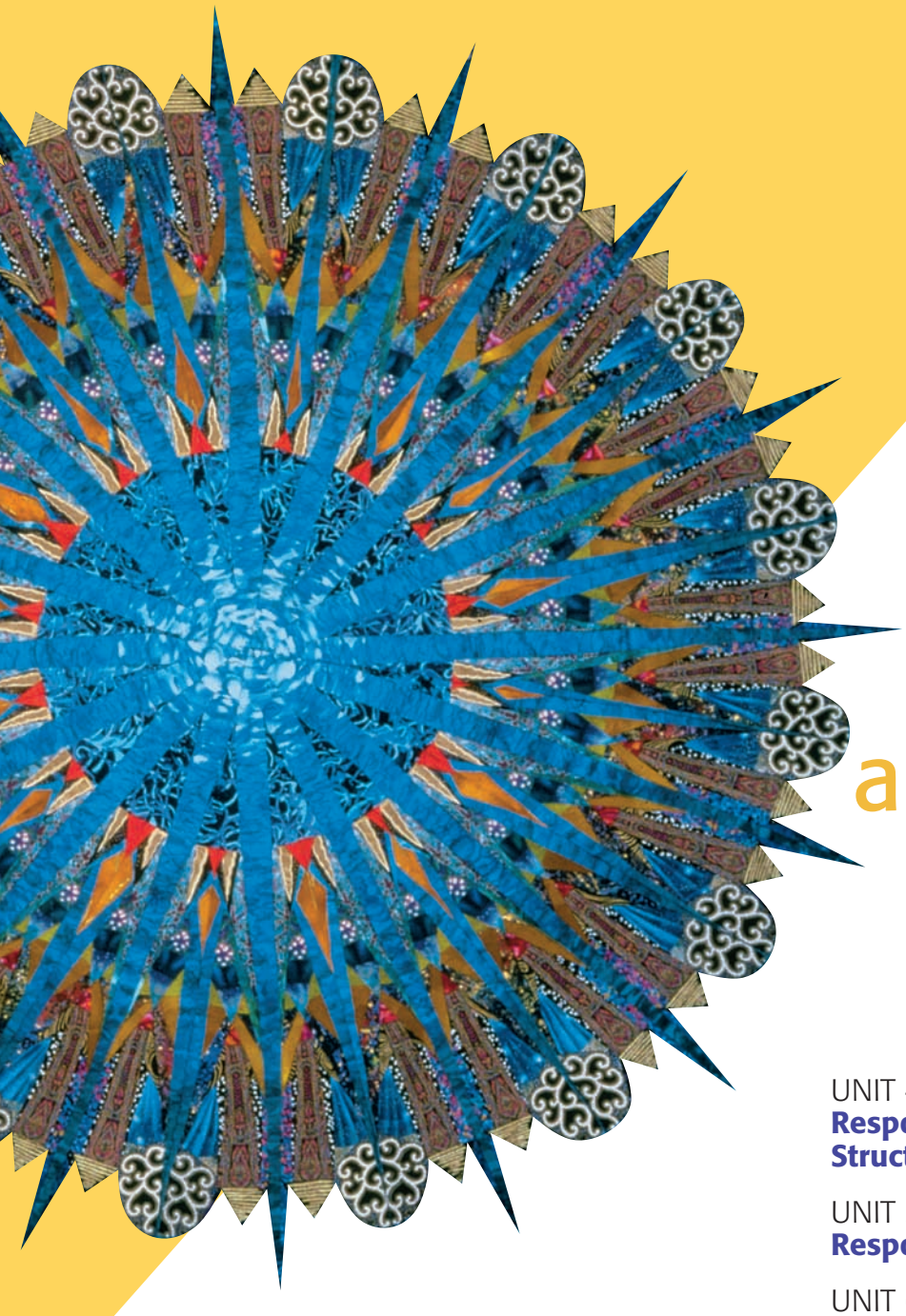


PART II

Nutritional and Metabolic Patterns

UNIT 4
Responses to Altered Integumentary Structure and Function

UNIT 5
Responses to Altered Endocrine Function

UNIT 6
Responses to Altered Nutrition

Functional Health Patterns with Related Nursing Diagnoses

HEALTH PERCEPTION-HEALTH MANAGEMENT

- Perceived health status
- Perceived health management
- Healthcare behaviors: health promotion and illness prevention activities, medical treatments, follow-up care

VALUE-BELIEF

- Values, goals, or beliefs (including spirituality) that guide choices or decisions
- Perceived conflicts in values, beliefs, or expectations that are health related

COPING-STRESS-TOLERANCE

- Capacity to resist challenges to self-integrity
- Methods of handling stress
- Support systems
- Perceived ability to control and manage situations

NUTRITIONAL-METABOLIC

- Daily consumption of food and fluids
- Favorite foods
- Use of dietary supplements
- Skin lesions and ability to heal
- Condition of the integument
- Weight, height, temperature

PART II NUTRITIONAL AND METABOLIC PATTERNS WITH RELATED NANDA NURSING DIAGNOSES

- Risk for Aspiration
- Risk for Imbalanced Body Temperature
- Impaired Dentition
- Feeding Self-Care Deficit
- Deficient Fluid Volume
- Fluid Volume Excess
- Risk for Deficient Fluid Volume
- Hyperthermia
- Hypothermia
- Risk for Infection
- Impaired Oral Mucous Membranes
- Nausea
- Imbalanced Nutrition: Less than Body Requirements
- Imbalanced Nutrition: More than Body Requirements
- Impaired Skin Integrity
- Risk for Impaired Skin Integrity
- Impaired Swallowing
- Ineffective Thermoregulation
- Impaired Tissue Integrity
- Risk for Trauma
- Adult Failure to Thrive

SEXUALITY-REPRODUCTIVE

- Satisfaction with sexuality or sexual relationships
- Reproductive pattern
- Female menstrual and perimenopausal history

ELIMINATION

- Patterns of bowel and urinary excretion
- Perceived regularity or irregularity of elimination
- Use of laxatives or routines
- Changes in time, modes, quality, or quantity of excretions
- Use of devices for control

ROLE-RELATIONSHIPS

- Perception of major roles, relationships, and responsibilities in current life situation
- Satisfaction with or disturbances in roles and relationships

ACTIVITY-EXERCISE

- Patterns of personally relevant exercise, activity, leisure, and recreation
- ADLs that require energy expenditure
- Factors that interfere with the desired pattern (e.g., illness or injury)

SELF-PERCEPTION–SELF-CONCEPT

- Attitudes about self
- Perceived abilities, worth, self-image, emotions
- Body posture and movement, eye contact, voice and speech patterns

SLEEP-REST

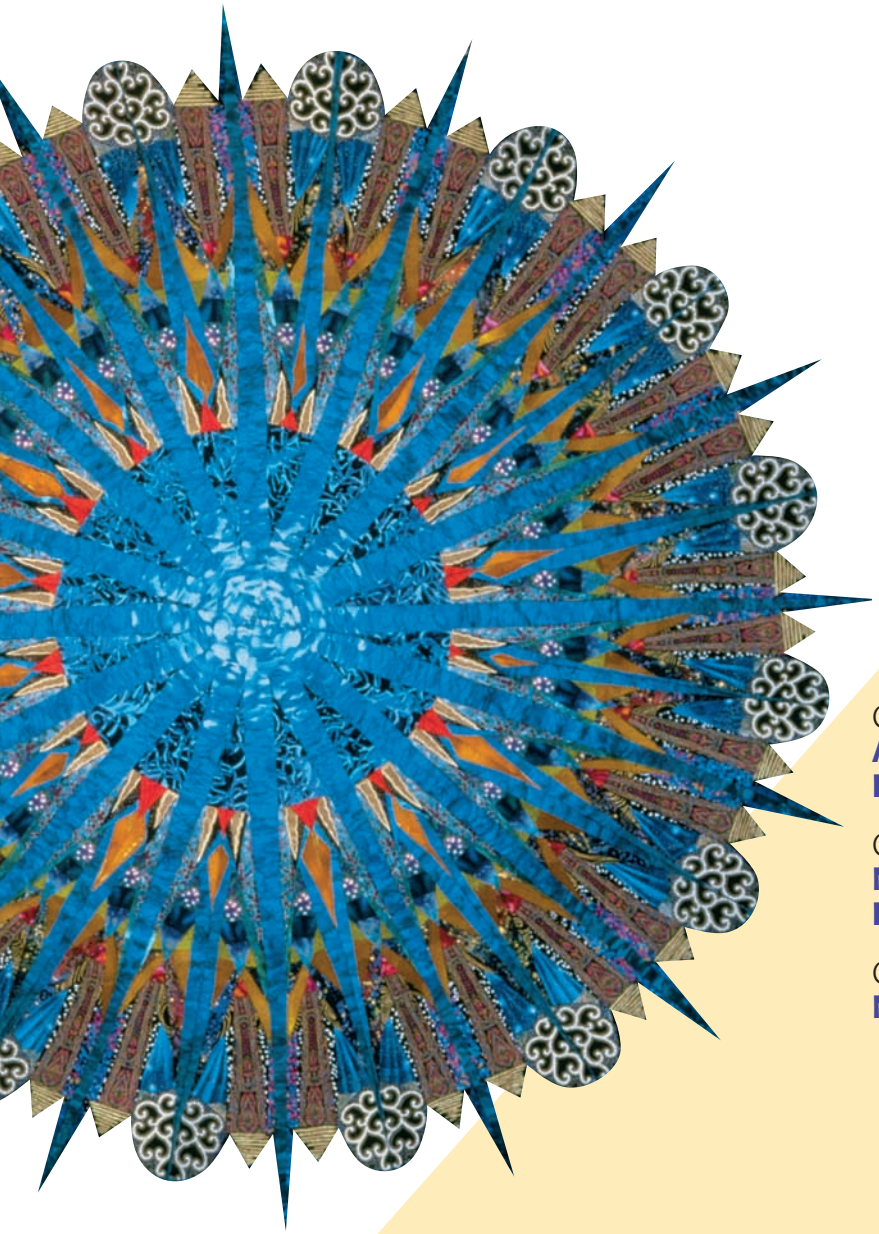
- Patterns of sleep and rest-/relaxation in a 24-h period
- Perceptions of quality and quantity of sleep and rest
- Use of sleep aids and routines

