

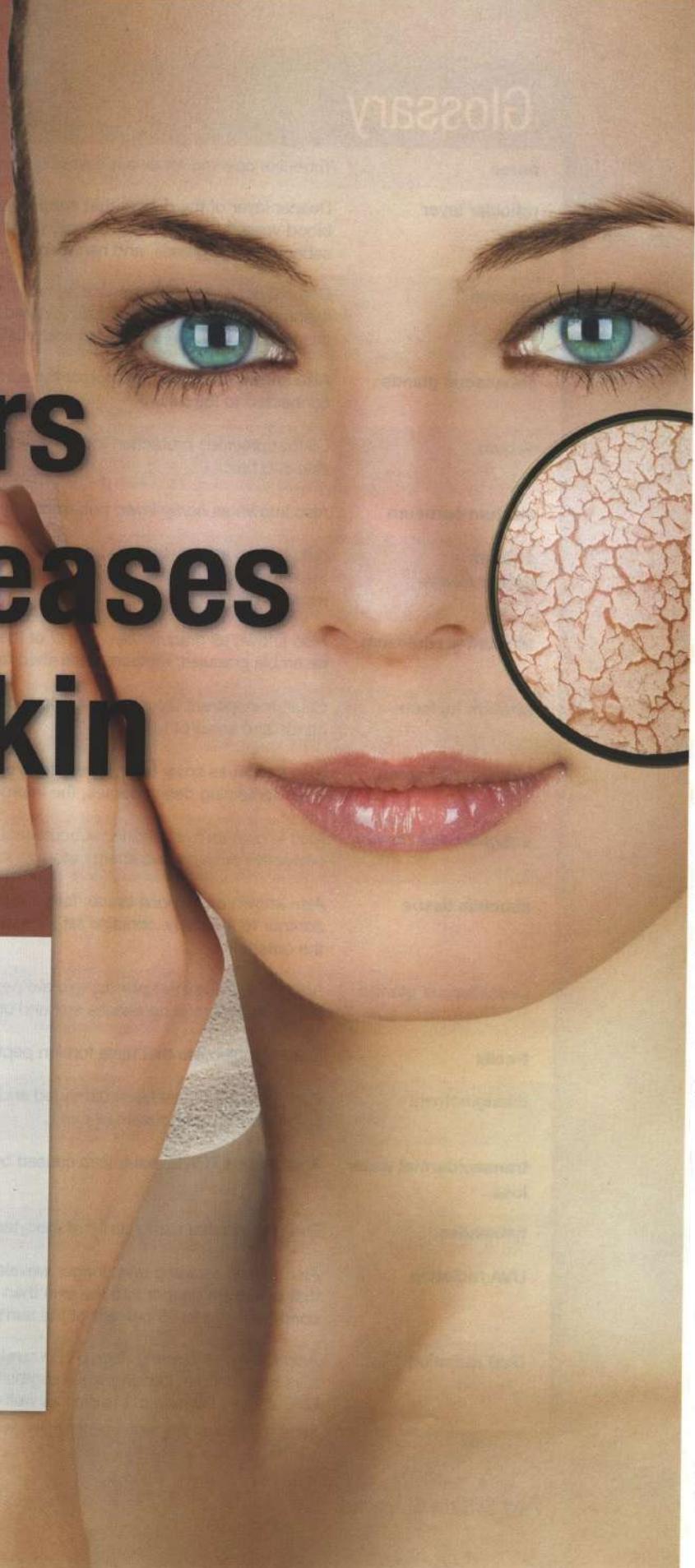
CHAPTER

# 11

# Disorders and Diseases of the Skin

## Chapter Outline

- Why Study Disorders and Diseases of the Skin?
- Dermatology and Esthetics
- Lesions of the Skin
- Disorders of the Sebaceous (Oil) Glands
- Disorders of the Sudoriferous (Sweat) Glands
- Inflammations of the Skin
- Pigmentation Disorders
- Hypertrophies of the Skin
- Contagious Diseases
- Skin Cancer
- Acne



# Learning Objectives

After completing this chapter, you will be able to:

- L01** Understand the different types of skin lesions.
- L02** Understand gland disorders.
- L03** Understand skin inflammations.
- L04** Recognize pigmentation disorders.
- L05** Identify which disorders are contagious.
- L06** Recognize potential skin cancer growths.
- L07** Understand acne and the causes of the disorder.
- L08** Recognize the different grades of acne.
- L09** Identify common skin conditions and disorders.
- L010** Know which disorders to refer to a physician.

# Key Terms

Page number indicates where in the chapter the term is used.

<b>acne</b> pg. 261	<b>comedo</b> pg. 261	<b>excoriation</b> pg. 260	<b>hypopigmentation</b> pg. 265
<b>acne excoriate</b> pg. 260	<b>comedogenic</b> pg. 274	<b>fissure</b> pg. 260	<b>impetigo</b> pg. 268
<b>actinic keratoses</b> pg. 267	<b>conjunctivitis (pinkeye)</b> pg. 268	<b>folliculitis</b> pg. 264	<b>keloid</b> pg. 260
<b>albinism</b> pg. 266	<b>contact dermatitis</b> pg. 263	<b>furuncle (boil)</b> pg. 261	<b>keratoma</b> pg. 267
<b>anhidrosis</b> pg. 262	<b>crust</b> pg. 260	<b>herpes simplex virus 1</b> pg. 268	<b>keratosis</b> pg. 267
<b>asteatosis</b> pg. 261	<b>cyst</b> pg. 258	<b>herpes simplex virus 2</b> pg. 268	<b>keratosis pilaris</b> pg. 267
<b>atopic dermatitis</b> pg. 263	<b>dermatitis</b> pg. 263	<b>herpes zoster (shingles)</b> pg. 268	<b>lentigo</b> pg. 266
<b>basal cell carcinoma</b> pg. 270	<b>dermatologist</b> pg. 258	<b>hyperhidrosis</b> pg. 262	<b>lesions</b> pg. 258
<b>bromhidrosis</b> pg. 262	<b>dermatology</b> pg. 258	<b>hyperkeratosis</b> pg. 267	<b>leukoderma</b> pg. 266
<b>bulla</b> pg. 258	<b>eczema</b> pg. 263	<b>hyperpigmentation</b> pg. 265	<b>macule</b> pg. 259
<b>carbuncle</b> pg. 261	<b>edema</b> pg. 264	<b>hypertrophy</b> pg. 267	<b>malignant melanoma</b> pg. 271
<b>chloasma (liver spots)</b> pg. 266	<b>erythema</b> pg. 264		

# Key Terms

Page number indicates where in the chapter the term is used.

<b>milia</b> pg. 261	<b>psoriasis</b> pg. 264	<b>secondary lesions</b> pg. 260	<b>ulcer</b> pg. 261
<b>miliaria rubra (prickly heat)</b> pg. 263	<b>pustule</b> pg. 259	<b>skin tag</b> pg. 267	<b>urticaria (hives)</b> pg. 264
<b>mole</b> pg. 267	<b>retention hyperkeratosis</b> pg. 272	<b>squamous cell carcinoma</b> pg. 270	<b>varicose veins</b> pg. 264
<b>nevus (birthmark)</b> pg. 266	<b>rosacea</b> pg. 264	<b>stain</b> pg. 266	<b>vasodilation</b> pg. 264
<b>nodules</b> pg. 259	<b>scale</b> pg. 261	<b>steatoma</b> pg. 262	<b>verruca (wart)</b> pg. 268
<b>papule</b> pg. 259	<b>scar</b> pg. 261	<b>tan</b> pg. 266	<b>vesicle</b> pg. 260
<b>perioral dermatitis</b> pg. 263	<b>sebaceous filaments</b> pg. 273	<b>tinea</b> pg. 268	<b>vitiligo</b> pg. 267
<b>primary lesions</b> pg. 258	<b>sebaceous hyperplasia</b> pg. 262	<b>tinea corporis (ringworm)</b> pg. 268	<b>wheel</b> pg. 260
<b>pruritis</b> pg. 264	<b>seborrhea</b> pg. 262	<b>tubercle</b> pg. 260	
<b>pseudofolliculitis (razor bumps)</b> pg. 264	<b>seborrheic dermatitis</b> pg. 262	<b>tumor</b> pg. 260	

**S**kin disorders and diseases are interesting and complex subjects. Estheticians must be knowledgeable about skin disorders and diseases. Recognizing these conditions can help the esthetician work with clients effectively and safely. The medical field is progressing and the treatment of skin disorders and diseases is becoming easier with advances in technology, ingredients, and medicine. Although there are hundreds of disorders and diseases, only the most common are discussed in this chapter. Knowledge of skin problems takes years of experience and study, but reference books are helpful in identifying these disorders and diseases.

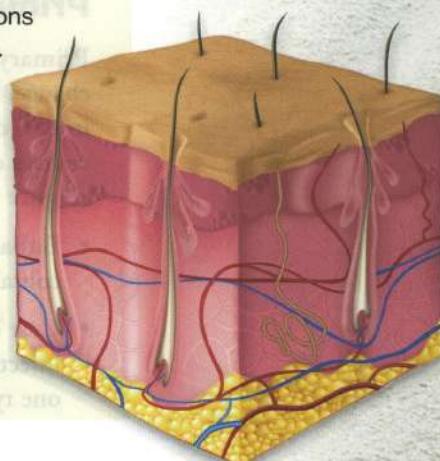
Estheticians can provide client education and help clients with many of their skin concerns. Individuals that have skin problems can be affected emotionally by dealing with such a visible problem. Be sensitive to people's modesty and to how their experiences may have a lifetime effect on their self-esteem and health. Even in the classroom, baring our skin to close examination by others can be uncomfortable. Use positive words of encouragement and be mindful of how you discuss skin problems tactfully.

