

Esthetician Cheat Sheet

SCIENTIFIC CONCEPTS

Skin Composition

Epidermis - The outermost and thinnest layer of the skin. Contains no blood vessels but many nerve endings. It is made up of five layers:

- Stratum corneum - the layer we see when we look at the skin; made up of keratin and lipids which combine to produce a protective, water-resistant layer.
- Stratum lucidum - clear, transparent layer under the stratum corneum.
- Stratum granulosum - composed of cells that look like granules and are filled with keratin.
- Stratum spinosum - the spiny layer where the process of skin cell shedding begins.
- Stratum germinativum - the deepest layer of the epidermis; responsible for the growth of the epidermis; this is where melanin is produced.

Dermis - The underlying or inner layer of the skin. Is highly sensitive, and 25 times thicker than the epidermis. Contains blood vessels, lymph vessels, nerves, sudoriferous glands, sebaceous glands, hair follicles, and arrector pili muscles. It is made up of two layers:

- Papillary layer - the outer layer of the dermis.
- Reticular layer - the deeper layer that supplies the skin with all of its oxygen and nutrients.

Subcutaneous Tissue - The fatty tissue found below the dermis. Gives smoothness and contour to the body. Contains fat used for energy and as a protective cushion to the skin. Varies in thickness due to age, gender, and general health.

Histology

Four Basic Tissue Types

- **Epithelial Tissue** - Cells attached to one another to form an uninterrupted layer of cells that separates the underlying tissues from the outside world. Provides the essential functions of protection, containment, absorption, and secretion.
- **Connective tissue** - Several cell types and extracellular products which, together, provide essential functions of mechanical reinforcement, immune surveillance, transport/diffusion of nutrients and wastes, and energy storage.
- **Nervous Tissue** - Highly specialized nerve cells and support cells. Stimulates muscle contraction, creates an awareness of the environment, and plays a major role in emotions, memory, and reasoning.
- **Muscle tissue** - Highly cellular and is well supplied with blood vessels. Has the special ability to shorten or contract in order to produce movement of the body parts.

The epithelium is always supported by connective tissue. Peripheral nerves travel within connective tissue. Muscle tissue is enmeshed by connective tissue. Blood vessels travel within connective tissue.

Structure of the Hair

Hair root: located below the epidermis.

- **Hair follicle:** tube-like depression or pocket in the skin or scalp that contains the hair root.
- **Hair bulb:** the lowest part of a strand of hair; thickened, club-shaped.
- **Dermal papilla:** small, cone-shaped elevation located at the base of the hair follicle that fits into the hair bulb.
- **Arrector pili muscle:** small, involuntary muscle in the base of the hair follicle.
- **Sebaceous glands:** oil glands in the skin that are connected to the hair follicles; secrete sebum.

Hair shaft: located above the epidermis

- **Hair cuticle:** the outermost layer of hair; consists of a single, overlapping layer of transparent, scale-like cells; protects the inner structure of hair; creates shine and smoothness.
- **Cortex:** the middle layer of the hair; 90% of total hair weight comes from the cortex; elasticity and color are the result of protein in the cortex.
- **Medulla:** the innermost layer of hair; generally only thick, coarse hair contains a medulla.

Growth Cycles

- **Anagen phase:** new hair is produced; new cells are actively manufactured in the follicle; hair cells grow faster in this phase than any other normal cell in the body.
- **Catagen phase:** brief transition period between the growth and the resting phases of a hair follicle; signals the end of the anagen phase; lasts from one to two weeks.
- **Telogen Phase:** final phase in the cycle; lasts about three to six months.

Basic chemistry

Solutions

Acidic: an **acid** is a substance that donates hydrogen ions - When an acid is dissolved in water, the balance between hydrogen ions and hydroxide ions is shifted.

- tightens integumentary tissues, constricts the body's blood network, and eliminates water

Alkaline: a **base** is a substance that accepts hydrogen ions - When a base is dissolved in water, the balance between hydrogen ions and hydroxide ions shifts the opposite way.

- soften and expand tissues, dilate or open the blood network, break down oil, and eliminate water

Safety practices

Methods of decontamination:

- **Clean and then disinfect with an appropriate EPA-registered disinfectant.**
 - For hands: use soap and water to clean your hands (removes many more pathogens from your skin).
 - For tools: wash them with soap and warm water, scrubbing with a clean, disinfected nail brush; use an ultrasonic unit; use a cleaning solvent.
 - Use EPA-approved disinfectant on nonliving surfaces (not on skin).
- **Clean and then sterilize.**
 - Sterilization: kills all microbial life, including spores.
 - Autoclave: high-pressure steam equipment.

SKIN CARE AND SERVICES

Skin Analysis

Fitzpatrick skin phototype

- I** - Pale white skin, blue/green eyes, blond/red hair. Always burns, and does not tan.
- II** - Fair skin, blue eyes. Burns easily tans poorly.
- III** - Darker white skin. Tans after the initial burn.
- IV** - Light brown skin. Burns minimally, tans easily.
- V** - Brown skin. Rarely burns, tans darkly easily.
- VI** - Dark brown skin. Never burns, always tans darkly.

Contraindications for skin services

▸ Microdermabrasion:

- active infection of any type
- active acne Sunburn Recent use of topical agents such as glycolic acids, alpha hydroxy acids, and Retin-A
- eczema
- dermatitis
- skin cancer
- vascular lesions
- oral blood thinner medications
- rosacea
- family history of hypertrophic scarring or keloid formation

▸ Dermanplaning:

- current inflamed acne lesions
- skin cancer
- active cold sores
- uncontrolled diabetes
- dermatitis
- open skin lesions
- use of Accutane currently or in the past six months
- the use of prescription retinol within a week of treatment

▸ Chemical peel:

- recent cosmetic surgery, laser resurfacing, deep or medium depth chemical peels, or dermabrasion
- severe rosacea or acne
- easily scars or has hyper-pigmentation tendencies
- breast-feeding
- sunburn or irritated skin
- open sores or lesions
- infectious disease
- active Herpes simplex
- high blood pressure
- deficient immune system

Infection Control and Protocols

Setup and Client Protection

- Disinfect the work area or place a protective covering over it.
- Apply body and hair drapes.
- Re-sanitize hands after touching the client's hair.

Cleansing and Steaming the Face

- Cleanse the client's lips and eye areas.
- Distribute cleanser over the entire face safely.

Massaging the Face

- Use infection control techniques while completing this procedure.
- Dispose of soiled materials using the proper infection control technique.

Manual Extraction on the Forehead

- Apply eye protection to the client.
- Wear gloves.
- Maintain work area in a sanitary way, and dispose of soiled items using infection control techniques.

Hair Removal of the Eyebrows

- Wear gloves.
- Use implements that have been disinfected (disposable implements that are assumed to be disinfected should still be in their original packaging).
- Apply antiseptic to the eyebrow area safely – before and after performing this procedure.

Facial Mask

- Remove the mask product using the proper infection control technique.
- Apply mask product safely.
- Remove the mask product and apply toner or astringent, and moisturizer safely.
- Dispose of soiled items appropriately.

Hair Removal with Hard Wax on Upper Lip Area

- Wear gloves.
- Apply antiseptic to the client's upper lip area before and after this procedure.
- Use implements that have been disinfected (disposable implements that are assumed to be disinfected should still be in their original packaging).
- Dispose of soiled items appropriately and use proper infection control procedures throughout the procedure.