COGNITIVE-PERCEPTUAL

- Adequacy of vision, hearing, taste, touch, smell
- Pain perception and management
- Language, judgment, memory, decisions

Responses to Altered Integumentary Structure and Function

UNIT 4



CHAPTER 15
Assessing Clients with Integumentary Disorders

CHAPTER 16
Nursing Care of Clients with Integumentary Disorders

CHAPTER 17
Nursing Care of Clients with Burns

CHAPTER 15 Assessing Clients with Integumentary Disorders

LEARNING OUTCOMES

- Describe the anatomy, physiology, and functions of the skin, hair, and nails.
- Discuss factors that influence skin color.
- Identify specific topics for a health history interview of the client with problems involving the skin, hair, and nails.
- Explain techniques for assessing the skin, hair, and nails.
- Compare and contrast normal and abnormal findings when conducting an assessment of the integumentary system.
- Describe normal variations in assessment findings for the older client.
- Identify abnormal findings that may indicate impairment of the integumentary system.

CLINICAL COMPETENCIES

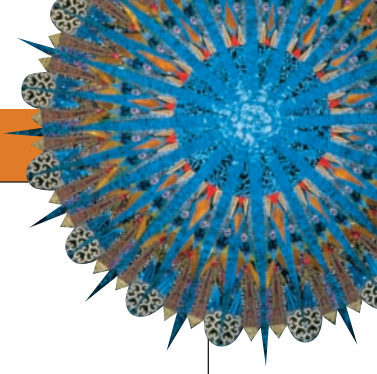
- Conduct and document a health history for clients who have or are at risk for alterations in the skin, hair, or nails.
- Conduct and document a physical assessment of the integumentary system.
- Monitor the results of diagnostic tests and report abnormal findings.

EQUIPMENT NEEDED

- Disposable gloves
- Ruler
- Flashlight

MEDIALINK

Resources for this chapter can be found on the Prentice Hall Nursing MediaLink DVD-ROM accompanying this textbook, and on the Companion Website at http://www.prenhall.com/lemone



KEY TERMS

alopecia, *435*
cyanosis, *425*
ecchymosis, *431*
edema, *435*
erythema, *425*
hirsutism, *435*
jaundice, *425*
keratin, *423*
melanin, *423*
pallor, *425*
sebum, *424*
urticaria, *431*
vitiligo, *431*

The skin, the hair, and the nails make up the integumentary system. The skin, the largest organ of the body, provides an external covering for the body, separating and protecting the body's organs and tissues from the external environment. Functions of the skin, hair, and nails are summarized in Table 15–1.

Disorders of the integumentary structures may be caused by a variety of factors, including allergies, infection, infestation, cancer, and genetic influences.

ANATOMY, PHYSIOLOGY, AND FUNCTIONS OF THE INTEGUMENTARY SYSTEM

The Skin

The skin has a total surface area of 15 to 20 square feet and weighs about 9 pounds. It has been estimated that each square inch of skin contains 15 feet of blood vessels, 4 yards of nerves, 650 sweat glands, 100 oil glands, 1500 sensory receptors, and more than 3 million cells that are constantly dying and being replaced. The skin is composed of two regions: the epidermis and the dermis (Figure 15–1 ■).

The Epidermis

The epidermis, which is the surface or outermost part of the skin, consists of epithelial cells. The epidermis has either four or five layers, depending on its location; there are five layers over the palms of the hands and the soles of the feet, and four layers over the rest of the body.

The stratum basale is the deepest layer of the epidermis. It contains melanocytes, cells that produce the pigment **melanin**, and keratinocytes, which produce **keratin**. Melanin forms a protective shield to protect the keratinocytes and the nerve endings in the dermis from the damaging effects of ultraviolet light. Melanocyte activity probably accounts for the difference in skin color in humans. Keratin is a fibrous, water-repellent protein that gives the epidermis its tough, protective quality. As keratinocytes mature, they move upward through the epidermal layers, eventually becoming dead cells at the surface of the skin. Millions of these cells are worn off by abrasion each day, but millions are simultaneously produced in the stratum basale. The next layer of the epidermis is the stratum spinosum. Several cells thick, this layer contains abundant cells that arise from the bone marrow and migrate to the epidermis. Mitosis occurs at this layer, although not as abundantly as in the stratum basale.

The stratum granulosum is only two to three cells thick. The cells of the stratum granulosum contain a glycolipid that slows water loss across the epidermis. Keratinization, a thickening of the cells' plasma membranes, begins in the stratum granulosum. The stratum lucidum is present only in areas of thick skin. It is made up of flattened, dead keratinocytes.

The outermost layer of the epidermis, the stratum corneum, is also the thickest, making up about 75% of the epidermis's total thickness. It consists of about 20 to 30 sheets of dead cells filled with keratin fragments arranged in "shingles" that flake off as dry skin.

The Dermis

The dermis is the second, deeper layer of skin. Made of a flexible connective tissue, this layer is richly supplied with blood

TABLE 15–1 **Functions of the Skin and Its Appendages**

STRUCTURE	FUNCTIONS
Epidermis	Protects tissues from physical, chemical, and biologic damage. Prevents water loss and serves as a water-repellent layer. Stores melanin, which protects tissues from harmful effects of the ultraviolet radiation in sunlight. Converts cholesterol molecules to vitamin D when exposed to sunlight. Contains phagocytes, which prevent bacteria from penetrating the skin.
Dermis	Regulates body temperature by dilating and constricting capillaries. Transmits messages via nerve endings to the central nervous system.
Sebaceous (oil) glands	Secrete sebum, which lubricates skin and hair and plays a role in killing bacteria.
Eccrine sweat glands	Regulate body heat by excretion of perspiration.
Apocrine sweat glands	Remnant of sexual scent gland.
Hair	Cushions the scalp. Eyelashes and cilia protect the body from foreign particles. Provides insulation in cold weather.
Nails	Protect the fingers and toes, aid in grasping, and allow for various other activities, such as scratching the skin, picking up small items, peeling an orange, and so on.