Never work on any skin condition you do not recognize. When in doubt, stop the service. Let clients know if you do not recognize a condition or lesion, and they will appreciate your honesty and caution. Trying to extract a sebaceous hyperplasia mistaken for a comedone can lead to scarring and a potentially worse problem. Advanced classes and experience are necessary to learn more about disorders. Treatments and products formulated for some of the common disorders are addressed in subsequent chapters.

## Why Study Disorders and Diseases of the Skin?

Estheticians should study and have a thorough understanding of disorders and diseases of the skin in order to effectively and safely treat clients.

- Recognizing skin disorders and diseases is necessary to work with clients effectively and safely, especially for those conditions that are contagious or that need to be referred to a physician.
- Estheticians can help clients with many common disorders and conditions such as rosacea and minor acne.
- By understanding acne and the causes of the disorder, estheticians have a rewarding opportunity to help people with acne and make a difference in their lives.
- As an esthetician, it is important to keep current on the treatments of skin disorders and diseases along with the advances in technology, ingredients, and medicine used to treat the skin.



# Dermatology and Esthetics

**Dermatology** is the branch of medical science that studies and treats the skin and its disorders and diseases. A **dermatologist** is a physician who treats these disorders and diseases. Recognizing skin disorders and diseases is important for the protection of both the technician and the client. Estheticians may not perform services on clients who have contagious or infectious diseases. Any skin abnormality you do not positively recognize must be referred to a physician.

Dermatologists and physicians are qualified to treat skin problems, but estheticians may not diagnose or treat disorders and diseases of the skin beyond their scope of practice; however, estheticians can help clients with many common disorders and conditions such as rosacea, minor acne, and sensitive skin. Caution and strict infection control practices are imperative when working with skin disorders. Knowledge of skin conditions that *contraindicate* (prohibit) a treatment is also necessary.

Causes and treatments for all of the disorders and diseases are not addressed here due to the limited scope of practice and vast amount of advanced medical information that it would require. Some lesions fit into more than one category and have more than one name or definition. Skin disorders are not easy to categorize as they can be as diverse as the individuals dealing with the ailments.

## CAUTION!

Do not attempt to diagnose or treat medical conditions. Estheticians are not licensed to diagnose skin disorders or diseases. Refer clients to a physician if you think they have a disorder or disease that needs medical attention.

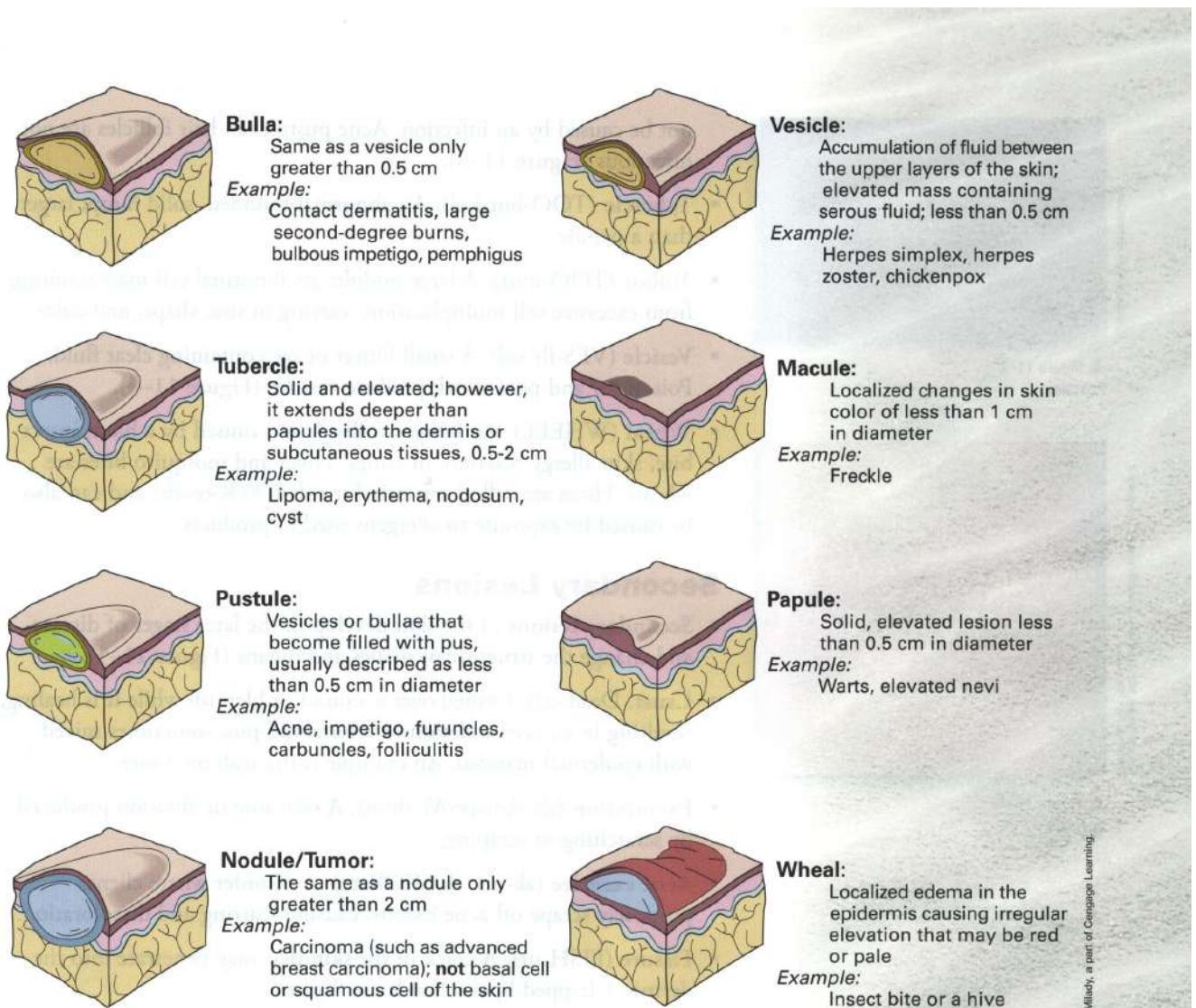
## Lesions of the Skin

**Lesions** (LEE-zhuns) are structural changes in the tissues caused by damage or injury. Any mark, wound, or abnormality is described as a lesion. The three types of lesions are primary, secondary, and tertiary. Some books refer to the tertiary, or third, type of lesions as *vascular lesions*. Vascular lesions involve the blood or circulatory system.

### Primary Lesions

**Primary lesions** are lesions in the early stages of development or change. Primary lesions are characterized by flat, nonpalpable changes in skin color or by elevations formed by fluid in a cavity, such as vesicles or pustules. Primary lesions of the skin include the following (Figure 11–1):

- **Bulla** (BULL-uh) (plural: bullae, BULL-ay). A large blister containing watery fluid. It is similar to a vesicle, but larger.
- **Cyst** (SIST). A closed, abnormally developed sac containing fluid, infection, or other matter above or below the skin. An acne cyst is one type of cyst.



▲ **Figure 11-1**  
Primary lesions of the skin. These illustrations show the size, elevation or depression, and layers of the skin that are affected in each type of lesion.

- **Macule** (MAK-yool), (plural: maculae, MAK-yuh-ly). A flat spot or discoloration on the skin, such as a freckle or a red spot, left after a pimple has healed. Macules are neither raised nor sunken.
- **Nodules** (NOD-yool). These are often referred to as tumors, but they are smaller bumps caused by conditions such as scar tissue, fatty deposits, or infections.
- **Papule** (PAP-yool). A small elevation on the skin that contains no fluid, but may develop into a pustule (Figure 11-2). Papules are less than half an inch (1.25 centimeters) in diameter and may have a varied appearance in color and are either rounded, smooth, or rough.
- **Pustule** (PUS-chool). An inflamed papule with a white or yellow center containing pus, a fluid consisting of white blood cells, bacteria, and other debris; a small pus-containing blister that may or may



▲ **Figure 11-2**  
Papules.



▲ Figure 11-3  
Pustules.



▲ Figure 11-4  
Vesicles.

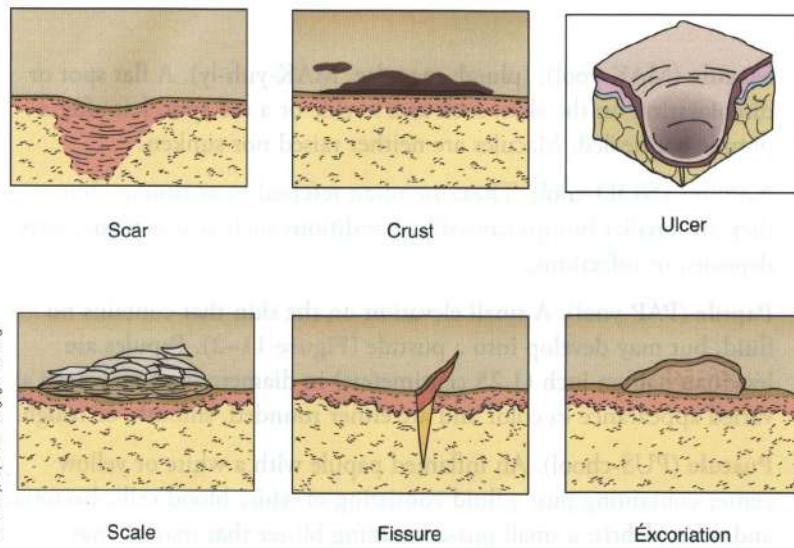
not be caused by an infection. Acne pustules in hair follicles are not infectious (**Figure 11-3**).

