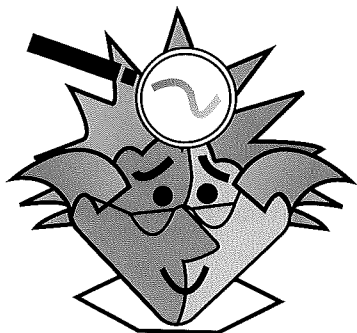


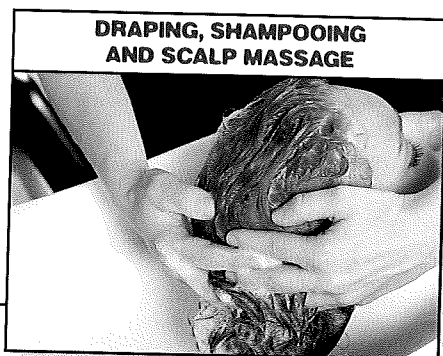
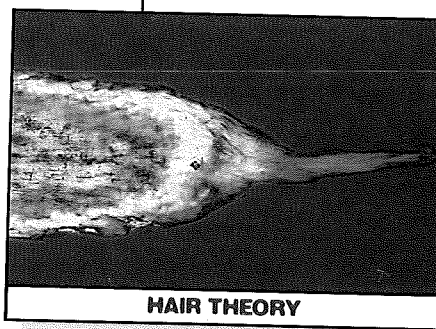
# Chapter 7

## TRICHOLOGY

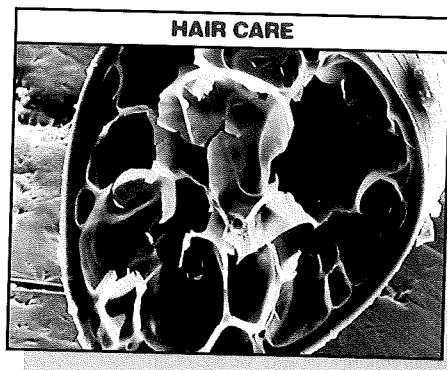


After studying this chapter you will be able to ...

1. Define the theory of hair, including formation, growth, structure, behavior and color.



3. Explain and demonstrate proper draping, shampooing and scalp massage services.



2. Recognize how to care for the hair by doing an evaluation for common hair disorders, including hair loss.

You're moving closer to your goal every minute. If you skim through its photos, this chapter probably looks more like what you expected in a cosmetology textbook. Isn't that a picture of a shampoo bowl right on this page? I bet your fingers are just itching to begin their skillful work in shampooing and scalp massage. This chapter on hair theory and care definitely holds a key for you into the world for which you've been waiting.

TRICHO (hair) + OLOGY (the study of) = TRICHOLOGY

**You will be more successful with the services you perform if you know the composition, structure and behavior of hair, how to evaluate it for product selection and how to properly drape and shampoo the client and give a scalp massage. Clients may choose you specifically for the wonderful shampoo and massage you offer.**

Nothing equals the security of being able to put yourself in good hands. The client who trusts a stylist can relax and enjoy the opening part of a hair care service. The VALUE your client perceives in your skill returns to you in customer loyalty.

**The quality of your salon services depends on your knowledge of all phases of hair growth, of common hair and scalp disorders and of causes and treatments of hair loss as well as on your attentiveness and skill during the draping, shampoo and scalp massage.**

My PLAN for you in this chapter is very straight forward. First you learn the essentials of hair theory and then of hair care. After that you begin to put this learning into practice through several simple procedures.

## **HAIR THEORY**

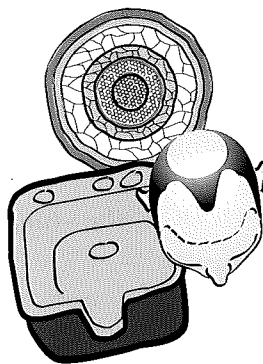
- Hair Bulb Formation
- Hair Growth
- Hair Structure and Behavior
- Natural Hair Color

## **HAIR CARE**

- Hair Evaluation
- Common Hair Conditions
- Common Scalp Conditions
- Hair Loss

## **DRAPING, SHAMPOOING AND SCALP MASSAGE**

- Draping Theory
- Shampooing and Conditioning Theory
- Scalp Massage Theory
- Draping, Shampooing and Scalp Massage Essentials
- Infection Control and Safety
- Basic Draping, Shampooing and Conditioning
- Basic Scalp Massage

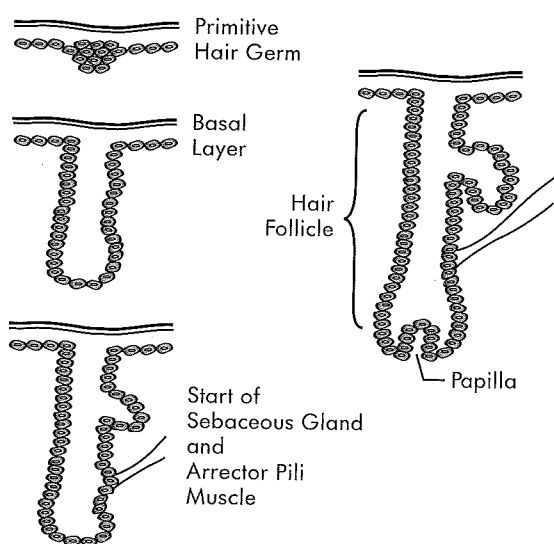


# HAIR THEORY

Hair, you cut it and it grows again! It becomes damaged either by nature or improper care and it can be reconditioned. Its color can be changed and it can take on straight, wavy or curly shapes. The main purposes of hair are protection from heat, cold and injury, as well as adornment. But have you ever wondered what makes all this possible? The answers lie in the marvelous, mysterious biology of living matter or, for your purposes of study, *Trichology*, the technical name for the study of hair.