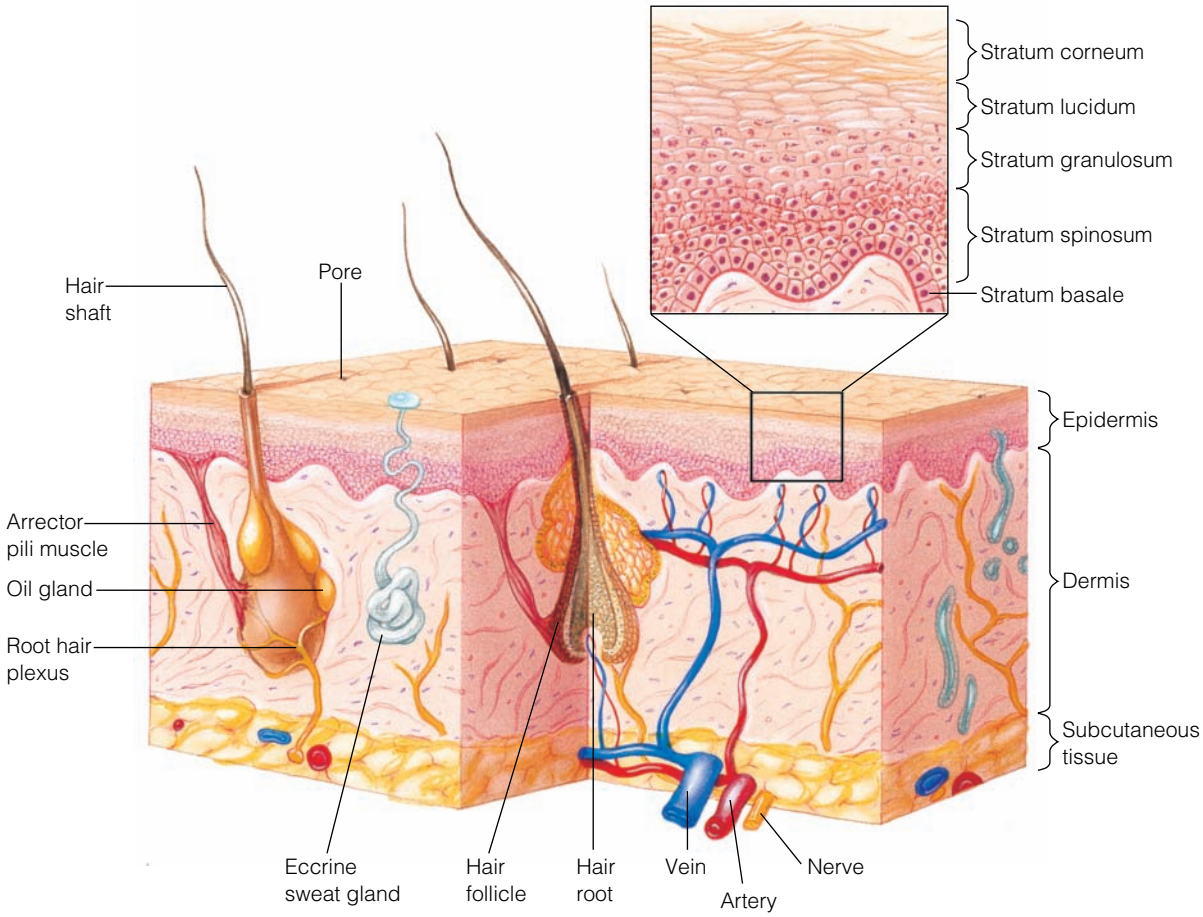


Figure 15–1 ■ Anatomy of the skin.

cells, nerve fibers, and lymphatic vessels. Most of the hair follicles, sebaceous glands, and sweat glands are located in the dermis. The dermis consists of a papillary and a reticular layer. The papillary layer contains ridges that indent the overlying epidermis. It also contains capillaries and receptors for pain and touch. The deeper, reticular layer contains blood vessels, sweat and sebaceous glands, deep pressure receptors, and dense bundles of collagen fibers. The regions between these bundles form lines of cleavage in the skin. Surgical incisions parallel to these lines of cleavage heal more easily and with less scarring than incisions or traumatic wounds across cleavage lines.

Superficial Fascia

A layer of subcutaneous tissue called the superficial fascia lies under the dermis. It consists primarily of adipose (fat) tissue and helps the skin adhere to underlying structures.

Glands of the Skin

The skin contains sebaceous (oil) glands, sudoriferous (sweat) glands, and ceruminous glands. Each of these glands has a different function.

Sebaceous glands are found all over the body except on the palms and soles. These glands secrete an oily substance called **sebum**, which usually is ducted into a hair follicle. Sebum softens and lubricates the skin and hair and also decreases water loss from the skin in low humidity. Sebum also protects the body from infection by killing bacteria. The secretion of sebum is stimulated by hormones, especially androgens. If a sebaceous gland becomes blocked, a pimple or whitehead appears on the surface of the skin; as the material oxidizes and dries, it forms a blackhead. Acne vulgaris is an inflammation of the sebaceous glands.

There are two types of sweat glands: eccrine and apocrine. Eccrine sweat glands are more numerous on the forehead, palms, and soles. The gland itself is located in the dermis; the duct to the skin rises through the epidermis to open in a pore at the surface. Sweat, the secretion of the eccrine glands, is composed mostly of water but also contains sodium, antibodies, small amounts of metabolic wastes, lactic acid, and vitamin C. The production of sweat is regulated by the sympathetic nervous system and serves to maintain normal body temperature. Sweating also occurs in response to emotions.

Most apocrine sweat glands are located in the axillary, anal, and genital areas. The secretions from apocrine glands are similar to those of sweat glands, but they also contain fatty acids and proteins. Apocrine glands are a remnant of sexual scent glands. Ceruminous glands are modified apocrine sweat glands. Located in the skin of the external ear canal, they secrete yellow-brown waxy cerumen. This substance provides a sticky trap for foreign materials.

Skin Color

Skin color varies among individuals and among people of different races, ranging from a pinkish white to various shades of brown and black. Areas of the skin that are normally exposed to the sun and environment, such as the face and hands, may have a slightly different color from areas that are usually covered with clothing. Special care must be taken when assessing changes in skin color in people with dark skin, such as African Americans, Hispanics, Native Americans, Asians, people of Mediterranean descent, and Caucasians who are deeply suntanned.

The color of the skin is the result of varying levels of pigmentation. Melanin, a yellow-to-brown pigment, is darker and is produced in greater amounts in persons with dark skin color than in those with light skin. Exposure to the sun causes a buildup of melanin and a darkening or tanning of the skin in people with light skin. Carotene, a yellow-to-orange pigment, is found most in areas of the body where the stratum corneum is thickest, such as the palms of the hands. Carotene is more abundant in the skins of persons of Asian ancestry and, together with melanin, accounts for their golden skin tone. The epidermis in Caucasian skin has very little melanin and is almost transparent. Thus, the color of the hemoglobin found in red blood cells (RBCs) circulating through the dermis shows through, lending Caucasians a pinkish skin tone.

Skin color is influenced by emotions and illnesses. **Erythema**, a reddening of the skin, may occur with embarrassment (blushing), fever, hypertension, or inflammation. It may also result from a drug reaction, sunburn, acne rosacea, or other factors. A bluish discoloration of the skin and mucous membranes, called **cyanosis**, results from poor oxygenation of hemoglobin. **Pallor**, or paleness of skin, may occur with shock, fear, or anger or in anemia and hypoxia. **Jaundice** is a yellow-to-orange color visible in the skin and mucous membranes; it is most often the result of a hepatic disorder. Table 15–2 further defines these terms and compares and contrasts skin color changes in people with light and dark skin.

The Hair

Hair is distributed all over the body, except the lips, nipples, parts of the external genitals, the palms of the hands, and the soles of the feet. Hair is produced by a hair bulb, and its root is enclosed in a hair follicle (Figure 15–2 ■). The exposed part, called the shaft, consists mainly of dead cells. Hair follicles extend into the dermis and in some places, such as the scalp, below the dermis. Many factors, including nutrition and hormones, influence hair growth.

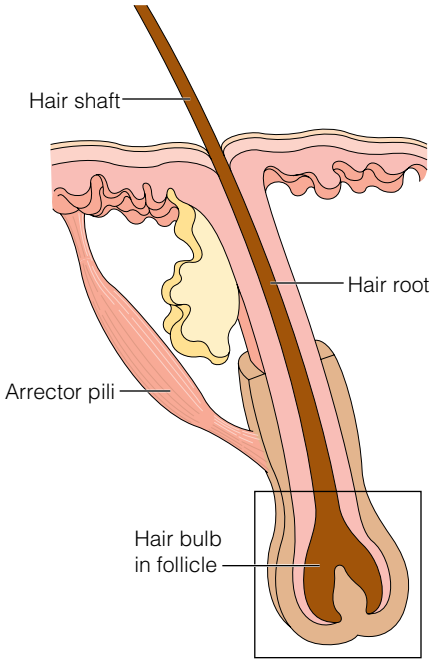


Figure 15–2 ■ Anatomy of a hair follicle.

Hair in various parts of the body has protective functions: The eyebrows and eyelashes protect the eyes; hair in the nose helps keep foreign materials out of the upper respiratory tract; and hair on the head protects the scalp from heat loss and sunlight.