- **Tubercle** (TOO-bur-kul). An abnormal rounded, solid lump; larger than a papule.
- **Tumor** (TOO-mur). A large nodule; an abnormal cell mass resulting from excessive cell multiplication, varying in size, shape, and color.
- **Vesicle** (VES-ih-kel). A small blister or sac containing clear fluid. Poison ivy and poison oak produce vesicles (**Figure 11-4**).
- **Wheal** (WHEEL). An itchy, swollen lesion caused by a blow, insect bite, skin allergy reaction, or stings. Hives and mosquito bites are wheals. Hives are called urticaria (ur-tuh-KAYR-ee-ah) and can also be caused by exposure to allergens used in products.

## Secondary Lesions

- **Secondary lesions** of the skin develop in the later stages of disease and change the structure of tissues and organs (**Figure 11-5**).
- **Crust**. Dead cells formed over a wound or blemish while it is healing, resulting in an accumulation of sebum and pus, sometimes mixed with epidermal material. An example is the scab on a sore.
- **Excoriation** (ek-skor-ee-AY-shun). A skin sore or abrasion produced by scratching or scraping.
- **Acne excoriee** (ak-nee ek-SKOR-ee). A disorder where clients purposely scrape off acne lesions, causing scarring and discoloration.
- **Fissure** (FISH-ur). A crack in the skin that may penetrate into the dermis. Chapped lips or hands are fissures.
- **Keloid** (KEE-loyd). A thick scar resulting from excessive growth of fibrous tissue (collagen). Keloids are usually found in those that are

► Figure 11-5  
Secondary skin lesions.



genetically predisposed to them and may occur following an injury or surgery (**Figure 11–6**).

- **Scale.** Excessive shedding of dead skin cells; flaky skin cells; any thin plate of epidermal flakes, dry or oily. An example is abnormal or excessive dandruff or psoriasis.
- **Scar.** Discolored, slightly raised mark on the skin formed after an injury or lesion of the skin has healed. The tissue hardens to heal the injury. Thick, elevated scars are *hypertrophic*.
- **Ulcer.** An open lesion on the skin or mucous membrane of the body, accompanied by pus and loss of skin depth; a deep erosion or depression in the skin, normally due to infection or cancer. Requires medical referral. **L01**



▲ **Figure 11–6**  
Keloids.

## Disorders of the Sebaceous (Oil) Glands

Notable sebaceous gland disorders include the following:

- **Acne.** A chronic inflammatory skin disorder of the sebaceous glands characterized by comedones and blemishes. There are many types of acne. Common acne is known as *acne simplex* or *acne vulgaris*. Inflammation of the sebaceous glands results from retained oil secretions, cells, and excessive *Propionibacterium acne* (*P. acne*) bacteria.
- **Asteatosis** (as-tee-ah-TOH-sis). Dry, scaly skin from sebum deficiency; can be due to aging, internal disorders, alkalies of harsh soaps, or cold exposure.
- **Comedo** (KAHM-uh-doe) (plural: comedones; KAHM-uh-dohnz). A noninflamed buildup of cells, sebum, and other debris inside follicles. An *open comedo* is a blackhead open at the surface and exposed to air. When the follicle is filled with an excess of oil a blackhead forms. It is dark because it is exposed to oxygen and oxidation occurs (**Figure 11–7**). A *closed comedo* forms when the openings of the follicles are blocked with debris and white cells. Also referred to as a *whitehead*, but should not be confused with the more hardened white type of papules called milia.
- **Furuncle** (FYOO-rung-kul), also known as **boil**. A subcutaneous abscess filled with pus. Furuncles are caused by bacteria in glands or hair follicles.
- **Carbuncles.** (KAHR-bung-kuls) Groups of boils.
- **Milia** (MIL-ee-uh). These epidermal cysts are small, firm white papules. Milia are whitish, pearl-like masses of sebum and dead cells under the skin with no visible opening often mistakenly called whiteheads (whiteheads look similar but are soft). Hardened and closed over, milia are more common in dry skin types and may form after skin trauma, such as a laser resurfacing or chronic exposure to UV radiation (**Figure 11–8**).



▲ **Figure 11–7**  
Comedones.



▲ **Figure 11–8**  
Milia.



▲ Figure 11–9  
Seborrheic Dermatitis.

They resemble small sesame seeds and are almost always perfectly round. They are usually found around the eyes, cheeks, and forehead; also caused by blocked follicular openings from thick moisturizers.

Depending on the state, milia can be treated in the salon or spa. Milia must be lanced, or opened, to be extracted.

- **Sebaceous hyperplasia** (sih-BAY-shus hy-pur-PLAY-zhuh). Benign lesions frequently seen in oilier areas of the face. They are often white, yellow, or flesh colored. Sebaceous hyperplasia is described as doughnut-shaped with an indentation in the center. Sebaceous material may be found in the center. As cell turnover rate slows with age and decreased androgen levels, this causes abnormal cell buildup with very little oil that crowds and enlarges sebaceous glands. Do not mistake these overgrowths of the sebaceous gland for comedones or milia, which may look similar at first. These harmless lesions cannot be removed by extraction, only surgically (Figure 11–9).
- **Seborrhea** (seb-oh-REE-ah). Severe oiliness of the skin; an abnormal secretion from the sebaceous glands.
- **Seborrheic dermatitis** (seb-oh-REE-ick derm-ah-TIE-tus). A skin condition characterized by inflammation, dry or oily scaling or crusting, and/or itchiness. The red, flaky skin often appears in the eyebrows, in the scalp and hairline, the middle of the forehead, and along the sides of the nose. One cause is an inflammation of the sebaceous glands. This condition is sometimes treated with cortisone creams. Severe cases should be referred to the dermatologist. Seborrheic dermatitis is also a common form of eczema.
- **Steatoma** (stee-ah-TOH-muh). A sebaceous cyst or subcutaneous tumor filled with sebum and ranging in size from a pea to an orange. It usually appears on the scalp, neck, and back; also called a *wen*.

## Disorders of the Sudoriferous (Sweat) Glands

Disorders of the sudoriferous glands include the following:

- **Anhidrosis** (an-hy-DROH-sis). A deficiency in perspiration due to failure of the sweat glands; often results from a fever or skin disease. Anhidrosis requires medical treatment.
- **Bromhidrosis** (broh-mih-DROH-sis). Foul-smelling perspiration, usually in the armpits or on the feet. Bromhidrosis is caused by bacteria and yeast that break down the sweat on the surface of the skin.
- **Hyperhidrosis** (hy-pur-hy-DROH-sis). Excessive perspiration caused by heat, genetics, medications, or medical conditions. Also called *diaphoresis*.

- **Miliaria rubra** (mil-ee-AIR-ee-ah ROOB-rah), also known as **prickly heat**. Acute inflammatory disorder of the sweat glands; results in the eruption of red vesicles and burning, itching skin from excessive heat exposure.  L02

## Inflammations of the Skin

Inflammations of the skin include the following:

- **Dermatitis**. An inflammatory condition of the skin; various forms include lesions such as eczema, vesicles, or papules. The three main categories of dermatitis are atopic, contact, and seborrheic.
- **Atopic dermatitis**. Atopic dermatitis is a chronic, relapsing form of dermatitis (*atopic* is “excess inflammation from allergies”). Irritants and allergens trigger reactions that include dry, cracking skin. The redness, itching, and dehydration of the dermatitis make the condition worse. Use of humidifiers and lotion can help keep the skin more hydrated. Topical corticosteroids can relieve the symptoms.
- **Contact dermatitis**. An inflammatory skin condition caused by an allergic reaction from contact with a substance or chemical. Contact dermatitis can be caused by either an allergic reaction or contact with an irritant. Makeup, skin care products, detergents, dyes, fabrics, jewelry, and plants can all cause red, itchy skin. Allergies to red dyes in products and nickel in jewelry are common. *Allergic contact dermatitis* is caused by exposure to allergens (Figure 11–10). Poison ivy is an example. A rash occurs when the immune system responds to allergens such as fragrances and preservatives. *Irritant contact dermatitis* is a localized inflammatory reaction caused by exposure to caustic irritants. Occupational disorders from ingredients in cosmetics and chemical solutions can cause contact dermatitis, or *dermatitis venenata*. Contact with allergens and caustic chemicals can also cause skin sensitivity or disorders. Allergies and skin eruptions are common. Wearing gloves or protective skin creams while working with chemicals or irritating substances can help prevent contact dermatitis. Irritant contact dermatitis can become worse and lead to allergic contact dermatitis.
- **Perioral dermatitis** (pair-ee-OR-ul derm-a-TIE-tuss). An acne-like condition around the mouth; consists mainly of small clusters of papules. It may be caused by toothpaste or products used on the face. It is not contagious. Antibiotics can help treat the condition.
- **Eczema** (EG-zuh-muh). An inflammatory, painful, itching disease of the skin; acute or chronic in nature, with dry or moist lesions. This should be referred to a physician (Figure 11–11). Avoid contact and skin care treatments if a client has eczema. *Seborrheic dermatitis* is a common form of eczema as well as a sebaceous gland disorder; characterized by scaling around the nose, ears, scalp, eyebrows, and mid-chest areas. This flaking mainly affects oilier areas.



