

CHAPTER 3

INTEGUMENTARY SYSTEM

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MEDIA LIBRARY

Student DVD-ROM

- Twelve different interactive learning games
- Flash card generator
- Audio Glossary
- Professional Profile videos—Nursing Service
 - Registered Nurse
 - Licensed Practical Nurse
 - Nursing Aide
- Body Rhythms
- Terminology Translator

Companion Website

- Multiple Choice, True/False, and Fill-in-the-Blank practice questions
- Labeling exercises
- Case study
- Additional Professional Profile information
- *New York Times* link for research into specific pathologies
- Web Destination activities
- Audio Glossary

- Link to VangoNotes
- Link to drug updates

IRDVD

- Drag-and-drop labeling activity for skin anatomy
- Videos
 - Decubitus ulcers
 - Eczema

- Skin cancer
- Digital library of all figures from text chapter, labeled and unlabeled
- Test bank with 200 objective questions per chapter plus two short answer questions
- 20 classroom response questions
- PowerPoint presentation for classroom or online utilization

OBJECTIVE 1

Identify and define the combining forms, prefixes, and suffixes introduced in this chapter.

Text page: 48; PowerPoint slides: 6–9

LECTURE NOTES

Combining Forms

albin/o	white
bi/o	life
cry/o	cold
cutane/o	skin
cyan/o	blue
derm/o	skin
dermat/o	skin
diaphor/o	profuse sweating
electr/o	electricity
erythr/o	red
hidr/o	sweat
ichthy/o	scaly, dry
kerat/o	hard, horny
leuk/o	white
lip/o	fat
melan/o	black
myc/o	fungus
necr/o	death
onych/o	nail
pil/o	hair
phot/o	light
py/o	pus
rhytid/o	wrinkle
scler/o	hard
seb/o	oil
trich/o	hair
ungu/o	nail
vesic/o	bladder
xer/o	dry

Suffixes

-derma	skin
-opsy	view of
-tome	instrument used to cut

Prefixes

allo-	other, different from usual
xeno-	strange, foreign

Definition

TEACHING STRATEGIES

Medical Terminology Bee

- Create PowerPoint flash cards of new combining forms and suffixes presented in this chapter; have all students stand and then define word part; if student is correct, he or she remains standing; if student is wrong, he or she sits down; continue until only one student is standing.

LEARNING ACTIVITIES

Worksheet 3A

- New Combining Form, Prefix, and Suffix Handout

Text

- Practice Exercises

Student DVD-ROM

- Learning games
- Make flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 3A—New Word Parts Quiz

Test Bank—Fill-in-the-Blank questions

OBJECTIVE 2

Correctly spell and pronounce medical terms and major anatomical structures relating to the integumentary system.

LECTURE NOTES

Pronunciation for medical terms in this chapter can be found:

- In parentheses following key terms
- In the Audio Glossary on Student DVD-ROM
- In the Audio Glossary at Companion Website

TEACHING STRATEGIES

Emphasize to students:

- Importance of correctly spelling terms.
- How sounding out terms can assist in learning how to spell the terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension of spelling strategies.

LEARNING ACTIVITIES

Worksheet 3B

- Medical Term Analysis

Terminology Checklist

- Can be used to practice pronunciation using the Audio Glossary as a reference

Text

- Practice Exercises

Flash cards

- Look at definition and write out/pronounce terms

Student DVD-ROM

- Audio Glossary
- Spelling Challenge game
- Crossword and Word Search puzzles

ASSESSMENTS

Quiz 3B—Spelling Quiz

Suggested terms:

1. subcutaneous
2. arrector pili
3. lunula
4. sudoriferous
5. diaphoresis
6. eschar
7. erythema
8. keloid
9. petechiae
10. pruritus
11. suppurative
12. urticaria
13. verruca
14. wheal
15. vesicle
16. decubitus ulcer
17. gangrene
18. impetigo

- 19. ichthyosis
 - 20. pediculosis
- Test Bank**—questions

OBJECTIVE 3

List and describe the three layers of skin and their functions.

Text pages: 50–52; PowerPoint slides: 18–25

LECTURE NOTES

Moving from outer surface of skin inward, three layers are:

1. **Epidermis:** thin, outer layer; composed of **stratified squamous epithelium** (flat scale-like cells arranged in overlapping layers or strata) (see ■ Figure 3.2); does not have blood supply; depends on deeper layers for nourishment; deepest layer within epidermis called **basal layer**; cells in this layer continually grow and multiply, new cells push old cells toward surface; during this process cells shrink, die, and become filled with hard protein called **keratin**; dead, overlapping, keratinized cells make skin effective barrier to infection and make it waterproof; basal layer also contains **melanocytes**, which produce black pigment **melanin**; responsible for color of skin, also protects against ultraviolet ray damage
2. **Dermis:** also called **corium**; middle, fibrous connective tissue layer; between epidermis and subcutaneous layer; name means “true skin”; living tissue with very good blood supply; composed of connective tissue and **collagen fibers** made from strong, fibrous protein; forms flexible “glue” that gives connective tissue strength; houses hair follicles, sweat glands, sebaceous glands, blood vessels, lymph vessels, sensory receptors, nerve fibers, and muscle fibers
3. **Subcutaneous layer** (Subcu, Subq): innermost layer; also called hypodermis; composed of fat cells called **lipocytes**; protects deeper tissues of body and acts as insulation for heat and cold

TEACHING STRATEGIES

Visual Aids

- Use full-size anatomical charts and models to illustrate layers of skin.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

IRDVD

- See PowerPoint presentation on the Instructor’s Resource DVD for a drag and drop anatomy activity; display on screen and have students discuss and place labels during class.