The Nails

A nail is a modified scalelike epidermal structure. Like hair, nails consist mainly of dead cells. They arise from the stratum germinativum of the epidermis. The body of the nail rests on the nail bed (Figure 15–3 ■). The nail matrix is the active,

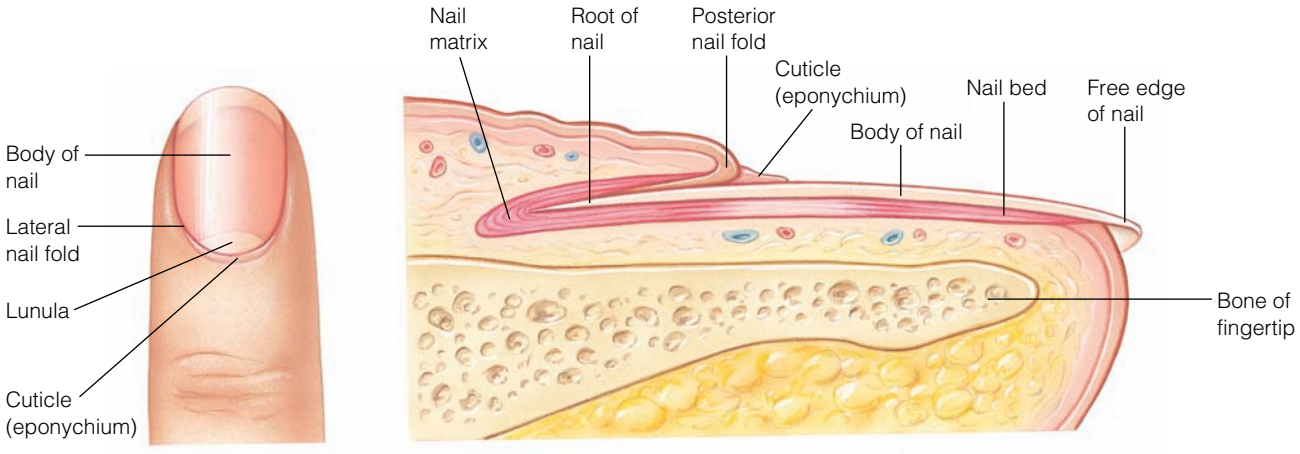


Figure 15–3 ■ Anatomy of a nail (frontal and side views).

TABLE 15–2 Skin Color Assessment Variations in People with Light and Dark Skin

PALLOR: *A decrease or absence in skin color as the result of a decrease in tissue perfusion; a decrease in shape, size, or amount of RBCs; or absence of melanin (local or generalized).*

DISORDER AND CAUSE	CHANGE IN LIGHT SKIN	CHANGE IN DARK SKIN
Anemia (decreased or abnormal size and shape of RBCs)	Generalized paleness	Brown skin is dull and has a yellow cast; black skin is dull and has an ashen gray cast
Hemorrhage (decreased amount of circulating RBCs)	Generalized paleness	Brown skin is dull and has a yellow cast; black skin is dull and has an ashen gray cast
Shock (decreased amount of circulating RBCs or decreased perfusion)	Generalized paleness	Brown skin is dull and has a yellow cast; black skin is dull and has an ashen gray cast
Arterial insufficiency (trauma, acute arterial occlusion, or arteriosclerosis)	Local paleness	Dull, ashen gray
Vitiligo (patchy loss of melanocytes)	Patches of white spots, most often found over skin of the face, hands, or groin	Patches of white spots, most often found over skin of the face, hands, or groin
Albinism (total absence of melanin)	White/pink	Tan, cream, or white

CYANOSIS: *A bluish discoloration of the skin and mucous membranes resulting from a local or generalized excess of deoxygenated hemoglobin or a structural defect in the hemoglobin molecule.*

DISORDER AND CAUSE	CHANGE IN LIGHT SKIN	CHANGE IN DARK SKIN
Acute and chronic disorders of the structure and function of the heart and lungs (arterial insufficiency; exposure to cold, hypothermia)	Dusky blue (may be generalized or local, depending on cause)	Skin may appear darker, but will be dull; cyanosis is more readily assessed in the nail beds, oral mucous membranes, and conjunctivae

ERYTHEMA: *Redness of the skin or mucous membranes that is the result of dilatation and congestion of superficial capillaries.*

DISORDER AND CAUSE	CHANGE IN LIGHT SKIN	CHANGE IN DARK SKIN
Hyperemia (inflammation, increased body temperature, hot environmental temperature, embarrassment, alcohol ingestion)	Red or bright pink	Difficult to assess, skin may have dark red cast
Carbon monoxide poisoning (carbon monoxide displaces oxygen on the hemoglobin molecule, causing hypoxia, carboxyhemoglobinemia)	Cherry red in face and upper torso	Cherry red lips, oral mucous membranes, and nail beds
Venous stasis (inability of veins to return blood to heart; may result from edema, varicose veins, or pressure)	Dusky red	Difficult to assess

JAUNDICE: *Yellowish discoloration of the skin, mucous membranes, and sclerae of the eyes, caused by increased amounts of bilirubin or other pigments in the blood).*

DISORDER AND CAUSE	CHANGE IN LIGHT SKIN	CHANGE IN DARK SKIN
Increased serum bilirubin to >2–3 mg/100 mL (liver disease, pancreatic disease, gallbladder disease, hemolysis, such as following blood transfusion, severe burns or infections)	Yellowing of skin follows yellowing of sclerae and mucous membranes; may also be assessed in the fingernails and palms of the hands	Yellowing is best assessed at the junction of the hard palate and the soft palate or on the palms of the hands. Sclerae may be yellow near the limbus (do not confuse with normal yellow eye pigmentation)
Uremia (retained urochrome pigments in the blood)	Orange-green or gray cast to skin	Difficult to assess; may appear as yellowish-green color in the scleral of the eye

growing part of the nail. The proximal visible end of the nail has a white crescent, called a lunula. The sides of the nail are overlapped by skin, called nail folds. The proximal nail fold is thickened and is called the eponychium or cuticle. Nails form a protective coating over the dorsum of each digit on the fingers and toes.

ASSESSING THE INTEGUMENTARY SYSTEM

The functions of the integumentary system (skin, glands, hair, and nails) are assessed by findings from diagnostic tests, a health assessment interview to collect subjective

data, and a physical assessment to collect objective data. See the box below for sample documentation of an assessment of the integument.

Diagnosis

The results of diagnostic tests of the structure and function of the integumentary system are used to support the diagnosis of a specific injury or disease, to provide information to identify or modify the appropriate medication or treatments used to treat the disease, and to help nurses monitor the clients' responses to nursing care interventions. Diagnostic tests to assess the integumentary system are described in the box on the following page and summarized in the following bulleted list. More information is included in the discussion of specific health problems, diseases, or injuries in Chapters 16 and 17 ∞.

- One of the most common diagnostic tests is a skin biopsy, used to differentiate a benign skin lesion from a skin cancer. Skin biopsies can be obtained by using a punch technique, incision, excision, or shaving.
- Cultures to identify infections may be conducted on tissue samples, drainage and exudate from lesions, and (if an illness is generalized), serum.
- Tests used to identify infections include immunofluorescent studies, Wood's lamp, potassium hydroxide, and the Tzanck test.
- Allergies may be determined through patch tests or scratch tests.

Some studies are conducted to identify bacterial carriers. For example, if clients have repeated bacterial skin infections, or if a healthcare unit or agency experiences numerous bacterial infections of clients, nasal cultures may be performed to determine if the clients or the healthcare workers are carriers of the bacteria. Regardless of the type of diagnostic test, the nurse is responsible for explaining the procedure and any special preparation needed, for assessing for medication use that may affect the outcome of the tests, for supporting the client during the examination as necessary, for documenting the procedures as appropriate, and for monitoring the results of the tests.

SAMPLE DOCUMENTATION
Assessment of the Integumentary System

A 50-year-old man with no history of skin lesions, hair loss, or disorders of the nails. Took antibiotic for respiratory infection approximately 10 days ago and reports having a fine, raised, red rash on trunk and arms that itched. Nurse practitioner prescribed antihistamine and rash cleared in 3 days. Skin light brown, warm, dry, and elastic. Patches of vitiligo present over dorsum of hands. No lesions or edema noted. Healed scar on lower left abdomen (appendectomy as a young adult). Hair dark brown with gray at the temples, clean. Nails are smooth, hard, and immobile.

Genetic Considerations

When conducting a health assessment interview and physical assessment, it is important for the nurse to consider genetic influences on health of the adult. During the health assessment interview, ask about integumentary disorders or abnormalities in immediate family members and also inquire about their gender. During the physical assessment, assess for any manifestations that indicate a genetic disorder (see Genetic Considerations: Integumentary System below). If data are found that indicate genetic risk factors or alterations, ask about genetic testing and refer for appropriate genetic counseling and evaluation. Chapter 8 ∞ provides further information about genetics in medical-surgical nursing.

Health Assessment Interview

A health assessment interview to determine problems with the integumentary system may be conducted as part of a health screening or total health assessment, or it may focus on a chief complaint (such as itching or a rash). If the client has a skin problem, analyze its onset, characteristics and course, severity, precipitating and relieving factors, and note the timing and circumstances of any associated symptoms. For example, ask the client:

- What type of itching have you experienced?
- When did you first notice a change in this mole?
- Did you change to any different kinds of shampoo or other hair products just before you started to lose your hair?