 **Figure 11–10**  
Contact dermatitis.

Courtesy of www.dermnet.com.



 **Figure 11–11**  
Eczema.

Courtesy of www.dermnet.com.



▲ Figure 11-12  
Folliculitis.



▲ Figure 11-13  
Psoriasis.



▲ Figure 11-14  
Rosacea.

- **Edema** (ih-DEE-muh). Swelling from a fluid imbalance in the cells or from a response to injury, infection, or medication.
- **Erythema** (er-uh-THEE-muh). Redness caused by inflammation.
- **Folliculitis** (fah-lik-yuh-LY-tis). Hair grows under the surface instead of growing up and out of the follicle, causing a bacterial infection. These ingrown hairs are common in men, usually from shaving (referred to as *barbae folliculitis*, *folliculitis barbae*, *sycosis barbae*, or *barber's itch*) (**Figure 11-12**). **Pseudofolliculitis** (SOO-doe-fah-lik-yuh-LY-tis), also known as **razor bumps**, resembles folliculitus without the pus or infection.
- **Pruitis** (proo-RYT-us). The medical term for itching; persistent itching.
- **Psoriasis** (suh-RY-uh-sis). An itchy skin disease characterized by red patches covered with white-silver scales; caused by an over-proliferation of skin cells that replicate too fast (**Figure 11-13**). Psoriasis is usually found in patches on the scalp, elbows, knees, chest, and lower back. If patches are irritated, bleeding can occur. Psoriasis is not contagious but can be spread by irritating the affected area.
- **Urticaria** (ur-tuh-KAYR-ee-ah), also known as **hives**. An allergic reaction by the body's histamine production.

## Vascular Lesions

- **Rosacea** (roh-ZAY-see-uh). An inflammation of the skin characterized by extreme redness, dilation of blood vessels, and in severe cases the formation of papules and pustules (**Figure 11-14**). It is chronic congestion primarily on the cheeks and nose. The cause and treatment of rosacea is a primary skin care concern. The cause is unknown, but may be due to heredity, bacteria, mites, or fungus. Certain factors are known to aggravate the condition. **Vasodilation** (vascular dilation) of the blood vessels makes rosacea worse. Spicy foods, alcohol, caffeine, temperature extremes, heat, sun, and stress aggravate rosacea. Soothing and calming ingredients and treatments will help calm the skin and decrease the inflammation. Rosacea and couperose conditions are discussed further in other chapters.
- **Telangiectasia** (tel-an-jee-ek-TAY-zhuh). A vascular lesion; describes capillaries that have been damaged and are now larger, or distended blood vessels. Commonly called *couperose skin* and characterized by redness.
- **Varicose veins**. Vascular lesions that are abnormally dilated and twisted veins which can occur anywhere in the body. Sometimes treated with *sclerotherapy*, a nonsurgical injection into the vein. Surgery is a treatment option for serious vein problems.

## Allergic Contact Dermatitis

- Allergic contact dermatitis is caused by exposure and direct skin contact to an allergen. Normally the immune system protects us from pathogens

and disease, but in an allergic reaction the immune system actually causes the problem by trying to do its job too well. An allergic reaction occurs when our immune system mistakes a substance for a toxic one and initiates a major defense against it.

Initial exposure to an allergen does not always cause an allergic reaction. The development of hypersensitivity is the result of repeated exposure to an allergen over time. This process is called *sensitization* (SEN-sih-tiz-A-shun), and it may take months or years depending on the allergen and the intensity of exposure. Also remember that different people develop allergies to different allergens. Individual predisposition to allergies may be inherited because sensitivity seems to run in families.

### Irritant Contact Dermatitis

Irritant reactions affect everyone who comes in contact with an irritant, although the degree of irritation will vary depending on the individual. In acute cases, symptoms are noticed immediately or within just a few hours. Chronic cases may be delayed reactions that take weeks, months, or years to develop. Symptoms range from redness, swelling, scaling, and itching to serious, painful chemical burns. Irritating substances will temporarily damage the epidermis. Caustic substances are examples of irritants. When the skin is damaged by irritating substances, the immune system springs into action. It floods the tissue with water, trying to dilute the irritant. This is why swelling occurs.

The immune system also releases histamines, which enlarge the vessels around the injury. Blood can then rush to the area more quickly and help remove the irritating substance. The extra blood under the skin is easily visible. The entire area becomes red, warm, and may throb. Histamines cause the itchy feeling that often accompanies contact dermatitis. After everything calms down, the swelling will go away. The surrounding skin is often left damaged, scaly, cracked, and dry. Fortunately, irritations are not permanent. If you avoid repeated and/or prolonged contact with the irritating substance, the skin will usually quickly repair itself; however, continued or repeated exposure may lead to permanent allergic reactions and skin damage. **L03**

## Pigmentation Disorders

The genetic background of a person influences pigmentation disorders. Abnormal pigmentation, referred to as *dyschromia* (diz-KRO-me-ah), can be caused by various internal or external factors. Sun exposure is the biggest external cause of pigmentation disorders and can make existing pigmentation disorders worse. Drugs may also cause skin pigmentation abnormalities. **Hyperpigmentation**, overproduction of pigment, and **hypopigmentation**, lack of pigment, are the two types of pigmentation disorders. Hyperpigmentation is a frequent concern for clients and is discussed in subsequent chapters.

**fyi**

Poison ivy is a common allergen. Although approximately 75 percent of the population is allergic to poison ivy, the remaining 25 percent will never have a reaction no matter how many times they are exposed. Individuals who are not predisposed never become sensitized and will not develop allergies.

### CAUTION!

Reactions from chemicals are commonly seen in the salon:

- On the practitioner's fingers, palms, or on the back of the hand.
- On the practitioner's face, especially the cheeks.
- On the client's scalp, hairline, forehead, or neckline

If you examine the area where the problem occurs, you can usually determine the cause.

For example, technicians may react to chemicals from using disinfectants or strong skin care products. This is both prolonged and repeated contact! Sensitization is an increased or exaggerated sensitivity to products. Wear gloves to avoid potential reactions. Eyes and lungs can also be affected by exposure to strong chemicals or ingredients.

### Did You Know?

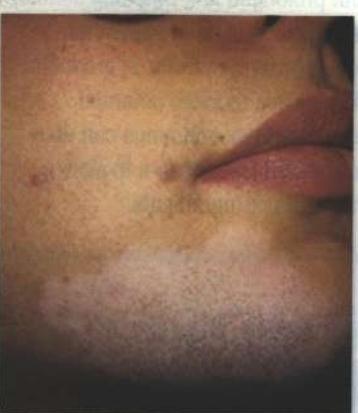
Severe allergic reactions can result in high fever and anaphylactic (an-ah-fah-LAK-tik) shock, which can be life threatening.



▲ Figure 11-15  
Hyperpigmentation.



▲ Figure 11-16  
Albinism.



▲ Figure 11-17  
Vitiligo.

## Hyperpigmentation

Hyperpigmentation appears in the following forms:

- **Chloasma** (klo-AZ-ma), also known as **liver spots**. Increased pigmentation; from sun exposure or pigmentation from other causes. Melasma is a type of chloasma, which appears during pregnancy. They can be helped by exfoliation treatments or can be treated by a dermatologist.
- **Hyperpigmentation**. An overproduction of pigment (Figure 11-15). Increased melanin causes excess pigment. Sun exposure, acne, medications, and post-inflammatory hyperpigmentation from skin damage can cause darkened pigmentation.
- **Lentigo** (len-TY-goh). A flat, pigmented area similar to a freckle; small, yellow-brown spots. Lentigenes (len-tih-JEE-neez) are multiple freckles. Lentigenes that result from sunlight exposure are liver spots called *actinic*, or solar, lentigenes. Freckles are tiny round or oval pigmented skin on areas exposed to the sun, referred to as *macules*, the small flat colored spots on the skin.
- **Melasma** (muh-LAZ-muh). A term for hyperpigmentation triggered by hormonal changes, often during pregnancy or with birth control use. *Pregnancy mask* is a condition where brown pigmentation appears on the face during pregnancy. It usually fades with time, but is worsened by sun exposure.
- **Nevus** (NEE-vus), also known as **birthmark**. A malformation of the skin from abnormal pigmentation or dilated capillaries.
- **Stain**. Abnormal brown or wine-colored skin discoloration with a circular or irregular shape. A *port wine stain* is a birthmark, which is a vascular type of nevus. Stains may also occur after certain diseases.
- **Tan**. Exposure to the sun causes tanning, a change in pigmentation due to melanin production as a defense against UV radiation that damages the skin. A tan is basically visible skin and cell damage.

## Hypopigmentation

Hypopigmentation occurs in various forms.