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Text

- Labeling exercise 3.A
- Practice Exercises

Student DVD-ROM

- Labeling exercise
- Learning games

CW

- Labeling exercise
- Practice questions

Quizzes 3C & 3D

- May be used as worksheets

ASSESSMENTS

Quizzes 3C & 3D—Labeling Diagrams

Test Bank—questions

OBJECTIVE 4

List and describe the four purposes of the skin.

Text page: 50; PowerPoint slides: 13–17

LECTURE NOTES

Four main purposes of skin:

1. **Protection:** primary function; forms two-way barrier; keeps **pathogens** (disease-causing organisms) and harmful chemicals from entering body; stops critical body fluids from escaping body; prevents injury to internal organs underneath
2. **Houses nerve receptors:** detect temperature, pain, touch, and pressure; messages conveyed to brain from nerve endings in dermis
3. **Secretes fluids:** two types of skin glands—**sweat glands** help maintain internal temperature by cooling as sweat evaporates; **sebaceous glands** produce an oil to lubricate skin surface
4. **Temperature regulation:** variety of means; evaporation of sweat cools; dilation of superficial blood vessels in dermis lowers internal temperature; brings more blood to surface of body to release heat; to conserve heat, constricts superficial blood vessels, keeps warm blood away from surface; continuous fat layer of subcutaneous layer acts as insulation

TEACHING STRATEGIES

Visual Aids

- Use full-size anatomical charts and models to illustrate each part of skin as you describe its function, emphasizing connection between form and function.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Text

- Practice Exercises

Student DVD-ROM

- Learning games

CW

- Practice questions

ASSESSMENTS

Test Bank—questions

OBJECTIVE 5

List and describe the accessory organs of the skin.

Text pages: 52–54; PowerPoint slides: 26–37

LECTURE NOTES

Accessory organs of skin are anatomical structures located within dermis

1. **Hair:** composed of keratin; deeper cells in **hair root** force older keratinized cells to move upward, forming **hair shaft**; hair shaft grows toward skin surface within **hair follicle**; melanin gives hair color; sebaceous glands release oil directly into hair follicle; each hair has small slip of smooth muscle attached to it called **arrector pili** muscle (see ■ Figure 3.3); when it contracts hair shaft stands up and results in “goose bumps”
2. **Nails:** flat plate of keratin called **nail body**; covers ends of fingers and toes; nail body connected to tissue underneath by **nail bed**; nails grow longer from **nail root**, at base of nail and is covered and protected by soft tissue **cuticle**; **free edge** is exposed edge trimmed when nails become too long; light-colored half-moon area at base of nail is **lunula** (see ■ Figure 3.4).

TEACHING STRATEGIES

Visual Aids

- Use full size anatomical posters or models to illustrate each structure as you describe it

IRDVD

- See PowerPoint presentation on the Instructor’s Resource DVD for a drag and drop anatomy activity; display on screen and have students discuss and place labels during class.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

3. **Sebaceous glands:** found in dermis; secrete **sebum**, which lubricates hair and skin; helps prevent drying and cracking; sebum secreted directly into hair follicles, rather than duct (see ■ Figure 3.1); secretion increases during adolescence, playing role in acne; secretion diminishes with aging; causes dry and wrinkled skin
4. **Sweat glands:** have about two million sweat glands; also called **sudoriferous glands**; highly coiled glands located in dermis; sweat travels to surface of skin in **sweat duct**; surface opening of sweat duct is **sweat pore** (see ■ Figure 3.1); cool body as sweat evaporates; sweat or **perspiration** contains small amount of waste product but is normally colorless and odorless; **apocrine glands** in pubic and underarm areas secrete thicker sweat that can produce odor when it comes into contact with skin bacteria; body odor

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Text

- Labeling exercise 3.B1 & 3.B2
- Practice Exercises

Student DVD-ROM

- Labeling exercise
- Learning games

CW

- Labeling exercise
- Practice questions

Quizzes 3C & 3D

- May be used as worksheets

ASSESSMENTS

Test Bank—questions

Quizzes 3C and 3D

OBJECTIVE 6

Build and define integumentary system medical terms from word parts.

Text pages: 54–55; PowerPoint slides: 39–46

LECTURE NOTES

Combining

Form	Medical Term	Definition
cutane/o	subcutaneous	pertaining to under the skin
derm/o	epidermal	pertaining to upon the skin
	hypodermic	pertaining to under the skin
	intradermal	pertaining to within the skin
dermat/o	dermatitis	inflammation of the skin
	dermatologist	specialist in skin
	dermatosis	abnormal condition of skin
	dermatopathy	skin disease
	dermatoplasty	surgical repair of the skin
hidr/o	anhidrosis	abnormal condition of no sweat
	hyperhidrosis	abnormal condition of excessive sweat
	lip/o	lipectomy
lip/o	lipoma	fatty mass
	melan/o	melanoma
melan/o	melanocyte	black cell
necr/o	necrosis	abnormal condition of death
onych/o	onychectomy	removal of a nail
	onychomalacia	softening of nails
	onychomycosis	abnormal condition of nail fungus
py/o	onychophagia	nail eating (nail biting)
	pyogenic	pus forming
	rhytid/o	rhytidectomy
rhytid/o	rhytidoplasty	surgical repair of wrinkles
seb/o	seborrhea	oily discharge
trich/o	trichomycosis	abnormal condition of hair fungus
ungu/o	ungual	pertaining to the nails
Suffix -derma	Medical Term	Meaning
	erythroderma	red skin
	ichthyoderma	scaly and dry skin
	leukoderma	white skin
	pyoderma	pus skin
	scleroderma	hard skin
	xeroderma	dry skin

TEACHING STRATEGIES

- Reinforce how many words in integumentary system can be constructed from word parts.
- Read aloud integumentary system words that are made up of word parts; have students identify parts and define terms, either aloud or individually on paper.
- Write sentences on the board using common words, then have students substitute correct medical terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 3B

- Med Term Analysis

Worksheet 3C

- Chapter Review

Quiz 3E

- May be used as a worksheet

Text

- Practice Exercises
- Terminology Checklist

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 3E—Word Building Quiz

Quiz 3G—Chapter Review

Test Bank—questions

OBJECTIVE 7

Identify and define integumentary system vocabulary terms.