Ask about any change in health, rashes, itching, color changes, dryness or oiliness, growth of or changes in warts or moles, and the presence of lesions. Precipitating causes, such as medications, the use of new soaps, skin care agents, cosmetics, pets, travel, stress, or dietary changes, must also be explored. In assessing hair problems, ask about any thinning or baldness, excessive hair loss, change in distribution of hair, use of hair care products, diet, and dieting. When assessing nail problems, ask about nail splitting or breakage, discoloration, infection, diet, and exposure to chemicals.

GENETIC CONSIDERATIONS
Integumentary System

- Oculocutaneous albinism, an autosomal recessive inheritance disorder, causes hypopigmentation (albinism or absence of color) of the skin, hair, and eyes as a result of an inability to synthesize melanin.
- Keloids, which are elevated scars, have a familial tendency and are more commonly found in blacks. Vitiligo, the sudden appearance of white patches on the skin, has a familial tendency.
- Male pattern baldness (the most common cause of baldness in men) is genetically predetermined.
- Hirsutism (excessive hair in women) may be genetically predetermined.
- Blacks may have very dry scalps and dry, fragile hair of genetic origin.
- A family history of skin cancer is a risk factor.

DIAGNOSTIC TESTS of the Integumentary System

NAME OF TEST Punch Skin Biopsy

PURPOSE AND DESCRIPTION This biopsy is done to differentiate benign lesions from skin cancers. An instrument is used to remove a small section of dermis and subcutaneous fat. Depending on size, the incision may be sutured.

RELATED NURSING CARE Explain the procedure to the client, and ensure a consent form is signed (if required). Assist with the procedure. Apply dressing and provide information about self-care and when to return for suture removal. Document the procedure and send the labeled specimen to the lab.

NAME OF TEST Incisional Skin Biopsy

PURPOSE AND DESCRIPTION This biopsy is done to differentiate benign lesions from skin cancers. An incision is made and a *part* of the lesion or tumor is removed. The incision is closed with sutures.

RELATED NURSING CARE See above.

NAME OF TEST Excisional Skin Biopsy

PURPOSE AND DESCRIPTION This biopsy is done to differentiate benign lesions from skin cancers. An incision is made and the *entire* skin lesion or tumor is removed for analysis. The incision is closed with sutures.

RELATED NURSING CARE See above.

NAME OF TEST Shave Skin Biopsy

PURPOSE AND DESCRIPTION This skin biopsy is done to shave off superficial lesions and to differentiate infectious from inflammatory lesions. A single-edged razor is used for shaving.

RELATED NURSING CARE See above.

NAME OF TEST Culture

PURPOSE AND DESCRIPTION A culture of scrapings from a lesion, from drainage, or of exudate is done to identify fungal, bacterial, or viral skin infections. Obtain the culture with a sterile Culturette swab and culture tubes.

RELATED NURSING CARE Confirm physician's order. Explain the procedure to the client. Maintain strict asepsis while obtaining the culture. Document the procedure and send the labeled specimen to the lab.

NAME OF TEST Oil Slides

PURPOSE AND DESCRIPTION Oil slides are used to determine the type of skin infestation present. Scrapings of the lesion are placed on a slide with mineral oil and examined microscopically.

RELATED NURSING CARE Explain the procedure to the client. Assist with or obtain the specimen and complete the slide. Document the procedure and send the labeled specimen to the lab.

NAME OF TEST Immunofluorescent Slides

PURPOSE AND DESCRIPTION Immunofluorescent studies of samples from skin and/or serum may be done to identify IgG antibodies (present in pemphigus vulgaris) and to identify varicella in skin cells (for herpes zoster). Skin or blood samples are placed on a slide and examined microscopically.

RELATED NURSING CARE See above.

NAME OF TEST Wood's Lamp

PURPOSE AND DESCRIPTION This test uses an ultraviolet light that causes certain organisms to fluoresce (such as *Pseudomonas* organisms and fungi). The skin is examined under a special lamp.

RELATED NURSING CARE Explain the procedure to the client. Document the procedure.

NAME OF TEST Potassium Hydroxide (KOH)

PURPOSE AND DESCRIPTION A specimen from hair or nails is examined for a fungal infection. The specimen is obtained by placing material from a scraping on a slide, adding a potassium hydroxide solution, and examining it microscopically.

RELATED NURSING CARE Explain the procedure to the client. Assist with or obtain the specimen and complete the slide. Document the procedure and send the labeled specimen to the lab.

NAME OF TEST Tzanck Test

PURPOSE AND DESCRIPTION This test is used to diagnose herpes infections, but it does not differentiate herpes simplex from herpes zoster. Fluid and cells from the vesicles are obtained, put on a slide, stained, and examined microscopically.

RELATED NURSING CARE Explain the procedure to the client. Use sterile procedure to assist with or obtain the specimen and complete the slide. Document the procedure and send the labeled specimen to the lab.

NAME OF TEST Patch Test, Scratch Tests

PURPOSE AND DESCRIPTION These tests are used to determine a specific allergen. In a patch test, a small amount of the suspected material is placed on the skin under an occlusive bandage. In a scratch test, a needle is used to "scratch" small amounts of potentially allergic materials on the skin surface.

RELATED NURSING CARE Explain the procedure to the client, including the need to return in 48 hours to have the patched area or scratched areas evaluated. Document the procedure.

The client's medical history is important. Questions focus on previous problems, allergies, and lesions. Skin problems may be manifestations of other disorders, such as cardiovascular disease, endocrine disorders, hepatic disease, and hematologic disorders. Occupational and social history may provide cues to skin problems; ask the client about travel, exposure to toxic substances at work, use of alcohol, and responses to stress.

Assess the presence of risk factors for skin cancer carefully. These include male gender; age over 50; family history of skin cancer; extended exposure to sunlight; tendency to sunburn; history of sunburn or other skin trauma; light-colored hair or eyes; residence in high altitudes or near the equator; and exposure to radiation, x-rays, coal, tar, or petroleum products. (Risks for skin cancer are further discussed in Chapter 16 ∞.)

Also explore the risk factors for malignant melanoma. These include a large number of moles, the presence of atypical moles, a family history of melanoma, prior melanoma, repeated severe sunburns, ease of freckling and sunburning, or inability to tan.

See Functional Health Pattern Interview: Integumentary System below. Responses should be documented in the client's medical record.

Physical Assessment

Physical assessment of the skin, hair, and nails may be performed either as part of a total assessment or may be a

FUNCTIONAL HEALTH PATTERN INTERVIEW **Integumentary System**

Functional Health Pattern	Interview Questions and Leading Statements
Health Perception-Health Management	■ Describe any problems, injuries, or surgeries you have had. How were these treated? ■ Describe medications, herbs, and vitamins you currently are taking. ■ Describe your current problem. How long has it lasted? What have you done to treat it? ■ Do you have allergies to foods, plants, pets? ■ Describe what you do each day to care for your skin, hair, and nails.
Nutritional-Metabolic	■ Describe what you eat and how much and type of fluids you drink in a 24-hour period. ■ Do you have a history of food allergies? If so, describe what you are allergic to and how you respond. ■ Have you recently eaten any new foods? ■ Do you take any nutritional supplements, herbs, or vitamins? ■ How well do your cuts and scratches heal?
Elimination	■ Is your skin and scalp dry or oily? ■ Have you noticed swelling around your eyes or ankles? ■ Do you perspire a lot?
Activity-Exercise	■ Describe your physical activities in a typical day. ■ Do you bruise easily? ■ Do you use a sunscreen when you are outside? If so, what SPF? ■ Do you visit tanning salons?
Sleep-Rest	■ How many hours do you sleep each night? ■ Do you have trouble sleeping because of itching or sweating?
Cognitive-Perceptual	■ Do you have any of the following: pain, discomfort, itching, tingling, burning, tenderness, or numbness? If so, where?
Self-Perception-Self-Concept	■ How does this condition make you feel about yourself?
Role-Relationships	■ How does this condition affect your relationships with others? ■ Is there anything in your work environment that may have caused this condition?
Sexuality-Reproductive	■ Has this condition interfered with your usual sexual activities? ■ If you use a birth control method, could it have caused this condition?
Coping-Stress-Tolerance	■ Have you experienced any type of stress that may have worsened this condition? ■ Has this condition created stress for you? ■ Describe what you do when you feel stressed.
Value-Belief	■ Tell me how specific relationships or activities help you cope with this condition. ■ Describe specific cultural beliefs or practices that affect how you care for and feel about this condition. ■ Are there any specific treatments that you would not use to treat this condition?

focused assessment of the integument for clients with known or suspected problems. Physical assessment of the skin, hair, and nails is conducted by inspection and palpation. Assess the skin for color, presence of lesions (observable changes from normal skin structure), temperature, texture, moisture, turgor, and presence of edema. Characteristics of lesions to note include location and distribution, color, pattern, edges, size (measure with a ruler in centimeters), elevation, and type of exudate (if present). Common skin lesions of older adults are outlined in Box 15–1; see Table 15–3 for age-related integument changes. Examine the hair for color, texture, quality, and scalp lesions. Determine the shape, color, contour, and condition of the nails. Terminology of skin lesions with examples are outlined in Table 15–4.