- **Albinism** (AL-bi-niz-em). A rare genetic condition characterized by the lack of melanin pigment in the body including the skin, hair, and eyes (Figure 11-16). The person is at risk for skin cancer, is sensitive to light, and ages early without normal melanin protection. The technical term for albinism is *congenital leukoderma* or *congenital hypopigmentation*.
- **Leukoderma** (loo-koh-DUR-ma). Loss of pigmentation; light, abnormal patches of depigmented skin; congenital, acquired due to immunological and post-inflammatory causes. Vitiligo and albinism are leukodermas.
- **Vitiligo** (vih-til-EYE-goh). A pigmentation disease characterized by white irregular patches of skin that are totally lacking pigment (Figure 11-17).

The condition can worsen with time and sunlight. The disease can occur at any age and is believed to be an autoimmune disorder causing an absence of melanocytes. **L04**

## Hypertrophies of the Skin

Hypertrophies are defined as abnormal growths and include the following forms:

- **Hypertrophy** (hy-PUR-truh-fee). An abnormal growth; many are *benign*, or harmless, however, some growths are premalignant or malignant and can be dangerous or cancerous. *Hypertrophic* is used to describe thickening of a tissue. The opposite of hypertrophy is *atrophy*, which means “wasting away or thinning.” Keloids are an example of hypertrophies.
- **Actinic keratoses**. Pink or flesh-colored precancerous lesions that feel sharp or rough that are a result of sun damage and should be checked by a dermatologist (**Figure 11–18**).
- **Hyperkeratosis**. Thickening of the skin caused by a mass of keratinocytes.
- **Keratoma** (kair-uh-TOH-muh). An acquired, thickened patch of epidermis. A callus caused by pressure or friction is a keratoma. If the thickening also grows inward, it becomes a corn.
- **Keratosis** (kair-uh-TOH-sis) (plural: keratoses, kair-uh-TOH-seez). An abnormally thick buildup of skin cells.
- **Keratosis pilaris** (kair-uh-TOH-sis py-LAIR-us). Redness and bumpiness in the cheeks or upper arms; caused by blocked follicles. Exfoliation can help unblock follicles and alleviate the rough feeling (**Figure 11–19**).
- **Mole**. A pigmented nevus; a brownish spot ranging in color from tan to bluish black. Some are flat, resembling freckles; others are raised and darker. Most are benign, but changes in mole color or shape should be checked by a physician. Hairs in moles are common and should not be removed unless by a physician because it may irritate or cause structural changes to the mole.
- **Skin tag**. Small outgrowths or extensions of the skin that look like flaps; they are benign and are common under the arms or on the neck from friction or where skin is rubbed together (**Figure 11–20**).
- **Verruca** (vuh-ROO-kuh), also known as **wart**. A hypertrophy of the papillae and epidermis caused by a virus. Infectious and contagious, verrucas can spread (**Figure 11–21**).



▲ **Figure 11–18**  
Actinic keratosis.

Courtesy of www.dermnet.com.



▲ **Figure 11–19**  
Keratosis pilaris.

Courtesy of www.dermnet.com.



▲ **Figure 11–20**  
A skin tag.



▲ **Figure 11–21**  
Verruca.

Courtesy of www.dermnet.com.



▲ Figure 11-22  
Herpes type 1.



▲ Figure 11-23  
Shingles.



▲ Figure 11-24  
Tinea corporis (ringworm).

## Contagious Diseases

The term *contagious disease* is used interchangeably with the terms *infectious* or *communicable* disease. Do not perform services on anyone with a contagious disease because it can spread and infect others. Refer them to a physician.

The following are contagious diseases.

- **Conjunctivitis** (kun-junk-tuh-VY-tus) also known as **pinkeye**. Inflammation of the mucous membrane (conjunctiva) around the eye due to chemical, bacterial, or viral causes; very contagious; treated with antibiotics.
- **Herpes simplex virus 1** (HER-peez SIM-pleks VY-rus). Fever blisters or cold sores; recurring viral infection. A vesicle or group of vesicles on a red, swollen base. The blisters usually appear on the lips or nostrils. Herpes simplex virus 1 causes cold sores and lesions around the mouth; it is a contagious disease (**Figure 11-22**).
- **Herpes simplex virus 2**. Genital herpes; never work on clients with a current herpes lesion. Peels, waxing, or other stimuli may cause a breakout, even if the condition is not currently active. The virus can be spread to other areas on the person that is infected or to other people. Understanding a client's health history from her intake form may prevent potential problems.
- **Herpes zoster** (HER-peez ZOHS-tur), also known as **shingles**. A painful skin condition from the reactivation of the chickenpox virus; also known as the varicella-zoster virus (VZV). Shingles is a viral infection of the sensory nerves characterized by groups of red blisters that form a rash that occurs in a ring or line (**Figure 11-23**). The rash is typically confined to one side of the body. VZV can cause nerve and organ damage and severe pain that can last for months or years. Treated with antiviral drugs.
- **Impetigo** (im-puh-TEE-go). A bacterial infection of the skin that often occurs in children; characterized by clusters of small blisters or crusty lesions filled with bacteria. It is extremely contagious.
- **Tinea** (TIN-ee-uh). Fungal infections. Fungi feed on proteins, carbohydrates, and lipids in the skin. Tinea pedis, athlete's foot, is a fungal infection.
- **Tinea corporis** (TIN-ee-uh KOR-pur-is), also known as **ringworm**. Highly contagious; it forms a ringed red pattern with elevated edges (**Figure 11-24**).
- **Wart**. Verruca; a hypertrophy of the papillae and epidermis caused by a virus. Infectious and contagious, verrucas can spread. Wear gloves and avoid contact with warts. ■ **L05**

## ACTIVITY

To help learn the lesions, make an outline of the lesions using the categories and the names of each lesion.

Continue listing the categories in columns and the conditions below each category.

For example:

Primary Lesions	Secondary Lesions	Contagious	Inflammations	Hypertrophies	Glands	Pigment
bulla	crust	herpes	dermatitis	keloid	milia	hyper

### A Noncontagious Fungal Infection

**Tinea versicolor** (TIN-ee-uh VUR-see-kuh-lur), also called *pityriasis versicolor*, is a fungal condition that inhibits melanin production (Figure 11–25). It is not contagious because it is caused by yeast, a normal part of the human skin. It is characterized by white, brown, or salmon-colored flaky patches from the yeast on the skin. This sun fungus can be treated with antifungal cream or medication. Selenium sulfide shampoos can also treat the condition. High humidity and summer heat stimulate the condition. It usually fades in the cold winter season and recurs in the warm season.



Courtesy of www.dermnet.com.

▲ Figure 11–25  
Tinea versicolor.

## Skin Cancer

Skin cancer risk increases with cumulative ultraviolet (UV) sun exposure and is found in three distinct forms that vary in severity. Each form is named for the type of cells that are affected. Skin cancer is caused by damage to DNA. Skin cancer tumors form when cells begin to divide rapidly and unevenly. See Table 11–1, on page 270, for some facts on skin cancer.

If detected early, these abnormal growths can be removed. If not taken care of, they can be deadly. It is important for estheticians to recognize serious skin disorders so they can refer clients to physicians. Tactfully suggest that the client seek medical advice without diagnosing or speculating about the disorder. Annual exams are recommended to check for cancerous lesions. Sun damage and sunscreens are discussed in other chapters.

### CAUTION!

Do not work on clients if you have a verruca or any other contagious conditions on any area that would touch or infect the client! Do not touch clients' warts or plantar warts on the feet, because these are also contagious.



Benign means "not harmful"; malignant means "cancerous."

Carcinoma is a cancerous tumor.

## FACTS ABOUT SKIN CANCER AND SUN EXPOSURE

- Melanoma is rising faster than any other cancer, and it causes 8,000 deaths every year.
- Death from skin cancer occurs at the rate of one death per hour in the United States.
- More than 1.3 million skin cancers are diagnosed annually in the United States.
- One in five Americans will get skin cancer.
- More than 90% of all skin cancers are caused by sun exposure.
- Only 33% of the population uses sunscreen.
- The risk of skin cancer doubles if a person has had five or more sunburns in their lifetime, or even one severe sunburn as a child.
- Most parents do not correctly use sunscreen on their children or protect them with hats or clothing.
- Most of the people diagnosed with melanoma are white men over age 50.
- Skin cancer is the number one cancer in men over age 50.
- Men over age 40 spend the most time outdoors and have the most exposure to UV radiation.
- Skin cancer has tripled in women under age 40 in the past 30 years.
- Skin cancer kills more women in their late 20s and early 30s than breast cancer does.
- The effects of photoaging from sun exposure or indoor tanning can be seen as early as age 20 or before.
- There is a 75% increase of melanoma risk among those who use tanning beds in their teens and twenties.
- UVA wavelengths pass through clouds and window glass.
- There is no safe way to tan.

▲ Table 11-1 Facts About Skin Cancer and Sun Exposure.

© Millady, a part of Cengage Learning



Courtesy of www.dermnet.com.

▲ Figure 11-26  
Basal cell carcinoma.



Courtesy of www.dermnet.com.

▲ Figure 11-27  
Squamous cell carcinoma.

### Basal Cell Carcinoma

**Basal cell carcinoma** (BAY-zul CEL kar-si-NOH-mah) is the most common and the least severe type of carcinoma (Figure 11-26). Typical characteristics include open sores, reddish patches, or a smooth growth with an elevated border. It often appears as shiny bumps that are either colored or as light, pearly nodules. Sometimes blood vessels run through the nodules.