Text pages: 55–57; PowerPoint slides: 47–57

LECTURE NOTES

Term	Definition
abrasion	scraping away skin surface by friction
cicatrix	a scar
comedo	collection of hardened sebum in hair follicle; also called <i>blackhead</i>
contusion	injury caused by blow to body; causes swelling, pain, and bruising; skin is not broken
cyanosis	bluish tint to skin from deoxygenated blood (see ■ Figure 3.5).
depigmentation	loss of normal skin color or pigment
dermatology (Derm, dermat)	branch of medicine involving diagnosis and treatment of conditions and diseases of integumentary system; physician is a <i>dermatologist</i>
diaphoresis	profuse sweating
ecchymosis	skin discoloration caused by blood collecting under following blunt trauma ; a bruise (see ■ Figure 3.6A)
erythema	redness or flushing of skin
eschar	thick layer of dead tissue and tissue fluid; develops over deep burn area
hirsutism	excessive hair growth over body
hyperemia	redness of skin due to increased blood flow
hyperpigmentation	abnormal amount of pigmentation in skin
keloid	Formation of raised and thickened hypertrophic scar after injury or surgery (see ■ Figure 3.7)
keratosis	any skin condition involving an overgrowth and thickening of epidermis layer
lesion	general term for wound, injury, or abnormality
nevus	pigmented skin blemish, birthmark, or mole; usually benign but may become cancerous
pallor	abnormal paleness of skin
petechiae	pinpoint purple or red spots from minute hemorrhages under skin (see ■ Figure 3.6B)
photosensitivity	condition in which skin reacts abnormally when exposed to light; especially ultraviolet (UV) rays of sun
plastic surgery	surgical specialty involved in repair, reconstruction, or improvement of body structures such as skin that are damaged, missing, or misshapen; physician is <i>plastic surgeon</i>
pruritus	severe itching
purpura	hemorrhages into skin due to fragile blood vessels; commonly seen in elderly people (see ■ Figure 3.6C)
purulent	containing pus or infection that is producing pus; pus consists of dead bacteria, white blood cells, and tissue debris

TEACHING STRATEGIES

- Write sentences on the board using common words; have students substitute correct medical terms.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Pathology, Diagnostic, and Therapeutic terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study

ASSESSMENTS

Quiz 3G—Chapter Review

Test Bank—questions

strawberry hemangioma	congenital collection of dilated blood vessels (see ■ Figure 3.8) causing a red birthmark that fades a few months after birth
suppurative urticaria	containing or producing pus also called <i>hives</i> ; a skin eruption of pale reddish wheals with severe itching; usually associated with food allergy, stress, or drug reactions
verruca	commonly called <i>warts</i> ; a benign growth caused by a virus; has rough surface that is removed by chemicals and/or laser therapy

OBJECTIVE 8

Identify and define selected integumentary system pathology terms.

Text pages: 58–63; PowerPoint slides: 58–89

LECTURE NOTES

Term	Definition
Surface Lesions	
cyst	fluid-filled sac under skin (see ■ Figure 3.9A & B)
fissure	crack-like lesion or groove on skin (see ■ Figure 3.9 C & D)
laceration	torn or jagged wound; incorrectly used to describe cuts
macule	flat, discolored area flush with skin surface; example is freckle or birthmark (see ■ Figure 3.9E & F)
nodule	firm, solid mass of cells in skin larger than 0.5 cm in diameter (see ■ Figure 3.9G & H)
papule	small, solid, circular raised spot on surface of skin less than 0.5 cm in diameter (see ■ Figure 3.9I & J)
pustule	raised spot on skin containing pus (see ■ Figures 3.9E and 3.9 K & L)
ulcer	open sore or lesion in skin or mucous membrane (see ■ Figures 3.9 M & N)
vesicle	blister; small, fluid-filled raised spot on skin (see ■ Figure 3.9 O & P)
wheel	small, round, swollen area on skin; typically seen in allergic skin reactions such as <i>hives</i> ; usually accompanied by urticaria (see ■ Figures 3.9 Q & R)
Skin	
abscess	collection of pus in skin
acne	inflammatory disease of sebaceous glands and hair follicles; results in papules and pustules
acne rosacea	chronic form of acne seen in adults; redness, tiny pimples, and broken blood vessels, primarily on nose and cheeks
acne vulgaris	common form of acne seen in teenagers; comedo, papules, and pustules

TEACHING STRATEGIES

- Select two students to do 5-minute presentations of their Internet research in class.
- Write sentences on the board using common words; have students substitute correct medical terms.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for video on the topics of decubitus ulcers, eczema, and skin cancer.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Diagnostic, and Therapeutic terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Internet Research

- Have students select a specific pathology and use Internet resources to research its symptoms, diagnosis, and treatments.