The examination should be conducted in a warm, private room. The client removes all clothing and puts on a gown or drape. The areas to be examined should be fully exposed, but protect the client's modesty by keeping other areas covered. The client may be standing, sitting, or lying down at various times of the examination. Don disposable gloves when palpating open lesions, skin surfaces suspicious of infections or infestations, or discharge from lesions of the skin and mucous membranes. Standard precautions should be adhered to when conducting a skin assessment. A ruler is used to measure the size of lesions. A flashlight is used to better visualize lesions.

BOX 15–1 Common Skin Lesions of Older Adults

- *Skin tags:* soft brown or flesh-colored benign papules
- *Keratoses:* horny growth of keratinocytes, may be seborrheic (benign) or actinic (premalignant)
- *Lentigines ("liver spots"):* brown or black benign macule with a defined border
- *Angiomas (hemangioma):* benign vascular tumors with dilated blood vessels, found in the middle to upper dermis
- *Telangiectases:* single dilated blood vessels, capillaries, or terminal arteries
- *Venous lakes:* small, dark blue, slightly raised benign papules
- *Photoaging:* wrinkling, mottling, pigmented areas, loss of elasticity, benign or malignant lesions

TABLE 15–3 Age-Related Skin Changes

AGE-RELATED CHANGE	SIGNIFICANCE
Epidermis : ↓ thickness and miotic activity	■ Skin is more fragile and at greater risk for tears or injury ■ Delayed wound healing ■ Hyperkeratoses and skin cancers in sun-exposed areas are more evident
Epidermis: ↑ permeability, ↓ Langerhans cells	■ Increased risk of reactions to irritants ■ Decreased inflammatory response
Epidermis: ↓ number of active melanocytes	■ Increased susceptibility to sun exposure
Epidermis: hyperplasia of melanocytes, especially in sun-exposed areas	■ Small areas of hyperpigmentation ("liver spots") and hypopigmentation ("age spots"), especially on the hands
Epidermis: ↓ vitamin D production	■ Increased risk of osteomalacia, osteoporosis
Epidermis: dermal–epidermal junction flattens	■ Increased risk of skin tears, purpura, and pressure ulcers
Dermis: ↓ perfusion	■ More susceptible to dry skin ■ Decreased sensation (pain, touch, temperature, and peripheral vibration) ■ Increased risk of injury
Dermis: ↓ vasomotor response	■ Greater risk of hyperthermia and hypothermia
Dermis: elastic fibers degenerate	■ Decreased tone and elasticity, with wrinkle formation
Dermis: proliferation of capillaries	■ Cherry hemangiomas are common
Subcutaneous skin layer: thins	■ Greater risk of hypothermia ■ Increased risk of pressure ulcers
Subcutaneous skin layer: adipose tissue is redistributed	■ Cellulite forms ■ Bags over and under the eyes ■ Double chin forms ■ Abdominal fat increases ■ Breasts sag ■ Skin returns to normal more slowly when pinched (tenting)
Glands: ↓ eccrine and apocrine activity	■ Dry skin is common ■ Absent perspiration

TABLE 15–4 **Terminology of Skin Lesions with Associated Disorders**

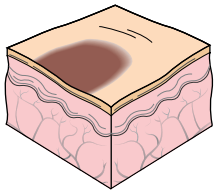
LESION	EXAMPLES OF DISORDERS
Pigmented	Freckle, seborrheic keratosis, nevus, melanoma
Scaly	Psoriasis, dermatitis, xerosis, tinea, actinic keratoses
Pustular	Acne vulgaris, folliculitis, candidiasis
Vesicular	Herpes simplex, herpes zoster, scabies
Nodular	Warts, basal cell carcinoma, acne
Weepy, crusted	Acute contact allergic dermatitis, impetigo
Figurate (shaped) erythema	Urticaria, cellulitis
Bullous	Pemphigus, toxic epidermal necrolysis
Pruritic	Xerosis, scabies, pediculosis
Ulcerated	Pressure ulcer, skin cancer, herpes simplex

INTEGUMENTARY ASSESSMENTS

Technique/Normal Findings	Abnormal Findings
Inspect skin color and note any odors coming from the skin. *Skin color should be even, appropriate to the age and race of the client, without foul odors.*	■ A strong odor of perspiration may indicate poor hygiene and a need for client teaching. A foul odor may indicate a disorder of the sweat glands. ■ Pallor and/or cyanosis are seen with exposure to cold and with decreased perfusion and oxygenation. In cyanotic dark-skinned clients, skin loses glow and appears dull. Cyanosis may be more visible in the mucous membranes and nail beds of these clients. ■ In dark-skinned clients, jaundice may be most apparent in the sclerae of the eyes. ■ Redness, swelling, and pain are seen with various rashes, inflammations, infections, and burns. First-degree burns cause areas of painful erythema and swelling. Red, painful blisters appear in second-degree burns, whereas white or blackened areas are common in third-degree burns. ■ **Vitiligo**, an abnormal loss of melanin in patches, typically occurs over the face, hands, or groin. Vitiligo is thought to be an autoimmune disorder.
Inspect the skin for lesions and alterations, including calluses, scars, tattoos, and piercings. Include inspection of skin creases and folds. *Skin should be intact without abnormal lesions.*	Primary, secondary, and vascular lesions are described and shown in Tables 15–5 through 15–7. ■ Pearly edged nodules with a central ulcer are seen in basal cell carcinoma. ■ Scaly, red, fast-growing papules are seen in squamous cell carcinoma. ■ Dark, asymmetric, multicolored patches (sometimes moles) with irregular edges appear in malignant melanoma. ■ Circular lesions are usually present in ringworm and in tinea versicolor. ■ Grouped vesicles may be seen in contact dermatitis. ■ Linear lesions appear in poison ivy and herpes zoster. ■ **Urticaria** (hives) appears as patches of pale, itchy wheals in an erythematous area. ■ In psoriasis, scaly red patches appear on the scalp, knees, back, and genitals. ■ In herpes zoster, vesicles appear along sensory nerve paths, turn into pustules, and then crust over. ■ Bruises (**ecchymosis**) are raised bluish or yellowish vascular lesions. Multiple bruises in various stages of healing suggest trauma or abuse.
Palpate skin temperature. *Skin should be warm.*	■ Skin is warm and red in inflammation and is generally warm with elevated body temperature. ■ Decreased blood flow decreases the skin temperature; this may be generalized, as in shock, or localized, as in arteriosclerosis.
Palpate skin texture. *Skin should be smooth.*	■ Changes in the texture of the skin may indicate irritation or trauma. ■ The skin is soft and smooth in hyperthyroidism and coarse in hypothyroidism.

TABLE 15–5 **Primary Skin Lesions**

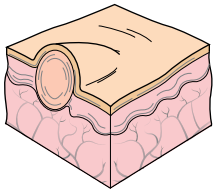
Macule, Patch



Flat, nonpalpable change in skin color. Macules are smaller than 1 cm, with a circumscribed border, and patches are larger than 1 cm and may have an irregular border.

Examples Macules: freckles, measles, and petechiae. Patches: Mongolian spots, port-wine stains, vitiligo, and chloasma.

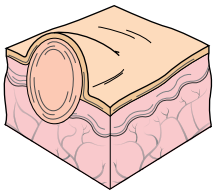
Papule, Plaque



Elevated, solid, palpable mass with circumscribed border. Papules are smaller than 0.5 cm; plaques are groups of papules that form lesions larger than 0.5 cm.

Examples Papules: elevated moles, warts, and lichen planus. Plaques: psoriasis, actinic keratosis, and also lichen planus.

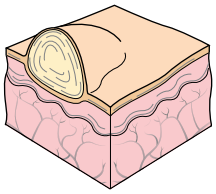
Nodule, Tumor



Elevated, solid, hard or soft palpable mass extending deeper into the dermis than a papule. Nodules have circumscribed borders and are 0.5 to 2 cm; tumors may have irregular borders and are larger than 2 cm.

Examples Nodules: small lipoma, squamous cell carcinoma, fibroma, and intradermal nevi. Tumors: large lipoma, carcinoma, and hemangioma.

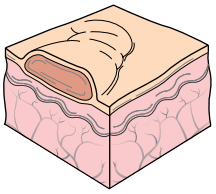
Vesicle, Bulla



Elevated, fluid-filled, round or oval shaped, palpable mass with thin, translucent walls and circumscribed borders. Vesicles are smaller than 0.5 cm; bullae are larger than 0.5 cm.

