

Skin Disorders

R. Thomas

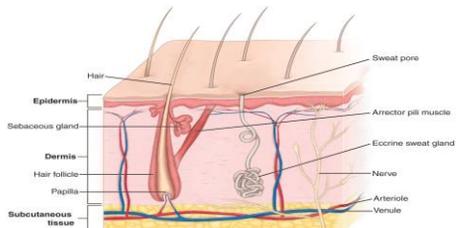
Skin

- ❖ Largest organ of the body
- ❖ Functions
 - Protection
 - Sensation
 - Fluid balance
 - Temperature regulation

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Anatomic Structures of the Skin



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Normal Aging Changes

- ❖ Thinning of skin
- ❖ Uneven pigmentation
- ❖ Wrinkling, skin folds, and decreased elasticity
- ❖ Dry skin
- ❖ Diminished hair
- ❖ Increased fragility and increased potential for injury
- ❖ Reduced healing ability

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Infectious Skin Diseases

- Bacterial infections
 - Impetigo
- Viral infections
 - Herpes zoster
 - Herpes Simplex (HSV)- discussed in maternity
- Fungal infections
 - Tinea- discussed in pediatrics
- Parasitic Infections
 - Pediculosis- discussed in pediatrics
 - Scabies

Impetigo



Impetigo

- Bullous
- Non-bullous
- Treatment



Patient Education: Bacterial Infections

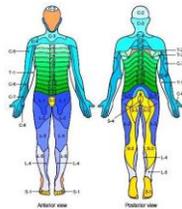
- ❖ Impetigo is contagious and may spread to other parts of patient's body or to other persons
- ❖ Patient education regarding antibiotics, hygiene, and skin and lesion care
- ❖ Don't share towels, combs, and so on
- ❖ Bathe daily with antibacterial soap
- ❖ Furuncles, boils, or pimples should never be squeezed

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Viral Skin Infections

- Herpes zoster



Herpes Zoster Phases

- Pre-eruptive
- Acute Eruptive
- Post Herpetic Neuralgia
- Treatment

Fungal Infections

- Candida
- Tinea
- Treatment

Patient Education: Fungal Infections

- ❖ Instruction regarding medications, use of oral and topical agents, and shampoos
- ❖ Instructions regarding hygiene: use clean towels and washcloths every day
- ❖ Do not share towels, combs, and so on
- ❖ Keep skin folds and feet dry
- ❖ Wear clean, dry, cotton clothing, including underwear and socks; avoid synthetic underwear, tight-fitting garments, wet bathing suits, and plastic shoes
- ❖ Avoid excessive heat and humidity
- ❖ Hair loss associated with tinea capitis is temporary

Patient Education: Pediculosis Capitis

- ❖ Head lice may infest anyone and are not a sign of uncleanliness
- ❖ Instruction in use of shampoo (lindane [Kwell]) or pyrethrin [RID]) and combing of hair with fine-tooth comb dipped in vinegar to remove all nits
- ❖ Note lindane may have toxic effects and must be used only as directed
- ❖ All articles of clothing and bedding must be disinfected, washed in hot water, or dry cleaned. Furniture and floors should be frequently vacuumed
- ❖ Do not share combs, hats, and so on
- ❖ All family members and close contacts must be treated

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Patient Education: Pediculosis Corporis and Pubis

- ❖ Pediculosis corporis is a disease related to poor hygiene and of those who live in close quarters
- ❖ Pediculosis pubis is common and spread chiefly by sexual contact
- ❖ Bathe in soap and water and apply prescription scabicide or over-the-counter permethrin (NIX). If eyelashes are involved, Vaseline may be applied twice a day for 8 days. Mechanically remove any nits
- ❖ All family members and sexual contacts must be treated and instructed regarding personal hygiene
- ❖ All clothing and bedding must be washed in hot water or dry cleaned
- ❖ Patient and partner should also be scheduled for checkup to assess for coexisting sexually transmitted disease

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Parasitic Skin Infestations

- Scabies (mites) (*Sarcoptes scabiei*)
- S/S
 - Small raised burrows
- Dx
- Treatment
 - Hygiene- bathing, linen
 - Scabicide- 5% permethrin
 - Antihistamines
 - Treat family members