Worksheet 3C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

albinism	genetic condition in which body makes no melanin; white hair and skin, and red pupils; person with albinism is an <i>albino</i>
basal cell carcinoma (BCC)	cancerous tumor of basal cell layer of epidermis (see ■ Figure 3.10); common skin cancer; rarely metastasizes; arise on sun exposed skin
burn	damage to skin from exposure to open fire, electricity, ultraviolet light, or caustic chemicals; seriousness depends on amount of body surface involved and depth burn; extent of a burn is estimated using the Rule of Nines (see ■ Figure 3.11); depth of burns is determined by amount of damage to each layer skin; first degree damages epidermis only (red but no blisters); second degree damages epidermis and dermis (blisters); third degree destroys epidermis and dermis and damages underlying tissues; see ■ Figure 3.12 A-D
cellulitis	diffuse, acute infection and inflammation of connective tissue of skin
decubitus ulcer (decub)	open sore caused by pressure over bony prominences cutting off blood flow to overlying skin; appear in bedridden patients who lie in one position too long; can be difficult to heal; also called <i>bedsore</i> or <i>pressure sore</i>
dry gangrene	late stages of gangrene; affected areas become dried, blackened, and shriveled; referred to as <i>mummified</i>
eczema	superficial dermatitis of unknown cause; redness, vesicles, itching, and crusting
gangrene	tissue necrosis usually due to deficient blood supply
ichthyosis	skin becomes dry, scaly, and keratinized
impetigo	highly infections bacterial infection of skin; pustules that rupture and become crusted (see ■ Figure 3.13)
Kaposi's sarcoma	skin cancer frequently seen in acquired immunodeficiency syndrome (AIDS) patients; brownish-purple papules that spread from skin and metastasize to internal organs
malignant melanoma (MM)	dangerous form of skin cancer; uncontrolled growth of melanocytes; quickly metastasizes to internal organs (see ■ Figure 3.14)
pediculosis	infestation with lice; eggs are called nits and cling tightly to hair
psoriasis	chronic inflammatory condition; papules forming "silvery scale" patches with circular borders (see ■ Figure 3.15)
rubella	contagious viral skin infection; commonly called <i>German measles</i>
scabies	contagious skin disease caused by an egg-laying mite that burrows through skin; redness and intense itching
sebaceous cyst	sac under the skin filled with sebum; can grow to large size and may need to be excised

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- Web Destination activity on melanoma
- *New York Times* link for research into specific pathologies

ASSESSMENTS

Quiz 3G—Chapter Review

Test Bank—questions

squamous cell carcinoma (SCC)	cancer of epidermis layer of skin that may invade deeper tissue and metastasize; often begins as a sore that does not heal
systemic lupus erythematosus (SLE)	chronic disease of the connective tissue that injures skin, joints, kidneys, nervous system, and mucous membranes; characteristic red, scaly butterfly rash across the cheeks and nose
tinea	fungal skin disease resulting in itching, scaling lesions
tinea capitis	fungal infection of the scalp; commonly called <i>ringworm</i>
tinea pedis	fungal infection of the foot; commonly called <i>athlete's foot</i>
varicella	contagious viral skin infection; commonly called <i>chickenpox</i> (see ■ Figure 3.16)
vitiligo	disappearance of pigment from skin; milk-white patches; also called <i>leukoderma</i>
wet gangrene	area of gangrene that becomes secondarily infected by pus-producing bacteria
Hair	
alopecia	absence or loss of hair, especially of head; commonly called <i>baldness</i>
carbuncle	furuncle involving several hair follicles
furuncle	bacterial infection of hair follicle; redness, pain, and swelling; also called <i>boil</i>
Nails	
onychchia	infected nail bed
paronychia	infection of the skin fold around nail

OBJECTIVE 9

Identify and define selected integumentary system diagnostic procedures.

Text page: 63; PowerPoint slides: 90–91

LECTURE NOTES

Term	Definition
Clinical Laboratory Tests	
culture and sensitivity (C&S)	grows a colony of bacteria removed from infected area to identify specific infecting bacteria; then determines its sensitivity to variety of antibiotics
Biopsy Procedures	
biopsy (BX, bx)	piece of tissue removed by syringe, needle, knife, punch, or brush to examine under microscope; used to aid in diagnosis
exfoliative cytology	scraping cells from tissue; examining them under microscope
frozen section (FS)	thin piece of tissue cut from a frozen specimen for rapid examination under microscope
fungal scrapings	scrapings, taken with curette, of tissue from lesions; placed on growth medium; examined under microscope to identify fungus

TEACHING STRATEGIES

- Review an actual skin biopsy report.
- Write sentences on the board using common words; have students substitute correct medical terms.

IRDVD

- See PowerPoint presentation on the Instructor's Resource DVD for video on the topics of Urinalysis and Specimen Collection.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Pathology, and Therapeutic terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- *New York Times* link for research into specific diagnostic procedures

ASSESSMENTS

Quiz 3G—Chapter Review

Test Bank—questions

OBJECTIVE 10

Identify and define selected integumentary system therapeutic procedures.

Text page: 64; PowerPoint slides: 92–97

LECTURE NOTES

Term	Definition
Skin Grafting	
allograft	skin graft from one person to another; donor is usually cadaver
autograft	skin graft from a person's own body (see ■ Figure 3.17)
dermatome	instrument for cutting skin or thin transplants of skin
dermatoplasty	skin grafting; transplantation of skin
heterograft	skin graft from animal of another species (usually a pig); also called <i>xenograft</i>
skin graft (SG)	transfer of skin from normal area to cover another site; used to treat burns; also called <i>dermatoplasty</i>
xenograft	skin graft from animal of another species (usually a pig); also called <i>heterograft</i>
Surgical Procedures	
cauterization	destruction of tissue by caustic chemicals, electric currents, heat, or freezing
cryosurgery	use of extreme cold to freeze and destroy tissue
curettage	removal of superficial skin lesions with curette (surgical instrument shaped like a spoon)

TEACHING STRATEGIES

- Write sentences on the board using common words; have students substitute correct medical terms.