Examples Vesicles: herpes simplex/zoster, early chickenpox, poison ivy, and small burn blisters. Bullae: contact dermatitis, friction blisters, and large burn blisters.

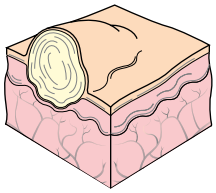
Wheal



Elevated, often reddish area with irregular border caused by diffuse fluid in tissues rather than free fluid in a cavity, as in vesicles. Size varies.

Examples Insect bites and hives (extensive wheals).

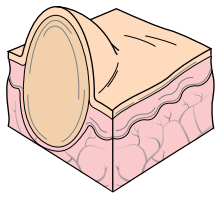
Pustule



Elevated, pus-filled vesicle or bulla with circumscribed border. Size varies.

Examples Acne, impetigo, and carbuncles (large boils).

Cyst

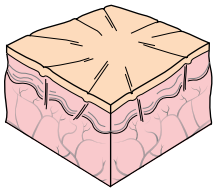


Elevated, encapsulated, fluid-filled or semisolid mass originating in the subcutaneous tissue or dermis, usually 1 cm or larger.

Examples Varieties include sebaceous cysts and epidermoid cysts.

TABLE 15–6 **Secondary Skin Lesions**

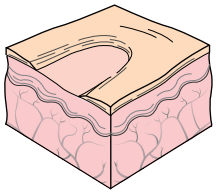
Atrophy



A translucent, dry, paper-like, sometimes wrinkled skin surface resulting from thinning or wasting of the skin due to loss of collagen and elastin.

Examples Striae, aged skin.

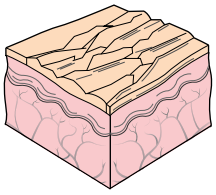
Erosion



Wearing away of the superficial epidermis causing a moist, shallow depression. Because erosions do not extend into the dermis, they heal without scarring.

Examples Scratch marks, ruptured vesicles.

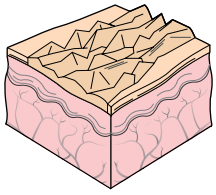
Lichenification



Rough, thickened, hardened area of epidermis resulting from chronic irritation such as scratching or rubbing.

Example Chronic dermatitis.

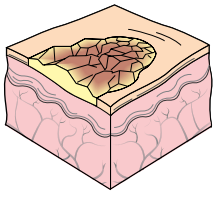
Scales



Shedding flakes of greasy, keratinized skin tissue. Color may be white, gray, or silver. Texture may vary from fine to thick.

Examples Dry skin, dandruff, psoriasis, and eczema.

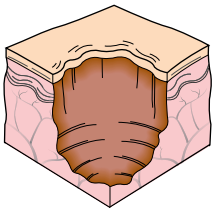
Crust



Dry blood, serum, or pus left on the skin surface when vesicles or pustules burst. Can be red-brown, orange, or yellow. Large crusts that adhere to the skin surface are called scabs.

Examples Eczema, impetigo, herpes, or scabs following abrasion.

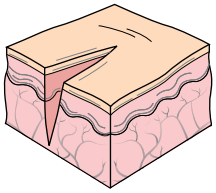
Ulcer



Deep, irregularly shaped area of skin loss extending into the dermis or subcutaneous tissue. May bleed. May leave scar.

Examples Decubitus ulcers (pressure sores), stasis ulcers, chancres.

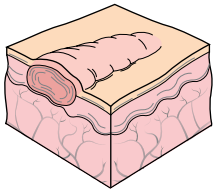
Fissure



Linear crack with sharp edges, extending into the dermis.

Examples Cracks at the corners of the mouth or in the hands, athlete's foot.

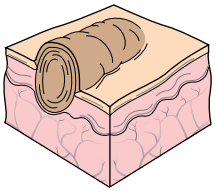
Scar



Flat, irregular area of connective tissue left after a lesion or wound has healed. New scars may be red or purple; older scars may be silvery or white.

Examples Healed surgical wound or injury, healed acne.

Keloid



Elevated, irregular, darkened area of excess scar tissue caused by excessive collagen formation during healing. Extends beyond the site of the original injury. Higher incidence in people of African descent.

Examples Keloid from ear piercing or surgery.

TABLE 15–7 **Vascular Skin Lesions**

Spider Angioma

Source: Custom Medical Stock Photo, Inc.

A flat, bright red dot with tiny radiating blood vessels ranging in size from a pinpoint to 2 cm. It blanches with pressure.

Cause A type of telangiectasis (vascular dilatation) caused by elevated estrogen levels, pregnancy, estrogen therapy, vitamin B deficiency, or liver disease, or may not be pathologic.

Localization/Distribution Most commonly appear on the upper half of the body.

Venous Star

Source: Phototake NYC

A flat blue lesion with radiating, cascading, or linear veins extending from the center. It ranges in size from 3 to 25 cm.

Cause A type of telangiectasis (vascular dilatation) caused by increased intravenous pressure in superficial veins.

Localization/Distribution Most commonly appear on the anterior chest and the lower legs near varicose veins.

Petechiae

Source: Custom Medical Stock Photo, Inc.

Flat red or purple rounded "freckles" approximately 1 to 3 mm in diameter. Difficult to detect in dark skin. Do not blanch.

Cause Minute hemorrhages resulting from fragile capillaries, petechiae are caused by septicemias, liver disease, or vitamin C or K deficiency. They may also be caused by anticoagulant therapy.

Localization/Distribution Most commonly appear on the dependent surfaces of the body (e.g., back, buttocks). In the client with dark skin, look for them in the oral mucosa and conjunctivae.

Purpura

Source: Custom Medical Stock Photo, Inc.

Flat, reddish blue, irregularly shaped extensive patches of varying size.

Cause Bleeding disorders, scurvy, and capillary fragility in the older adult (senile purpura).

Localization/Distribution May appear anywhere on the body, but are most noticeable on the legs, arms, and backs of hands.

Ecchymosis

Source: Photo Researchers, Inc.

A flat, irregularly shaped lesion of varying size with no pulsation. Does not blanch with pressure. In light skin, it begins as bluish purple mark that changes to greenish yellow. In brown skin, it varies from blue to deep purple. In black skin, it appears as a darkened area.

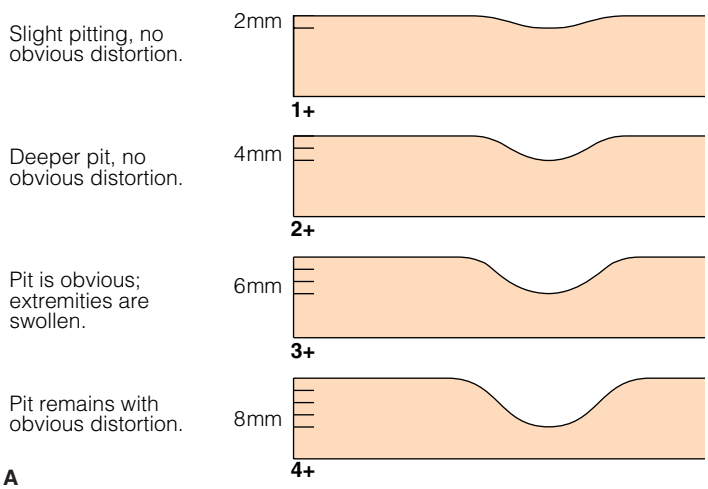
Cause Release of blood from superficial vessels into surrounding tissue due to trauma, hemophilia, liver disease, or deficiency of vitamin C or K.

Localization/Distribution Occurs anywhere on the body at the site of trauma or pressure.

Technique/Normal Findings	Abnormal Findings
Palpate skin moisture. *Skin should be dry.*	■ Excessively dry skin often is present in the elderly and clients with hypothyroidism. ■ Oily skin is common in adolescents and young adults. Oily skin may be a normal finding, or it may accompany a skin disorder such as acne vulgaris. ■ Excessive perspiration may be associated with shock, fever, increased activity, or anxiety.
Palpate skin turgor. *Skin fold should return rapidly to normal position.*	■ Pinch the client's skin gently over the back of the hand or collarbone. Tenting, in which the skin remains pinched for a few moments before resuming its normal position, is common in older clients who are thin (Figure 15–4 ■). ■ Skin turgor is decreased in dehydration. It is increased in edema and scleroderma.

Figure 15–4 ■ Tenting in an older client.