Patient Education: Scabies

- ❖ Mites frequently involve fingers, and hand contact may spread infection. Health care personnel should wear gloves when providing care until infection is ruled out
- ❖ Instruct patient to take a warm, soapy bath; allow skin to cool; and apply prescription scabicide lindane, crotamiton, or 5% permethrin to entire body, not including the face or scalp. Leave on for 12 to 24 hours
- ❖ Wash clothing and bedding in hot water and dry in a hot dryer
- ❖ Treat all contacts at the same time
- ❖ Repeat the treatment in 1 week to prevent reinfestation
- ❖ Pruritus may continue for several weeks and does not mean retreatment is required

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Psoriasis

- ❖ A chronic, autoimmune, inflammatory disease of the skin in which epidermal cells are produced at an abnormally rapid rate
- ❖ Affects about 3.2% of Americans, prevalent in Caucasians, median age 28
- ❖ Periods of remission and exacerbation throughout life
- ❖ May be aggravated by stress, trauma, seasonal and hormonal changes
- ❖ Treatment: baths to remove scales and medications

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Psoriasis

- S/S
 - Silvery plaques
 - Red, raised patches
 - May be pruritic
- Nursing Management
 - Patient education
 - Prevent skin injury
 - Prevent skin dryness
 - Support/ coping



Medical Management

- ❖ Goals: slow rapid turn over of epidermis, promote resolution of psoriatic lesions, control disease cycle
- ❖ Remove scales during bath using soft brush, apply emollient creams after, maintain routine
- ❖ Pharmacologic therapy
 - Topical
 - Phototherapy
 - Systemic

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Blistering Diseases

- ❖ Bacterial, fungal, viral infections
- ❖ Allergic contact reactions
- ❖ Burns
- ❖ Metabolic disorders
- ❖ IgG autoimmune reactions
 - Pemphigus vulgaris
 - Pemphigus foliaceus
 - Paraneoplastic pemphigus

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Nursing Process: The Care of the Patient With Blistering Diseases—Assessment

- ❖ Appearance of the skin
- ❖ Monitor VS frequently and assess for signs and symptoms of infection
- ❖ Pain, pruritus, and discomfort
- ❖ Coping of the patient with condition
- ❖ Note impact of the disease on patient activities and interactions

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Nursing Process: The Care of the Patient With Blistering Diseases—Diagnoses

- ❖ Acute pain: skin and oral cavity
- ❖ Impaired skin integrity
- ❖ Disturbed body image
- ❖ Risk for infection
- ❖ Deficient fluid volume due to loss of tissue fluids

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Interventions

- ❖ Meticulous oral hygiene
- ❖ Avoid commercial mouthwashes
- ❖ Keep lips moist with lip balm, petroleum, or lanolin
- ❖ Cool mist humidified air
- ❖ Cool, wet dressing or baths; hygiene measures
- ❖ Apply powder liberally to keep skin from adhering to sheets
- ❖ Monitor for and prevent hypothermia
- ❖ Skin care may be similar to that of the patient with extensive burns
- ❖ Measures to prevent secondary infections
- ❖ Encourage adequate fluid and nutritional intake

Toxic Epidermal Necrolysis & Stevens-Johnson Syndrome

- Potentially fatal
- Triggered by medications
- S/S
- Complications
- Dx
- Management
 - Supportive care
 - Surgical debridement/hydrotherapy
 - IV crystalloids
 - Fluid and electrolyte balance
 - TPN
 - IVIG
 - Immunosuppressants

Nursing Process: The Care of the Patient With Toxic Epidermal Necrolysis and Stevens–Johnson Syndrome—Assessment

- ❖ Skin inspection, oral cavity inspection
- ❖ Vital signs; fever, respiratory status, tachycardia
- ❖ Fatigue, pain levels
- ❖ Urine volume, specific gravity, and color monitored
- ❖ Local s/s infection at IV site
- ❖ Daily weight
- ❖ Evaluate for anxiety and coping mechanisms

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Nursing Process: The Care of the Patient With Toxic Epidermal Necrolysis and Stevens–Johnson Syndrome—Diagnoses