Jeopardy Game

- Have students create questions for terms in this section for a Jeopardy game to be played in class—may be combined with Vocabulary, Pathology, and Diagnostic terms.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist
- Medical Record Analysis
- Chart Note Transcription

debridement	removal of foreign material and dead or damaged tissue from wound
electrocautery	destruction of tissue with electric current
incision and drainage (I&D)	incision to create an opening for drainage of material such as pus
Plastic Surgery Procedures	
chemabrasion	abrasion using chemicals; also called <i>chemical peel</i>
dermabrasion	abrasion using wire brushes or sandpaper; performed to remove acne scars, tattoos, and scar tissue
laser therapy	removal of skin lesions and birthmarks using laser beam; laser converts light into narrow, powerful beam
liposuction	removal of fat beneath skin by suction
rhytidectomy	surgical removal of excess skin to eliminate wrinkles; commonly called a <i>face lift</i>

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions
- Case Study
- Web Destination activity on burns and skin grafts
- *New York Times* link for research into specific treatment procedures

ASSESSMENTS

Quiz 3G—Chapter Review

Test Bank—questions

OBJECTIVE 11

Identify and define selected medications relating to the integumentary system.

Text page: 65; PowerPoint slides: 98–99

LECTURE NOTES

Classification	Action	Generic and Brand Names
anesthetics	deaden pain	lidocaine, Xylocaine; procaine, Novocain
antibiotics	kill bacteria	bacitracin/neomycin/polymixinB, Neosporin ointment
antifungals	kill fungi	miconazole, Monistat; clotrimazole, Lotrimin
antiparasitics	kill mites or lice	lindane, Kwell; permethrin, Nix
antipruritics	reduces severe itching	diphenhydramine, Benadryl; camphor/pramoxine/zinc, Caladryl
antiseptics	kill bacteria	isopropyl alcohol; hydrogen peroxide
anti-virals	treat herpes simplex infection	valacyclovir, Valtrex; famcyclovir, Famvir; acyclovir, Zovirax
corticosteroid cream	powerful anti-inflammatory cream	hydrocortisone, Cortaid; triamcinolone, Kenalog

TEACHING STRATEGIES

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

- Have students use a PDR and/or the Internet to look up additional information regarding these medications, such as dosage, side effects, and contraindications.

Worksheet 3C

- Chapter Review

Text

- Practice Exercises
- Terminology Checklist

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Test Bank—questions

OBJECTIVE 12

Define selected abbreviations associated with the integumentary system.

Text page: 65; PowerPoint slides: 100–102

LECTURE NOTES

BCC	basal cell carcinoma
BX, bx	biopsy
C&S	culture and sensitivity
decub	decubitus ulcer
Derm, dermat	dermatology
FS	frozen section
HSV	herpes simplex virus
I&D	incision and drainage
ID	intra-dermal
MM	malignant melanoma
SCC	squamous cell carcinoma
SG	skin graft
SLE	systemic lupus erythematosus
STSG	split-thickness skin graft
subcu, SC, sc, subq	subcutaneous
SCC	squamous cell carcinoma
UV	ultraviolet

TEACHING STRATEGIES

- Emphasize importance of learning abbreviations and their full meanings; point out how some abbreviations, such as UTI, I&O, and BUN, are typically used rather than full terms.
- Write sentences on the board using medical terms; have students substitute the correct abbreviation for the term.
- Encourage students to add abbreviations to their flash cards.

Memory Game

- Have students assist in creating memory game to play in class.

Pop Questions

- Use Clicker questions as either a pretest or posttest quiz to gauge student comprehension during lecture.

LEARNING ACTIVITIES

Worksheet 3C

- Chapter Review

Quiz 3F

- May be used as a worksheet

Text

- Practice Exercises

Student DVD-ROM

- Learning games
- Flash cards

CW

- Practice questions

ASSESSMENTS

Quiz 3F—Abbreviations Quiz

Quiz 3G—Chapter Review

Test Bank—questions

Worksheet 3A

New Combining Form, Prefix, and Suffix Handout

Directions: For each new word part below, write out its meaning, then locate a term from the chapter that uses the word part and its meaning.

Combining Forms	Meaning	Integumentary Term	Meaning
1. albin/o	_____	_____	_____
2. bi/o	_____	_____	_____
3. cry/o	_____	_____	_____
4. cutane/o	_____	_____	_____
5. cyan/o	_____	_____	_____
6. dermat/o	_____	_____	_____
7. diaphor/o	_____	_____	_____
9. electr/o	_____	_____	_____
10. erythr/o	_____	_____	_____
11. hidr/o	_____	_____	_____
12. ichthy/o	_____	_____	_____
13. kerat/o	_____	_____	_____
14. leuk/o	_____	_____	_____
15. lip/o	_____	_____	_____
16. melan/o	_____	_____	_____
17. myc/o	_____	_____	_____
18. necr/o	_____	_____	_____
19. onych/o	_____	_____	_____
20. pil/o	_____	_____	_____
21. phot/o	_____	_____	_____
22. py/o	_____	_____	_____

(Continued)

Combining Forms	Meaning	Integumentary Term	Meaning
23. rhytid/o	_____	_____	_____
24. scler/o	_____	_____	_____
25. seb/o	_____	_____	_____
26. trich/o	_____	_____	_____
27. ungu/o	_____	_____	_____
28. vesic/o	_____	_____	_____
29. xer/o	_____	_____	_____
Suffixes			
30. -derma	_____	_____	_____
31. -opsy	_____	_____	_____
32. -tome	_____	_____	_____
Prefixes			
33. allo-	_____	_____	_____
34. xeno-	_____	_____	_____

Worksheet 3B

Medical Term Analysis

Directions: Below are terms built from word parts used in this chapter that are not analyzed in the Word Building Table. Some may use word parts you have not learned yet. In those cases, use the Appendices to translate those word parts. Analyze each term presented below and list and define the word parts used to build each term.