Basal cells do not spread as easily as squamous or melanoma cells. It is caused primarily by overexposure to UV radiation. They can be removed by surgery or other medical procedures.

### Squamous Cell Carcinoma

**Squamous cell carcinoma** (SKWAY-mus CEL kar-si-NOH-mah) is a more serious condition than basal cell carcinoma (Figure 11-27). It is characterized by red or pink scaly papules or nodules. Sometimes they are characterized by open sores or crusty areas that do not heal and may bleed easily. Squamous cell carcinoma can grow and spread to other areas of the body.

## Malignant Melanoma

**Malignant melanoma** (muh-LIG-nent mel-ah-NOH-muh) is the most serious form of skin cancer. Black or dark patches on the skin are usually uneven in texture, jagged, or raised (Figure 11–28). It can be tan and even white. Melanomas may have surface crust or bleed. Many appear in preexisting moles. It is not always found on areas exposed to sunlight and is often found on feet, toes, backs, and legs.

Malignant melanoma is more deadly because it can spread (metastasize) throughout the body and to internal organs via the lymphatics and blood stream. Early detection of melanomas and regular checkups are vital. Many young people can die from this dangerous cancer. Infrequent, intense UV exposure may cause a higher risk for melanoma than chronic continuous exposure does. Caucasians who have a tendency to burn are more susceptible to skin cancer.



▲ Figure 11–28  
Malignant melanoma.

Courtesy of www.dermnet.com.

**fyi**

### ABCDE's of Melanoma Detection

The American Cancer Society recommends using the ABCDE Cancer Checklist to help make potential skin cancer easier to recognize. When checking existing moles, look for changes in any of the following:

- A—Asymmetry: the two sides of the lesion are not identical.
- B—Border: the border is irregular on these lesions.
- C—Color: melanomas are usually dark and have more than one color or colors that fade into one another.
- D—Diameter: the lesion in a melanoma is usually at least the size of pencil eraser.
- E—Evolving: melanoma as a lesion often changes appearance.

Changes to any of these characteristics should be examined by a physician (Figure 11–29). For more information, contact the American Cancer Society at [www.cancer.org](http://www.cancer.org) or (800) ACS-2345.



Benign mole—symmetrical



Benign mole—one shade



Benign mole—even edges



Melanoma—asymmetrical



Melanoma—two or more shades



Melanoma—uneven edges

▲ Figure 11–29 ABCDE checklist.

Courtesy of the Skin Cancer Foundation; <http://www.skincancer.org>.

## ACTIVITY

Do your own mole and lesion check. Record where they are located and write down the description of the lesions now that you are familiar with wording used to describe various skin conditions.

You can use a blank chart of the body to track moles. Take photos of suspicious lesions. Get a partner to assist in checking the back area and back of the legs. How many lesions look suspicious?

You can also use this type of information to record in client charts.

*Example of tracking moles:*

**Date:** May 5, 2010

**Location:** Chest area: right side by collar bone.

**Description (A,B,C,D, E's):** Small, light brown freckle, 1 cm ( $\frac{3}{8}$  in) in diameter, flat, evenly shaped border.

**Changes/Evolution:** Darker than last year.

**Follow up:** Doctor checked for moles in April, 2009.

Get check-ups once a year.

The ABCDE Cancer Checklist is a method of evaluating possible skin cancer lesions; each letter corresponds to specific melanoma characteristics (Refer to Figure 11–29). Melanoma mole-like lesions are *asymmetrical*, have uneven *borders*, uneven *color*, are larger in *diameter* than a pencil eraser, and they change or *evolve*. ■ L06

## Acne

Acne is a primary concern for many clients seeking skin care help from an esthetician. This severe skin problem can greatly affect a person's self-esteem. Acne, a skin disorder of the sebaceous glands, is characterized by comedones and blemishes and is hereditary. It is usually triggered by hormonal changes. It begins to flare up when a person reaches puberty, but adult acne is also prevalent.

Acne ranges from mild breakouts to disfiguring cysts and scarring (Figure 11–30). Acne can be controlled with proper medications, but medications have side effects and treatment may sometimes be a lifelong battle. Estheticians have a great opportunity to help people with less severe acne and make a difference in their lives. Acne can be a challenge to work with, but seeing visible improvement in a client's skin is very rewarding.

## ACTIVITY

Go to the skin cancer foundation at [skincancer.org](http://skincancer.org) or another Web site to get more information on skin cancer facts. What is the most interesting or significant thing you learned from the Web site research?

### Causes of Acne

Causes of acne include the following:

- Genetics/heredity
- Clogged follicles
- Bacteria
- Triggers include hormones, stress, cosmetics, skin care products, and foods

### Genetics and Clogged Follicles

Clogged follicles are caused by a number of factors, including excess oil, retention hyperkeratosis, and sebaceous filaments.

The *pilosebaceous unit* (py-loh-see-BAY-shus unit) is the term for the entire follicle that includes the hair shaft, sebaceous gland, and the sebaceous duct or canal to the surface. The hairless follicle (with attached sebaceous glands) is the main follicle involved in acne (Figure 11–31).

**Retention hyperkeratosis** (ree-TEN-shun hy-pur-kair-uh-TOH-sis) is a hereditary factor in which dead skin cells build up because they do not shed from the follicles as they do on normal skin. Additionally,



▲ Figure 11–30  
Acne.

excessive sebum production can overtax the sebaceous follicles and cause further cell buildup. Sebum mixed with cells in the follicle become comedos (plugs in the follicles). Consequently, open and closed comedones are formed. While not inflamed, these comedones are the beginning of acne problems if they are not treated with proper skin care to alleviate the impaction. Another reason follicles get clogged is that the opening, or ostium (AHS-tee-um), of the follicle may be too small to let impactions out.

**Sebaceous filaments**, similar to open comedones, are mainly small, solidified impactions of oil without the cell matter. These filaments also block the follicle and can cause an acne breakout. They are often found on the nose.

### Bacteria

Bacteria in the follicles are anaerobic. This means bacteria cannot live in the presence of oxygen. When follicles are blocked with sebum and dead skin buildup, oxygen cannot reach the bottom of the follicle. This results in excessive *P. bacterium* (*propionibacterium*) proliferation.

Sebum can irritate follicles and cause inflammation. As bacteria and inflammation grow, pressure is exerted on the follicle wall. If the wall ruptures, it becomes infected and debris spills out into the dermis. Redness and inflammation occur when a foreign object is detected in the skin, and white blood cells move in to fight the infection. Papules are red, inflamed lesions caused by this process. Papules may become more infected and pus develops. These infected papules become pustules and are filled with fluid from the dead white blood cells that fought the infection.

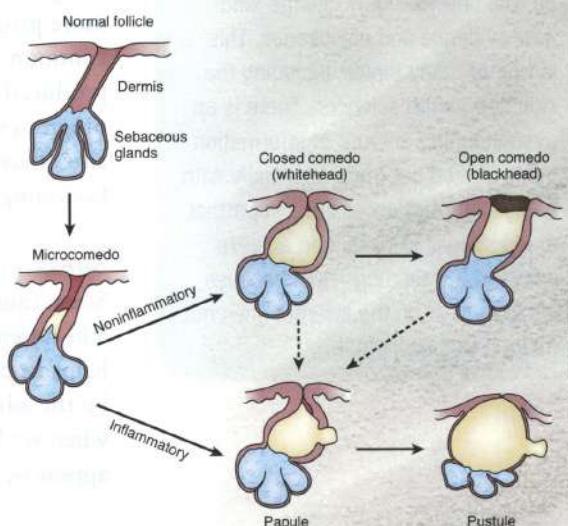
Cysts are nodules made up of deep pockets of infection. Skin forms hardened tissue around the infection to stop the spread of bacteria, which can lead to both depressed and raised scars from damage to the dermal tissue. Because it is in the dermis, this variety of acne—called *cystic acne*—can be treated only by a physician.

## Acne Triggers

Hormonal changes, stress, products, and certain foods may aggravate acne. Climate, sun, friction, and medications also trigger skin flare-ups.

### Hormones

Male hormones, known as *androgens* (AN-droh-jins), stimulate sebaceous glands. High levels of the male hormone testosterone (tes-TOSS-tur-own) cause an increase in oil production, which leads to oily skin and possible acne. These hormones increase during puberty, when teen acne is first evident. In females, acne is not as severe because there is less testosterone production.



▲ Figure 11–31  
Acne and sebaceous follicles.

© Milady, a part of Cengage Learning

## FOCUS ON

### Scientific Research

When researching topics, keep an open mind and determine the reliability of the source providing the information. What is found to be true one year may change with new evidence and discoveries. This is true of many topics, including the skin and health sciences. There is an overwhelming amount of information being shared out there especially with today's Internet access. It's important to dig deeper to verify and analyze what we are reading—just because it's in print or on the Internet does not make it true or factual.

Adult acne is more common in females for various reasons. Adrenal glands responding to stress produce extra hormones. Hormonal fluctuations from birth control pills, premenstrual changes, pregnancy, and menopause can all lead to acne inflammations in women. Hormonal acne is often seen on the chin.

