - Lymphatic system
 - Nerves

Subcutaneous Layer



Incontinence

- The involuntary leakage of urine or stool
- Urinary
 - Loss of bladder control
- Fecal
 - Loss of bowel control

What Causes Incontinence?

- Constipation
- Diet
- Gastrointestinal disease
- Hormone imbalance
- Weakness or loss of pelvic muscle function
- Loss of mobility

What Causes Incontinence?

- Mental changes
- Prostrate disease
- Spinal cord injury
- Urinary track infections

Why Does Incontinence Harm the Skin?

- Moisture
 - Too much of a good thing



pH Balance

- pH of skin vs. stool and urine



Incontinence

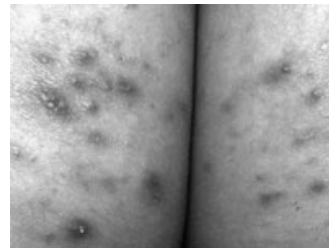
- Chronic exposure to moisture
- Breaks down alkaline pH
- Overgrowth or infection with pathogens
- Friction

Problems Caused by Incontinence

- Infections
 - Bacterial and yeast
- Incontinence Associated Dermatitis (IAD), skin excoriation, and skin breakdown
- Pressure ulcers

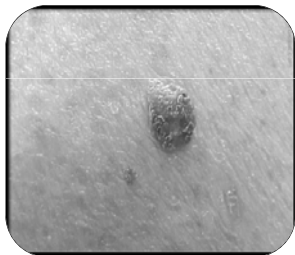
Skin Infection: Bacterial Staphylococcus

- Folliculitis



Skin Infection: Bacterial Staphylococcus

- Furunculosis



Skin Infection: Yeast/Fungal

- Any area, usually skin fold
- May create its own moisture
- Fiery red, white coated
- Satellite lesions
 - Red spots scattered at the edges

Skin Infection: Yeast



Skin Infection: Yeast



Skin Infection: Management

- Keep skin and folds clean and dry
- Maximize air to the area
- Use antifungal powder or cream

Incontinence Associated Dermatitis

“Skin inflammation manifested as redness with or without blistering, erosion, or loss of the skin barrier function that occurs as a consequence of chronic or repeated exposure of the skin to urine or fecal matter.”

Incontinence Associated Dermatitis

- Located where skin is in contact with urine or feces
- Initially may be bright red and weepy
- Later dark red/purple, or white
- Dry peeling skin like sunburn
- No satellite lesions unless also has fungal

Incontinence Associated Dermatitis

- Not confined over a bony prominence
- Burning, itchy, tingling, or painful

Incontinence Associated Dermatitis



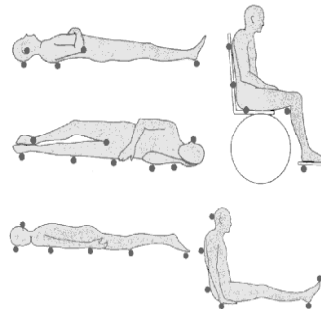
IAD: Management

- Treat cause of incontinence
- Prevent skin breakdown
 - Daily skin check
 - Prompt cleaning
 - Protect skin at risk
- Treat skin breakdown

Pressure Ulcer

- Pressure ulcer
 - Over bony prominence
 - Coccyx, usually round or oval
 - Sacral or ischium, butterfly or oval if only on one side
 - Well defined edges, no satellite lesions

Pressure Ulcer



Pressure Ulcer Stage I and II



Pressure Ulcer Management

- Relieve or reduce pressure
- Keep wound clean
- Maintain moisture in the wound bed
- Protect wound edges
- Do not massage

What Is This?

- A. Skin infection
- B. IAD
- C. Pressure ulcer



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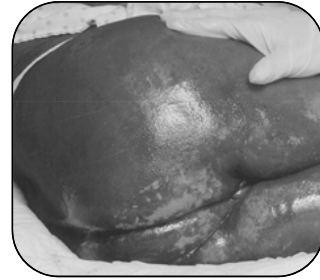
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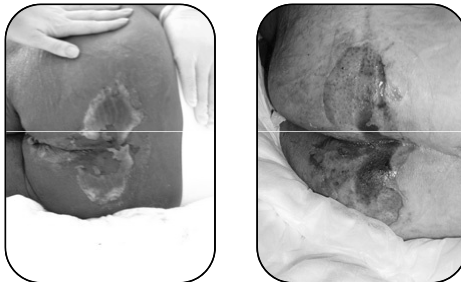


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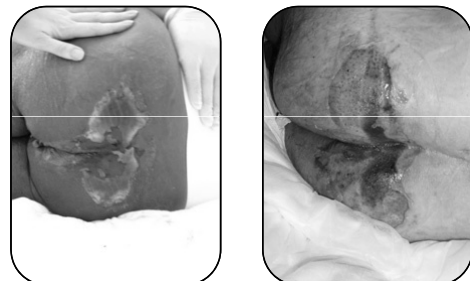
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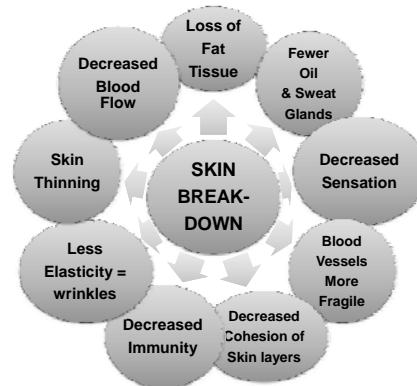
What Are These?



Kennedy Terminal Ulcer End of Life



Risk Factors for Skin Breakdown in the Elderly



Prevention and Treatment of Skin Breakdown

- **TREAT** the incontinence
- **DAILY** check the skin
- **PROMPTLY** clean the skin

Prevention and Treatment of Skin Breakdown

- **GENTLY** wipe skin when cleaning
- **USE** product with acidic pH like normal skin
 - 5.5
- **PROTECT** with moisture barrier

Linens, Diapers, Chux...

- **Limit** linen usage under patient
 - No more than 2 layers
- **No** diaper
 - Keeps moisture against the skin
 - Only use when up in chair or walking

Linens, Diapers, Chux...

- **Chux** (blue) pads
 - They wick moisture away so skin can dry
 - Patient needs to lie on top of pad
 - Do **NOT** put pad under linen
 - Do **NOT** use pad as diaper

Check the Skin

- **Check** the skin daily
- **Observe** skin in perineal area on all patients
 - Take special note of patients who are bed or chair bound
 - Take special note of patients who are incontinent
- **Report** any changes to caregiver and supervisor

Clean the Skin

- **Clean** skin immediately after urine or fecal leakage
- **Use** disposable perineal wipes or mild soap and warm water
- **Do not** rub or scrub

Clean the Skin

- Rinse well
- Pat dry the skin and skin fold
 - Do not rub
- Frequent baths will remove natural oils and increase skin dryness
 - pH balanced body cleansers
 - Soap

Clean the Skin

- Cleanse only when soiled
- Bath water should be warm
 - Not hot!
- Minimal force
 - No vigorous scrubbing

Cleaning



Protect

- Moisturized skin = healthy skin
- Loss of moisture from epidermis causes dryness
- Moisturizing prevents itching
- Apply lotion to damp skin
 - Locks in moisture
 - Apply daily

Protect

- Use emollients to soften and soothe skin but do not macerate
 - Add too much moisture
- Expose the area to air for 30 minutes, 2-3 times a day
- Apply skin protectorant
 - Dimethicone, petrolatum, or zinc oxide

Protect and Treat



Protect and Treat