Medical Term	Word Part Analysis
1. cyanosis	_____ _____
2. dermatology	_____ _____
3. hyperemia	_____ _____
4. keratosis	_____ _____
5. hemangioma	_____ _____
6. albinism	_____ _____
7. carcinoma	_____ _____
8. ichthyosis	_____ _____
9. onychia	_____ _____
10. biopsy	_____ _____

(Continued)

Medical Term

Word Part Analysis

11. cytology

12. dermatome

Worksheet 3C

Chapter Review

Anatomy and Physiology

1. The _____ is the most superficial layer of the skin.
2. Sebaceous glands secrete _____.
3. The subcutaneous layer is composed primarily of _____.
4. Another name for the skin is the _____ membrane.
5. The accessory organs of the skin are the _____, _____, _____, and _____.
6. Sensory receptors are found in the _____ layer of the skin.
7. _____ is the pigment molecule that gives skin its color.
8. Hair and nails are composed of _____.
9. The _____ is the light-colored half-moon area at the base of the nail.
10. Sweat cools the skin by _____.

Word Building

Directions: Build a term that means:

1. skin disease _____
2. black cell _____
3. softening of nails _____
4. oily discharge _____
5. scaly and dry skin _____
6. abnormal condition of hair fungus _____
7. abnormal condition of no sweat _____
8. pertaining to within the skin _____
9. skin inflammation _____
10. hard skin _____

(Continued)

Matching

- | | |
|--------------------------------|---|
| _____ 1. cicatrix | a. hypertrophic scar |
| _____ 2. diaphoresis | b. remove tissue for diagnosis |
| _____ 3. ecchymosis | c. open sore |
| _____ 4. keloid | d. reduces severe itching |
| _____ 5. purulent | e. lice infestation |
| _____ 6. ulcer | f. mite infection |
| _____ 7. vesicle | g. leukoderma |
| _____ 8. Kaposi's sarcoma | h. a scar |
| _____ 9. decubitus ulcer | i. baldness |
| _____ 10. pediculosis | j. removal of dead tissue from a wound |
| _____ 11. varicella | k. lab test to identify bacteria |
| _____ 12. alopecia | l. containing pus |
| _____ 13. furuncle | m. crack-like lesion on the skin |
| _____ 14. vitiligo | n. bacterial infection of hair follicle |
| _____ 15. macule | o. profuse sweating |
| _____ 16. fissure | p. powerful anti-inflammatory |
| _____ 17. scabies | q. chickenpox |
| _____ 18. biopsy | r. blister |
| _____ 19. dermatoplasty | s. a bruise |
| _____ 20. debridement | t. cancer beginning in a melanocyte |
| _____ 21. rhytidectomy | u. flat discolored spot on the skin |
| _____ 22. corticosteroid cream | v. skin cancer seen in AIDS patient |
| _____ 23. antipruritic | w. skin graft |
| _____ 24. MM | x. face lift |
| _____ 25. C&S | y. bedsore |

Quiz 3A

New Word Parts Quiz

Directions: Define the combining form or suffix in the spaces provided.

1. bi/o _____
2. cyan/o _____
3. kerat/o _____
4. lip/o _____
5. leuk/o _____
6. erythr/o _____
7. hidr/o _____
8. melan/o _____
9. necr/o _____
10. myc/o _____
11. seb/o _____
12. trich/o _____
13. xer/o _____
14. ungu/o _____
15. phot/o _____
16. py/o _____
17. scler/o _____
18. rhytid/o _____
19. albin/o _____
20. cutane/o _____
21. vesic/o _____
22. -opsy _____
23. -tome _____
24. allo- _____
25. xeno- _____

Quiz 3B

Spelling Quiz

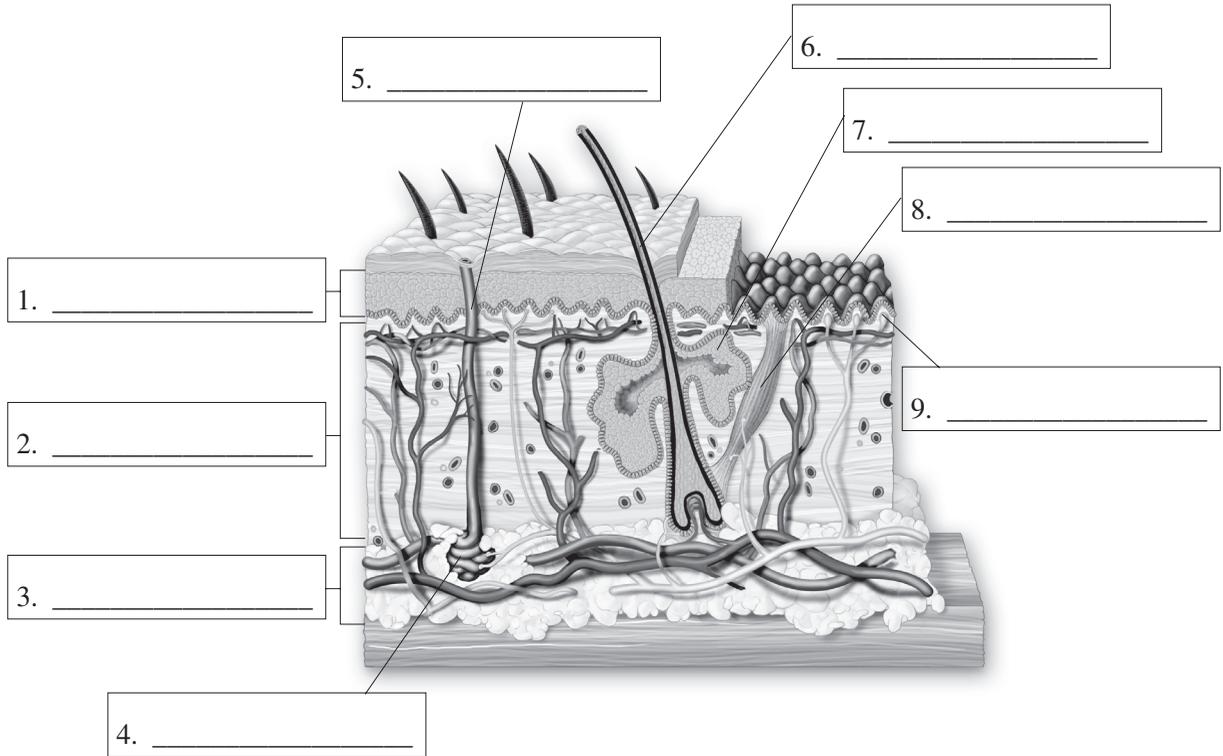
Directions: Write each term as your instructor pronounces it.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Quiz 3C