Hormones during premenstrual cycles cause water retention, consequently swelling the epidermis and blocking pilosebaceous ducts (oil gland ducts). In the first trimester of pregnancy, women have more progesterone that converts to testosterone, making breakouts common. Estrogenic hormones (estrogen, progesterone, etc.) are produced from androgens. Changes are noticeable as the pregnancy progresses. Hormones also change with the seasons, and skin is also affected by the climate in other ways. Hormonal problems are becoming more evident in the effects they have on the skin.

### Stress

Stress causes hormonal fluctuations and increased sebum production. The adrenal gland responds to stress and secretes adrenalin, which helps us cope with stressful events. Male hormones are also produced by the adrenal gland and stimulate the sebaceous gland. Unfortunately, when we have a big event and want to look our best, blemishes may appear because of the increased stress level and sebum production.

### Cosmetics and Products

Certain ingredients in products can aggravate acne. Fatty ingredients such as waxes and some oils can clog or irritate follicles. These **comedogenic** ingredients can block follicles, which causes cell buildup, resulting in comedones. *Acnegenic* products also cause acne inflammation. Products rich in emollients and occlusive products are too heavy for problem skin types. Moisturizers and sunscreens should be lighter formulas such as oil-in-water (O/W) emulsions, not water-in-oil (W/O) emulsions. Many makeup products are comedogenic, especially foundations and powders that are made with solids and fatty ingredients. Other products for hair and skin can also trigger or irritate acne. Products are discussed thoroughly in Chapter 13, Skin Care Products: Chemistry, Ingredients, and Selection.

### Foods

Foods blamed for triggering acne may not affect it directly, although our eating habits do affect our body's functions. Excessive iodides in salt, MSG, kelp, cheese, processed and packaged foods (especially fast foods), and minerals obtained from an ocean source found in vitamins can all irritate acne. The excess iodides are excreted through pores

and are thought to irritate them. Eating fresh vegetables and fruits and increasing water intake seems to help those with acne experience fewer breakouts. Different scientific opinions exist about how our diet affects acne. Ongoing research is progressing regarding this subject.

#### Other Irritations

Pressure or friction from rubbing or touching the face, phone use, or wearing hats can contribute to *acne mechanica* breakouts. Pillows or makeup brushes can also transfer bacteria to the face, so it's important to wash them often. Keeping hands and items that touch the face clean can help reduce breakouts.

Prolonged pressure or heat will likely cause skin problems. Swelling caused by heat, sweating or a moist, humid climate will clog and irritate follicles. Various drugs will also affect the body and are known to irritate skin. **L07**

#### Grades of Acne

Acne is broken down into four grades (Table 11–2). The number of lesions, comedones, papules, pustules, or cysts present determines the severity of the acne. **L08**

#### Treating Acne

There are many ways to help clients control acne. Good skin care treatments, products, and proper nutrition will help with skin problems. Estheticians can educate clients in caring for their skin and what causes acne flare-ups. Ingredients that can cause acne, acne treatments, and extractions are covered in Chapter 15, Facial Treatments.

Physicians may prescribe medications to treat Grade III and IV acne. A few of the acne medications are listed here in Table 11–3, page 275. Ask a physician for more information on acne medications and the potential side effects of the drugs.

GRADES OF ACNE	
GRADE I	Minor breakouts, mostly open comedones, some closed comedones, and a few papules (Figure 11–32).
GRADE II	Many closed comedones, more open comedones, and occasional papules and pustules (Figure 11–33).
GRADE III	Red and inflamed, many comedones, papules, and pustules (Figure 11–34).
GRADE IV	Cystic acne. Cysts with comedones, papules, pustules, and inflammation are present (Figure 11–35). Scar formation from tissue damage is common.

▲ Table 11–2 Grades of Acne.



▲ Figure 11–32  
Grade I acne.

Courtesy of www.dermnet.com.



▲ Figure 11–33  
Grade II acne is characterized by many closed comedones and is difficult to treat.

Courtesy of www.dermnet.com.



▲ Figure 11–34  
Grade III acne.

Courtesy of www.dermnet.com.



▲ Figure 11–35  
Grade IV acne.

Courtesy of www.dermnet.com.

## COMMON MEDICATIONS USED IN THE TREATMENT OF ACNE

DRUG	ACTIONS	POTENTIAL SIDE EFFECTS
Adapalene (Differin®)	A topical peeling agent similar to retinoic acid. May be less irritating than tretinoin.	Drying, redness, and irritation; photosensitivity.
Azelaic acid (Azelex®)	A topical acidic agent that flushes out follicles.	Drying, redness, and irritation; photosensitivity.
Clindamycin	Topical antibiotic; kills bacteria.	Very drying.
Isotretinoin (Accutane®)	An oral medication similar to retinoic acid; used for severe acne.  Pulled from the U.S. market in 2009 for extreme side effects, but is still prescribed. Similar products may be harmful.	Severe dryness, birth defects, other health problems; possible depression.
Tazarotene (Tazorac®)	Another retinoid; a topical peeling agent that may be less irritating than tretinoin.	Drying, redness, and irritation; photosensitivity.
Tretinoin (Retin-A®)	A topical vitamin A acid. A strong peeling agent that is drying and also flushes out follicles.	Very drying, causes redness and irritation; photosensitivity.

▲ Table 11–3 Common Medications Used in the Treatment of Acne.

© Milady, a part of Cengage Learning.

### ACTIVITY

With a partner, examine each other's face for skin conditions and disorders. See if you can properly identify them. Don't be shy: everyone has skin issues and it's important to know what they are. It is your job now to care for the skin. Ask your instructor to guide you on this as it can be tricky. Once you learn skin analysis and use a magnifying lamp further into your studies, it will be easier to identify these. Never guess on identifying a client's skin conditions. It's okay to say you are not sure what it is you are looking at.  L09  L010

© Kimmar, 2011; used under license from Shutterstock.com.

# Review Questions

1. Name and define the primary lesions.
2. Name and define the secondary lesions.
3. What is a comedone?
4. Name and define the sebaceous gland disorders.
5. List the inflammations of the skin.
6. What is contact dermatitis?
7. What is rosacea?
8. List three disorders characterized by hyperpigmentation.
9. What are four types of hypertrophies?
10. Name and define six of the contagious diseases.
11. Do contagious diseases contraindicate working on a client?
12. Describe the differences between the three types of skin cancer.
13. Explain the checklist system used to identify skin cancers.
14. What are the main causes of acne?
15. What may trigger an acne flare-up?
16. Describe the four grades of acne.
17. List three potential side effects of acne drugs.

# Glossary

<b>acne</b>	Chronic inflammatory skin disorder of the sebaceous glands that is characterized by comedones and blemishes; commonly known as <i>acne simplex</i> or <i>acne vulgaris</i> .
<b>acne excoriee</b>	Disorder where clients purposely scrape off acne lesions, causing scarring and discoloration.
<b>actinic keratoses</b>	Pink or flesh-colored precancerous lesions that feel sharp or rough; resulting from sun damage.
<b>albinism</b>	Absence of melanin pigment in the body, including skin, hair, and eyes; the technical term for albinism is <i>congenital leukoderma</i> or <i>congenital hypopigmentation</i> .
<b>anhidrosis</b>	Deficiency in perspiration, often a result of a fever or skin disease, that requires medical treatment.
<b>asteatosis</b>	Dry, scaly skin from sebum deficiency, which can be due to aging, body disorders, alkalies or harsh soaps, or cold exposure.
<b>atopic dermatitis</b>	Excess inflammation; dry skin, redness, and itching from allergies and irritants.
<b>basal cell carcinoma</b>	Most common and the least severe type of skin cancer, which often appears as light, pearly nodules; characteristics include sores, reddish patches, or a smooth growth with an elevated border.
<b>bromhidrosis</b>	Foul-smelling perspiration, usually in the armpits or on the feet.

# Glossary

<b>bulla (plural: bullae)</b>	Large blister containing watery fluid; similar to a vesicle, but larger.
<b>carbuncle</b>	Cluster of boils; large inflammation of the subcutaneous tissue caused by staphylococci bacterium; similar to a furuncle (boil) but larger.
<b>chloasma</b>	Also known as <i>liver spots</i> ; condition characterized by hyperpigmentation on the skin in spots that are not elevated.
<b>comedo (plural: comedones)</b>	Mass of hardened sebum and skin cells in a hair follicle; an open comedo or blackhead when open and exposed to oxygen. Closed comedones are whiteheads that are blocked and do not have a follicular opening.
<b>comedogenic</b>	Tendency for an ingredient to clog follicles and cause a buildup of dead skin cells, resulting in comedones.
<b>conjunctivitis</b>	Also known as <i>pink eye</i> ; very contagious infection of the mucous membranes around the eye; chemical, bacterial, or viral causes.
<b>contact dermatitis</b>	Inflammatory skin condition caused by contact with a substance or chemical. Occupational disorders from ingredients in cosmetics and chemical solutions can cause contact dermatitis (a.k.a. dermatitis venenata). Allergic contact dermatitis is from exposure to allergens; irritant contact dermatitis is from exposure to irritants.
<b>crust</b>	Dead cells form over a wound or blemish while it is healing, resulting in an accumulation of sebum and pus, sometimes mixed with epidermal material. An example is the scab on a sore.
<b>cyst</b>	Closed, abnormally developed sac containing fluid, infection, or other matter above or below the skin.
<b>dermatitis</b>	Any inflammatory condition of the skin; various forms of lesions such as eczema, vesicles, or papules; the three main categories are atopic, contact, and seborrheic dermatitis.
<b>dermatologist</b>	Physician who specializes in diseases and disorders of the skin, hair, and nails.
<b>dermatology</b>	Medical branch of science that deals with the study of skin and its nature, structure, functions, diseases, and treatment.
<b>eczema</b>	Inflammatory, painful itching disease of the skin, acute or chronic in nature, with dry or moist lesions. This condition should be referred to a physician. <i>Seborrheic dermatitis</i> , mainly affecting oily areas, is a common form of eczema.
<b>edema</b>	Swelling caused by a fluid imbalance in cells or a response to injury or infection.
<b>erythema</b>	Redness caused by inflammation; a red lesion is erythemic.
<b>excoriation</b>	Skin sore or abrasion produced by scratching or scraping.
<b>fissure</b>	Crack in the skin that penetrates the dermis. Chapped lips or hands are fissures.
<b>folliculitis</b>	Also known as <i>folliculitis barbae</i> , <i>sycosis barbae</i> , or <i>barber's itch</i> . Inflammation of the hair follicles caused by a bacterial infection from ingrown hairs. The cause is typically from ingrown hairs due to shaving or other epilation methods.
<b>furuncle</b>	Also known as <i>boil</i> ; a subcutaneous abscess filled with pus; furuncles are caused by bacteria in the glands or hair follicles.