Assess for edema. *No edema should be present.*	■ Assess **edema** (accumulation of fluid in the body's tissues) by depressing the client's skin (Figure 15–5 ■). Record findings as follows: 1+ Slight pitting, no obvious distortion 2+ Deeper pit, no obvious distortion 3+ Pit is obvious; extremities are swollen 4+ Pit remains with obvious distortion ■ Edema is common in cardiovascular disorders, renal failure, and cirrhosis of the liver. It also may be a side effect of certain drugs.
Inspect distribution and quality of hair. *Hair should be evenly distributed for client's gender.*	■ A deviation in the normal hair distribution in the male or female genital area may indicate an endocrine disorder. **Hirsutism** (increased growth of coarse hair, usually on the face and trunk) is seen in Cushing's syndrome, acromegaly, and ovarian dysfunction. **Alopecia** (hair loss) may be related to changes in hormones, chemical or drug treatment, or radiation. In adult males whose hair loss follows the normal male pattern, the cause is usually genetic.



B

Figure 15–5 ■ *A*, Degrees of pitting in edema. *B*, 4+ pitting.

Source: Dr. P. Marazzi/Science Photo Library/Photo Researchers, Inc.

Palpate hair texture. *Hair should be of even texture.*

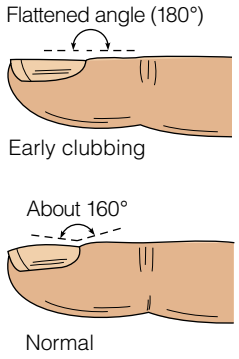
- Some systemic diseases change the texture of the hair. For instance, hypothyroidism causes the hair to coarsen, whereas hyperthyroidism causes the hair to become fine.

Inspect the scalp for lesions. *There should be no lesions on the scalp.*

- Mild dandruff is normal, but excessive, greasy flakes indicate seborrhea requiring treatment.
- Hair loss, pustules, and scales appear on the scalp in tinea capitis (scalp ringworm).
- Red, swollen pustules appear around infected hair follicles and are called folliculitis.
- Head lice may be seen as oval nits (eggs) adhering to the base of the hair shaft. Head lice are usually accompanied by itching.

Inspect nail curvature. *Nails should not be excessively curved.*

- Clubbing (Figure 15–6 ■), in which the angle of the nail base is greater than 180 degrees, is seen in respiratory disorders, cardiovascular disorders, cirrhosis of the liver, colitis, and thyroid disease. The nail becomes thick, hard, shiny, and curved at the free end.



A

B

Figure 15–6 ■ *A*, Assessing clubbing of the nails. *B*, Hand with nail clubbing.

Source: ISM/Phototake NYC.

Inspect the surface of the nails. *Nail surfaces should be smooth and nail folds firm, without redness.*

- The nail folds become inflamed and swollen and the nail loosens in paronychia, an infection of the nails.
- Inflammation and transverse rippling of the nail are associated with chronic paronychia and/or eczema.
- The nail plate may separate from the nail bed in trauma, psoriasis, and *Pseudomonas* and *Candida* infections. This separation is called oncolysis.
- Nail grooves may be caused by inflammation, by planus, or by nail biting.
- Nail pitting may be seen with psoriasis.
- A transverse groove (Beau's line) may be seen in trachoma and/or acute diseases.
- Thin spoon-shaped nails (Figure 15–7 ■) may be seen in anemia.

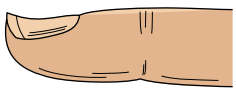


Figure 15–7 ■ Spoon-shaped nails.

Inspect nail color. *Nail color should be even.*

- The sudden appearance of a pigmented band may indicate melanoma in Caucasians. Pigmented bands are normally found in more than 90% of African Americans.
- Yellowish nails are seen in psoriasis and fungal infections.
- Dark nails occur with trauma, *Candida* infections, and hyperbilirubinemia.
- Blackish-green nails are apparent in injury and in *Pseudomonas* infection.
- Red splinter longitudinal hemorrhages may be seen in injury and/or psoriasis.

Inspect nail thickness. *Nails should not be excessively thick.*

- Trauma to the nails usually causes thickening. Other causes of thick nails include psoriasis, fungal infections, and decreased peripheral vascular blood supply.
- Thinning of the nails is seen in nutritional deficiencies.

EXPLORE MEDIALINK

Prentice Hall Nursing MediaLink DVD-ROM

Audio Glossary
NCLEX-RN® Review

COMPANION WEBSITE www.prenhall.com/lemone

Audio Glossary
NCLEX-RN® Review
Care Plan Activity: Integumentary Disorders
Case Studies
- *Assessing a Rash*
- *Skin Assessment for a Client with a Bacterial Infection*

MediaLink Applications
- *Moles*
- *Skin Cancer*

Links to Resources

TEST YOURSELF NCLEX-RN® REVIEW

1 Which layer of the skin contains most of the hair follicles, sebaceous glands, and sweat glands?
1. epidermis
2. dermis
3. stratum basale
4. stratum spinosum

2 What pigment is responsible for skin tanning?
1. carotene
2. red blood cells
3. melanin
4. sebum

3 Which of the four assessment techniques are used during assessment of the integumentary system? (Select all that apply.)
1. inspection
2. palpation
3. percussion
4. auscultation

4 What change in skin color is associated with an elevated body temperature?
1. erythema
2. jaundice
3. pallor
4. cyanosis

5 You are assessing a client who is complaining of severe itching. What would be an appropriate interview question?
1. "Tell me how this itch feels."
2. "Why do you keep scratching it?"
3. "Have you used a new soap?"
4. "Describe your daily fluid intake."

6 You are assessing the skin of an elderly client for dehydration. What finding would indicate this condition?
1. decreased turgor
2. increased moisture
3. presence of lesions
4. pallor or cyanosis

7 What part of the body would you palpate to assess edema?
1. scalp
2. fingers
3. clavicle
4. ankle/foot

8 You note that your client with chronic dermatitis has rough, thickened areas of skin. You document these areas as:
1. ulcers.
2. papules.
3. atrophy.
4. lichenification.

9 While making a home visit to an older woman, you notice multiple bruises on her arms and body. What might these indicate?
1. high intake of vitamin A
2. elder abuse
3. caregiver strain
4. aging skin

10 While assessing the hair of a family, you note small white eggs on the hair shaft. What type of infestation are you assessing?
1. bacterial
2. viral
3. head lice
4. head lichens

See Test Yourself answers in Appendix C.

BIBLIOGRAPHY

AARP. (2004). *Checkups and prevention: Skin cancer risks, treatments, and prevention.* Retrieved from http://www.aarp.org/health-prevention/Articles/a2004-07-07-skincancer.html

Amella, E. (2004). Presentation of illness in older adults: If you think you know what you're looking for, think again. *American Journal of Nursing, 104*(10), 40–51.

Bickley, L., & Szilagyi, P. (2005). *Bates' guide to physical examination and history taking* (9th ed.). Philadelphia: Lippincott.

Brinker, D., Hancox, J., & Bernardon, S. (2003). Assessment and intital treatment of lacerations, mammalian bites, and insect stings. *AACN Clinical Issues: Advanced Practice in Acute and Critical Care, 14*(4), 401–410.

Carter, K., Dufour, L., & Ballard, C. (2003). Wound & skin care: Identifying primary skin lesions. *Nursing, 33*(12), 58–69.

Finch, M. (2003). Assessment of skin in older people. *Nursing Older People, 15*(2), 29–30.

Fulmer, T. (2004). Try this: Best practices in nursing care to older adults from the Hartford Institute for Geriatric Nursing. Elder abuse and neglect assessment. *AAACN Viewpoint, 26*(2), 3–4.

Gray-Vickery, P. (2004). Combating elder abuse. *Nursing, 34*(10), 47–51.

Hayes, J. (2003). Are you assessing for melanoma? *RN, 66*(2), 36–41.

Jarvis, C. (2004). *Physical examination & health assessment*. St. Louis, MO: Mosby.

Kulkowski, K., & Ratliff, C. (2004). Wounds & skin care: Managing venous and neuropathic ulcers. *Nursing, 34*(8), 68.

Larson, K. (2003). Fluid balance in the elderly: Assessment and intervention—important role in community health and home care nursing. *Geriatric Nursing, 24*(5), 306–309.

McLeod, R. (2004). Lumps, bumps, and things that go itch in your office! *Journal of School Nursing, 20*(2), 115–116.

Oliviero, M. (2002). How to diagnose malignant melanoma. *Nursing Practitioner: American Journal of Primary Health Care, 27*(2), 26–27, 31–37.

Porth, C. (2005). *Pathophysiology: Concepts of altered health states* (7th ed.). Philadelphia: Lippincott.

Scanlon, E., & Stubbs, N. (2004). Pressure ulcer risk assessment in patients with darkly pigmented skin. *Professional Nurse, 19*(6), 339–341.

Stein, A. (2003). Aging is more than skin deep: Learn about the systemic effects and signs that may indicate abnormalities. *Nursing (Hospital Nursing), 33*(2), 32hn 7–8.

Weber, J., & Kelley, J. (2006). *Health assessment in nursing* (3rd ed.). Philadelphia: Lippincott-Williams Wilkins.