Labeling Diagram

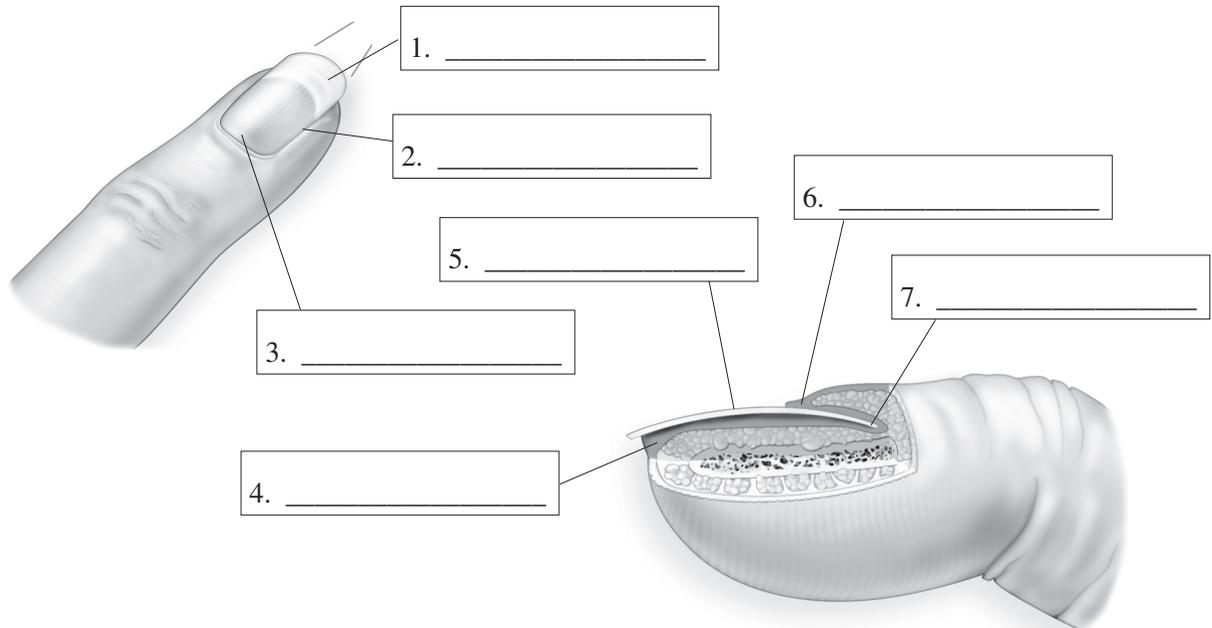
Directions: Label the structures of the skin.



Quiz 3D

Labeling Diagram

Directions: Label the internal structures of the nail.



Quiz 3E

Word Building Quiz

Directions: Build a single medical term for each phrase below.

1. surgical repair of skin _____
2. abnormal condition of no sweat _____
3. nail eating _____
4. pus forming _____
5. pertaining to nails _____
6. skin inflammation _____
7. study of skin _____
8. dry skin _____
9. hard skin _____
10. scaly and dry skin _____
11. red skin _____
12. oily discharge _____
13. abnormal condition of death _____
14. abnormal condition of excessive sweat _____
15. skin disease _____
16. skin specialist _____
17. pertaining to within the skin _____
18. pertaining to under skin _____
19. fat mass _____
20. black cell _____
21. removal of nail _____
22. surgical repair of wrinkles _____
23. abnormal condition of hair fungus _____
24. pus skin _____
25. white skin _____

Quiz 3F

Abbreviations Quiz

Directions: Write the medical term for which each abbreviation stands.

1. BCC _____
2. BX _____
3. C&S _____
4. decub _____
5. derm _____
6. FS _____
7. HSV _____
8. I&D _____
9. ID _____
10. MM _____
11. SCC _____
12. SG _____
13. SLE _____
14. STSG _____
15. subq _____
16. UV _____

Quiz 3G

Chapter Review

PART I: Multiple Choice

Directions: Circle the correct answer.

1. A skin graft from one person to another is called a(n)
 - a. autograft.
 - b. homograft.
 - c. heterograft.
 - d. allograft.
2. The surgical procedure commonly called a face lift is a
 - a. rhytidectomy.
 - b. liposuction.
 - c. dermabrasion.
 - d. chemabrasion.
3. The viral skin infection commonly called German measles is
 - a. verruca.
 - b. varicella.
 - c. rubella.
 - d. scabies.
4. The sweat glands in the underarm and pubic area are called
 - a. sudoriferous glands.
 - b. sebaceous glands.
 - c. perspiration glands.
 - d. apocrine glands.
5. A skin discoloration or bruise caused by blood collecting under the skin is
 - a. ecchymosis.
 - b. erythema.
 - c. hirsutism.
 - d. acne.
6. Urticaria is the medical term for
 - a. ringworm.
 - b. lice.
 - c. hives.
 - d. ulcers.
7. The medical term for a dangerous form of skin cancer caused by an overgrowth of melanin-producing cells is
 - a. basal cell carcinoma.
 - b. Kaposi's sarcoma.
 - c. malignant melanoma.
 - d. squamous cell carcinoma.
8. A burn that damages the epidermis and dermis causing redness and blisters is a
 - a. first-degree burn.
 - b. second-degree burn.
 - c. third-degree burn.
 - d. fourth-degree burn.
9. Build a medical term meaning *softening of the nail*.
 - a. onychophagia
 - b. rhytidoplasty
 - c. unguosis
 - d. onychomalacia
10. Which medication is used to treat bacterial infections?
 - a. antipruritic
 - b. antibiotic
 - c. antiseptic
 - d. antiparasitics

(Continued)

PART II: Matching

Directions: Match the term with its definition.