- ❖ Impaired tissue integrity (i.e., oral, eye, and skin) related to epidermal shedding
- ❖ Deficient fluid volume and electrolyte losses related to loss of fluids from denuded skin
- ❖ Risk for imbalanced body temperature (i.e., hypothermia) related to heat loss secondary to skin loss
- ❖ Acute pain related to denuded skin, oral lesions, and possible infection
- ❖ Anxiety related to the physical appearance of the skin and prognosis

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Skin Cancer

- Prevention
- Assessment
 - ABCD
- Types
 - Basal cell carcinoma
 - Squamous cell carcinoma
- Treatment



Treatment for BCC and SCC

- ❖ Medical Management: eradicate tumor, treatment depends on location, type and depth
- ❖ Alternatives: radiation, photodynamic, topical chemotherapeutic creams
- ❖ Surgical:
 - Surgical incision
 - Mohs micrographic surgery
 - Electrosurgery
 - Cryosurgery

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Melanoma

- Risk factors
- S/S
- Complications
- Interventions



Kaposi Sarcoma

- ❖ A malignancy of endothelial cells that line the blood vessels: dark reddish-purple lesions of the skin, oral cavity, GI tract, and lungs
- ❖ Classic KS: older men Mediterranean or Jewish chronic, benign
- ❖ Endemic (African) KS: Eastern half of Africa, men, resembles classic
- ❖ Iatrogenic/organ transplant-associated KS: organ transplant patients and immunosuppressants
- ❖ AIDS related or epidemic: occurs with AIDS, aggressive

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Burns

- Types
 - Thermal
 - Radiation
 - Chemical
- Classifications
 - Burn depth

Classification of Burns

- ❖ First-degree burns
 - Superficial injuries that involve outermost layer of skin; sunburn
- ❖ Second-degree burns
 - Involve entire epidermis and varying portions of the dermis; painful with blisters
- ❖ Third-degree burns (Full thickness)
 - Total destruction of the epidermis, dermis, and underlying tissue, lack of sensation
- ❖ Fourth-degree burns:
 - Deep burn necrosis
 - Extends into deep tissue, muscle, or bone

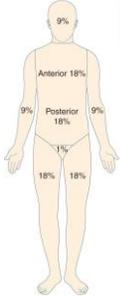
Factors to Consider in Determining Burn Depth

- ❖ How the injury occurred
- ❖ Causative agent (flame or scalding liquid)
- ❖ Temperature of agent
- ❖ Duration of contact with the agent
- ❖ Thickness of the skin at the injury

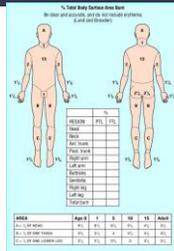
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Burns - Total Body Surface Area Burned



- TBSA
 - Rule of nines
 - Lund and Browder method
 - Palm method



Effects of Major Burns

- Fluid and electrolyte shifts
 - Eschar
 - fasciotomy
- Cardiovascular effects
- Pulmonary injury
 - Upper airway
 - Inhalation below the glottis
 - Carbon monoxide poisoning
 - Restrictive defects
- Renal and GI alterations
- Immunologic alterations
- Thermoregulation alterations
- Gastrointestinal alterations

Phases of Burn Injury

- ❖ Refer to Table 62-3
- ❖ Emergent or resuscitative phase
 - Onset of injury to completion of fluid resuscitation
- ❖ Acute or intermediate phase
 - From beginning of diuresis to wound closure
- ❖ Rehabilitation phase
 - From wound closure to return to optimal physical and psychosocial adjustment

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Emergent or Resuscitative Phase— On-the-Scene Care

- ❖ Prevent injury to rescuer
- ❖ Stop injury: extinguish flames, cool the burn, irrigate chemical burns
- ❖ ABCs: Establish airway, breathing, and circulation
- ❖ Start oxygen and large-bore IVs
- ❖ Remove restrictive objects and cover the wound
- ❖ Do assessment surveying all body systems and obtain a history of the incident and pertinent patient history
- ❖ Note: Treat patient with falls and electrical injuries as for potential cervical spine injury