# Glossary

<b>herpes simplex virus 1</b>	Strain of the herpes virus that causes fever blisters or cold sores; it is a recurring, contagious viral infection consisting of a vesicle or group of vesicles on a red, swollen base. The blisters usually appear on the lips or nostrils.
<b>herpes simplex virus 2</b>	Strain of the herpes virus that infects the genitals.
<b>herpes zoster</b>	Also known as <i>shingles</i> ; a painful viral infection skin condition from the chickenpox virus; characterized by groups of blisters that form a rash in a ring or line.
<b>hyperhidrosis</b>	Excessive perspiration caused by heat, genetics, medications, or medical conditions; also called <i>diaphoresis</i> .
<b>hyperkeratosis</b>	Thickening of the skin caused by a mass of keratinized cells (keratinocytes).
<b>hyperpigmentation</b>	Over-production of pigment.
<b>hypertrophy</b>	Abnormal growth of the skin; many are benign, or harmless.
<b>hypopigmentation</b>	Absence of pigment, resulting in light or white splotches.
<b>impetigo</b>	A contagious skin infection caused by staphylococcal or streptococcal bacteria, characterized by clusters of small blisters or crusty lesions and often occurring in children.
<b>keloid</b>	Thick scar resulting from excessive growth of fibrous tissue (collagen).
<b>keratoma</b>	Acquired, superficial, thickened patch of epidermis. A callus is a keratoma caused by continued, repeated pressure or friction on any part of the skin, especially the hands and feet.
<b>keratosis (plural: keratoses)</b>	Abnormally thick buildup of cells.
<b>keratosis pilaris</b>	Redness and bumpiness common on the cheeks or upper arms; it is caused by blocked hair follicles. The patches of irritation are accompanied by a rough texture and small pinpoint white milia.
<b>lentigo</b>	Freckles; small yellow-brown colored spots. Lentigenes that result from sunlight exposure are actinic, or solar, lentigenes. Patches are referred to as <i>large macules</i> .
<b>lesions</b>	Mark, wound, or abnormality; structural changes in tissues caused by damage or injury.
<b>leukoderma</b>	Skin disorder characterized by light, abnormal patches; congenital, acquired, post-inflammatory, or other causes that destroy pigment-producing cells. Vitiligo and albinism are leukodermas.
<b>macule (plural: maculae)</b>	Flat spot or discoloration on the skin, such as a freckle. Macules are neither raised nor sunken.
<b>malignant melanoma</b>	Most serious form of skin cancer as it can spread quickly (metastasize). Black or dark patches on the skin are usually uneven in texture, jagged, or raised. Melanomas may have surface crust or bleed.
<b>milia</b>	Epidermal cysts; small, firm papules with no visible opening; whitish, pearl-like masses of sebum and dead cells under the skin. Milia are more common in dry skin types and may form after skin trauma, such as a laser resurfacing.

# Glossary

<b>miliaria rubra</b>	Also known as <i>prickly heat</i> ; acute inflammatory disorder of the sweat glands resulting in the eruption of red vesicles and burning, itching skin from excessive heat exposure.
<b>mole</b>	Pigmented nevus; a brownish spot ranging in color from tan to bluish black. Some are flat, resembling freckles; others are raised and darker.
<b>nevus</b>	Also known as <i>birthmark</i> ; malformation of the skin due to abnormal pigmentation or dilated capillaries.
<b>nodules</b>	These are often referred to as tumors, but these are smaller bumps caused by conditions such as scar tissue, fatty deposits, or infections.
<b>papule</b>	Pimple; small elevation on the skin that contains no fluid but may develop pus.
<b>perioral dermatitis</b>	Acne-like condition around the mouth. These are mainly small clusters of papules that could be caused by toothpaste or products used on the face.
<b>primary lesions</b>	Primary lesions are characterized by flat, nonpalpable changes in skin color such as macules or patches, or an elevation formed by fluid in a cavity, such as vesicles, bullae, or pustules.
<b>pruritis</b>	Persistent itching.
<b>pseudofolliculitis</b>	Also known as <i>razor bumps</i> ; resembles folliculitis without the pus or infection.
<b>psoriasis</b>	Skin disease characterized by red patches covered with white-silver scales. It is caused by an overproliferation of skin cells that replicate too fast. Immune dysfunction could be the cause. Psoriasis is usually found in patches on the scalp, elbows, knees, chest, and lower back.
<b>pustule</b>	Raised, inflamed papule with a white or yellow center containing pus in the top of the lesion referred to as the head of the pimple.
<b>retention hyperkeratosis</b>	Hereditary factor in which dead skin cells build up and do not shed from the follicles as they do on normal skin.
<b>scale</b>	Flaky skin cells; any thin plate of epidermal flakes, dry or oily. An example is abnormal or excessive dandruff.
<b>scar</b>	Light-colored, slightly raised mark on the skin formed after an injury or lesion of the skin has healed up. The tissue hardens to heal the injury. Elevated scars are hypertrophic; a keloid is a hypertrophic (abnormal) scar.
<b>sebaceous filaments</b>	Similar to open comedones, these are mainly solidified impactions of oil without the cell matter.
<b>sebaceous hyperplasia</b>	Benign lesions frequently seen in oilier areas of the face. An overgrowth of the sebaceous gland, they appear similar to open comedones; often doughnut-shaped, with sebaceous material in the center.
<b>seborrhea</b>	Severe oiliness of the skin; an abnormal secretion from the sebaceous glands.
<b>seborrheic dermatitis</b>	Common form of eczema; mainly affects oily areas; characterized by inflammation, scaling, and/or itching.
<b>secondary lesions</b>	Skin damage, developed in the later stages of disease, that changes the structure of tissues or organs.

# Glossary

<b>skin tag</b>	Small, benign outgrowths or extensions of the skin that look like flaps; common under the arms or on the neck.
<b>squamous cell carcinoma</b>	Type of skin cancer more serious than basal cell carcinoma; characterized by scaly, red or pink papules or nodules; also appear as open sores or crusty areas; can grow and spread in the body.
<b>stain</b>	Brown or wine-colored discoloration with a circular and/or irregular shape. Stains occur after certain diseases, or after moles, freckles, or liver spots disappear. A port wine stain is a birthmark, which is a vascular type of nevus.
<b>steatoma</b>	Sebaceous cyst or subcutaneous tumor filled with sebum; ranges in size from a pea to an orange. It usually appears on the scalp, neck, and back; also called a wen.
<b>tan</b>	Increase in pigmentation due to the melanin production that results from exposure to UV radiation; visible skin damage. Melanin is designed to help protect the skin from the sun's UV radiation.
<b>tinea</b>	A contagious condition caused by fungal infection and not a parasite; characterized by itching, scales, and, sometimes, painful lesions.
<b>tinea corporis</b>	Also known as <i>ringworm</i> ; a contagious infection that forms a ringed, red pattern with elevated edges.
<b>tubercle</b>	Abnormal rounded, solid lump; larger than a papule.
<b>tumor</b>	Large nodule; an abnormal cell mass resulting from excessive cell multiplication and varying in size, shape, and color.
<b>ulcer</b>	Open lesion on the skin or mucous membrane of the body, accompanied by pus and loss of skin depth. A deep erosion; a depression in the skin, normally due to infection or cancer.
<b>urticaria</b>	Also known as <i>hives</i> ; caused by an allergic reaction from the body's histamine production.
<b>varicose veins</b>	Vascular lesions; dilated and twisted veins, most commonly in the legs.
<b>vasodilation</b>	Vascular dilation of the blood vessels.
<b>verruca</b>	Also known as <i>wart</i> ; hypertrophy of the papillae and epidermis caused by a virus. It is infectious and contagious.
<b>vesicle</b>	Small blister or sac containing clear fluid. Poison ivy and poison oak produce vesicles.
<b>vitiligo</b>	Pigmentation disease characterized by white patches on the skin from lack of pigment cells; sunlight makes it worse.
<b>wheal</b>	Itchy, swollen lesion caused by a blow, insect bite, skin allergy reaction, or stings. Hives and mosquito bites are wheals. Hives (urticaria) can be caused by exposure to allergens used in products.