- | | |
|---------------------|-------------------------------------|
| _____ 1. fissure | a. fungal infection |
| _____ 2. macule | b. blister |
| _____ 3. abscess | c. crack-like lesion |
| _____ 4. papule | d. removal of lesion with a scraper |
| _____ 5. vesicle | e. mite infestation |
| _____ 6. scabies | f. flat discolored spot |
| _____ 7. tinea | g. baldness |
| _____ 8. varicella | h. collection of pus |
| _____ 9. alopecia | i. small raised skin lesion |
| _____ 10. curettage | j. chickenpox |

PART III: Abbreviations

Directions: Write the full meaning of the following abbreviations.

1. C&S _____
2. STSG _____
3. bx _____
4. I&D _____
5. derm _____

Chapter 3 Answer Keys

Worksheet 3A Answer Key

1. white
2. life
3. cold
4. skin
5. blue
6. skin
7. skin
8. profuse sweating
9. electricity
10. red
11. sweat
12. scaly, dry
13. hard, horny
14. white
15. fat
16. black
17. fungus
18. death
19. nail
20. hair
21. light
22. pus
23. wrinkle
24. hard
25. oil
26. hair
27. nail
28. bladder
29. dry
30. skin
31. view of
32. instrument used to cut
33. other, different from usual
34. strange, foreign

Worksheet 3B Answer Key

1. cyan/o = blue; -osis = abnormal condition
2. dermat/o = skin; -logy = study of
3. hyper- = excessive; -emia = blood condition
4. kerat/o = hard, horny; -osis = abnormal condition
5. hemangi/o = blood vessel; -oma = tumor
6. albin/o = white; -ism = state of
7. carcin/o = cancer; -oma = tumor
8. ichthy/o = dry, scaly; -osis = abnormal condition
9. onych/o = nail; -ia = state, condition
10. bi/o = life; -opsy = view of
11. cyt/o = cell; -logy = study of
12. dermat/o = skin; -tome = instrument to cut

Worksheet 3C Answer Key

Anatomy and Physiology

1. epidermis
2. sebum
3. fat
4. cutaneous
5. hair, nails, sebaceous glands, sweat glands
6. dermis
7. melanin
8. keratin
9. lunula
10. evaporation

Word Building

1. dermatopathy
2. melanocyte
3. onychomalacia
4. seborrhea
5. ichthyoderma
6. trichomycosis
7. anhidrosis
8. intradermal
9. dermatitis
10. scleroderma

Matching

1. H
2. O
3. S
4. A
5. L
6. C
7. R
8. V
9. Y
10. E
11. Q
12. I
13. N
14. G
15. U
16. M
17. F
18. B
19. W
20. J
21. X
22. P
23. D
24. T
25. K

Quiz 3A Answer Key

1. life
2. blue
3. hard, horny
4. fat
5. white
6. red
7. sweat
8. black
9. death
10. fungus
11. oil
12. hair
13. dry
14. nail
15. light
16. pus
17. hard
18. wrinkle
19. white
20. skin
21. bladder
22. view of
23. instrument to cut
24. other, different from usual
25. strange, foreign

Quiz 3B Answer Key

1. subcutaneous
2. arrector pili
3. lunula
4. sudoriferous
5. diaphoresis
6. eschar
7. erythema
8. keloid
9. petechiae
10. pruritus
11. suppurative
12. urticaria
13. verruca
14. wheal
15. vesicle
16. decubitus ulcer
17. gangrene
18. impetigo
19. ichthyosis
20. pediculosis

Quiz 3C Answer Key

1. epidermis
2. dermis
3. subcutaneous layer
4. sweat gland
5. sweat duct
6. hair
7. sebaceous gland
8. arrector pili muscle
9. sensory receptor

Quiz 3D Answer Key

1. free edge
2. lateral nail groove
3. lunula
4. nail bed
5. nail body
6. cuticle
7. nail root

Quiz 3E Answer Key

1. dermatoplasty
2. anhidrosis
3. onychophagia
4. pyogenic
5. ungual
6. dermatitis
7. dermatology
8. xeroderma
9. scleroderma
10. ichthyoderma
11. erythroderma
12. seborrhea
13. necrosis
14. hyperhidrosis
15. dermatopathy
16. dermatologist
17. intradermal
18. subcutaneous or hyperdermic
19. lipoma
20. melanocyte
21. onychectomy
22. rhytidoplasty
23. trichomycosis
24. pyoderma
25. leukoderma

Quiz 3F Answer Key

1. basal cell carcinoma
2. biopsy
3. culture and sensitivity
4. decubitus ulcer
5. dermatology
6. frozen section
7. herpes simplex virus
8. incision and drainage
9. intradermal
10. malignant melanoma
11. squamous cell carcinoma
12. skin graft
13. systemic lupus erythematosus
14. split thickness skin graft
15. subcutaneous
16. ultraviolet

Quiz 3G Answer Key

Multiple Choice

1. D
2. A
3. C
4. D
5. A
6. C
7. C
8. B
9. D
10. B

Matching

1. c
2. f
3. h
4. i
5. b
6. e
7. a
8. j
9. g
10. d

Abbreviations

1. culture and sensitivity
2. split thickness skin graft
3. biopsy
4. incision and drainage
5. dermatology