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Emergent or Resuscitative Phase

- Interventions
 - At the scene
 - ABCDE
 - TBSA
 - Fluid resuscitation
 - ABA
 - 2 mL LR x Kg x % TSBA
 - 4 mL LR x Kg x % TSBA
- ECG
- NGT- >20/25%
- Foley catheter
- Analgesics
- Assessments
- Linen

Nursing Management in the Care of the Patient in the Emergent Phase of Burn Care

- ❖ ABC
- ❖ Vital signs and hemodynamic status
- ❖ Monitor for fluid volume deficit
- ❖ Assess extent of the burn
- ❖ Refer to Chart 62-6

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Use of the Nursing Process in the Care of the Patient in the Emergent Phase of Burn Care—Potential Complications and Collaborative Problems

- ❖ Acute respiratory failure
- ❖ Distributive shock
- ❖ Acute kidney injury
- ❖ Compartment syndrome
- ❖ Paralytic ileus
- ❖ Curling ulcer

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Fluid and Electrolyte Shifts—Emergent Phase

- ❖ Generalized dehydration
- ❖ Reduced blood volume and hemoconcentration
- ❖ Decreased urine output
- ❖ Trauma causes release of potassium into extracellular fluid: hyperkalemia
- ❖ Sodium traps in edema fluid and shifts into cells as potassium is released: hyponatremia
- ❖ Metabolic acidosis

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Pain Management

- ❖ Analgesics
 - IV use during emergent and acute phases
 - Morphine
 - Fentanyl
 - Other
- ❖ Role of anxiety in pain
- ❖ Effect of sleep deprivation on pain
- ❖ Nonpharmacologic measures

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Acute/Immediate Phase

- Begins 48-72 hours after
- Interventions
 - Assessment
 - Fluid and electrolyte balance
 - Skin integrity- prevent infection
 - Pain management
 - Wound care
 - Support

Use of the Nursing Process in the Care of the Patient in the Acute Burn Care—Collaborative Problems and Potential Complications

- ❖ Heart failure and pulmonary edema
- ❖ Sepsis
- ❖ Acute respiratory failure
- ❖ Visceral damage (electrical burns)

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Fluid and Electrolyte Shifts—Acute Phase

- ❖ Fluid reenters the vascular space from the interstitial space
- ❖ Hemodilution
- ❖ Increased urinary output
- ❖ Sodium is lost with diuresis and due to dilution as fluid enters vascular space: hyponatremia
- ❖ Potassium shifts from extracellular fluid into cells: potential hypokalemia
- ❖ Metabolic acidosis

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Burn Wound Care

- ❖ Wound cleaning
 - Hydrotherapy
- ❖ Use of topical agents: refer to Table 62-4
- ❖ Wound debridement
 - Natural debridement
 - Mechanical debridement
 - Surgical debridement
- ❖ Wound dressing, dressing changes, and skin grafting

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Nutritional Support

- ❖ Burn injuries produce profound metabolic abnormalities, and patient with burns have great nutritional needs related to stress response, hypermetabolism, and requirement for wound healing
- ❖ Goal of nutritional support is to promote a state of nitrogen balance and match nutrient utilization
- ❖ Nutritional support is based on patient preburn status and % of TBSA burned
- ❖ Enteral route is preferred. Jejunal feedings are frequently used to maintain nutritional status with a lower risk of aspiration in a patient with poor appetite, weakness, or other problems

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Rehabilitation Phase

- Prevent and treat scars
- Psychological support

Rehabilitation Phase

- ❖ Rehabilitation is begun as early as possible in the emergent phase and extends for a long period after the injury
- ❖ Focus is on wound healing, psychosocial support, self-image, lifestyle, and restoring maximal functional abilities so that the patient can have the best quality life, both personally and socially
- ❖ The patient may need reconstructive surgery to improve function and appearance
- ❖ Vocational counseling and support groups may assist the patient

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Home Care Instruction

- ❖ Mental health
- ❖ Skin and wound care
- ❖ Exercise and activity
- ❖ Nutrition
- ❖ Pain management
- ❖ Thermoregulation and clothing
- ❖ Sexual issues

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