Living matter. What does it mean to say that something is alive? By definition, to say that matter has life means that it grows, it can reproduce, and it responds to stimulation. That is, it can act. It can react.

Is hair alive? Even though hair is primarily protein and protein is the basis for all living matter, **only the cells of the hair bulb are alive. The hair fiber or strand itself is not alive.**



## Hair Bulb Formation

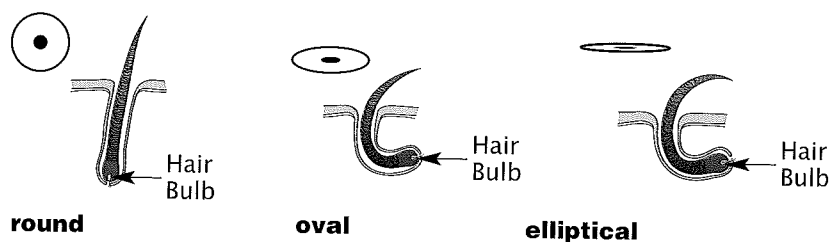
To understand more about hair, you need to know how the hair bulb is formed. In fetal life, the hair follicle forms from a cluster of cells in the upper layer of skin, technically referred to as the *basal layer* of the *epidermis*. This cluster of cells, called the *primitive hair germ*, needs nourishment to grow into a fully developed hair follicle. To get nourishment, it works its way down into the lower (dermal) layer of the skin. As it does, the cell cluster pulls the upper layer down with it, creating a **follicle** or tube-like “pocket” called the **root sheath**, out of which the hair will grow.

The shape of this follicle will determine the shape (round, oval, elliptical, etc.) of the hair shaft as it grows from the follicle. Since the hair shaft actually grows out of the hair follicle, the diameter of the hair fiber will be the same as the diameter of the inside of the follicle.

In straight or wavy hair, hair follicles are more or less vertical to the surface of the scalp, with a slight “tilt.” The angle of the hair follicle determines the natural flow or wave pattern of the hair. The follicle in straight or wavy hair is typically round or oval.

### Two Primary Parts of Hair

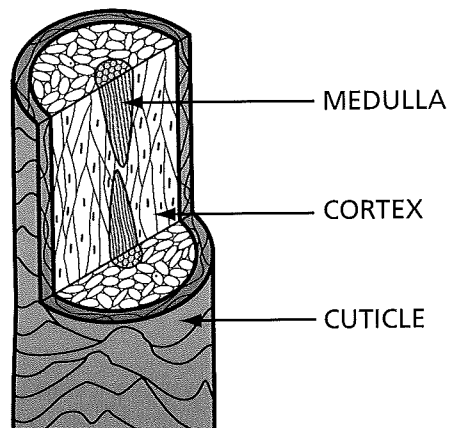
The **hair root** is the portion of hair that is inside the hair follicle *under* the skin's surface. The **hair fiber**, sometimes referred to as the *hair shaft* or *strand*, is the portion of the hair that extends above the skin's surface.



In hair that is curly/kinky, the hair follicles grow from the scalp at a much stronger angle. The follicle is almost parallel to the surface of the scalp. Furthermore, the hair bulb itself is nearly doubled back over the follicle in a growth shape resembling a golf club. The hair follicle that produces a curly/kinky hair has a flattened, elliptical shape.

## Hair Growth

As this primitive hair germ continues its growth downward into the dermis and joins a small number of dermal cells, these cells eventually become the dermal **papilla**. The papilla is filled with capillaries (small blood vessels) that supply nourishment to the cells



around it, called germinal matrix cells. The germinal matrix is the area of the bulb where cell division (mitosis) takes place. These germinal matrix cells produce the cells that ultimately *keratinize* (*harden*) and form the three major layers of the hair:

1. **Cuticle** - the outer covering of the hair shaft made up of overlapping layers of transparent scales
2. **Cortex** - the second layer consisting of unique protein structures (gives hair most of its pigment and strength [elasticity])
3. **Medulla** - the central core of the hair shaft, also called the pith or marrow (often absent in fine or very fine hair)



"Hair pulled out from the roots will grow again unless the papilla (origin of hair) is destroyed."

Attached to the side of the root sheath are bulges. These bulges are the beginnings of the sebaceous glands. The sebaceous, or oil, glands produce sebum (oil) and send it up through the hair follicles to the surface of the skin to prevent the hair and skin from becoming too dry. Sebum mixes with the body's perspiration to form the "acid mantle." The acid mantle is important because it protects the cuticle, or outer covering, of the hair fiber and maintains the acid balance of hair and skin.

The arrector pili muscle comes from cells in the dermis that attach to the follicle just below the sebaceous gland. This is the muscle that causes the hair to stand on end when a person is scared or cold. It also aids in the secretion of sebum from the sebaceous glands. The other end of the arrector pili muscle attaches to the dermis (or lower layer) just beneath the basal layer of the epidermis.

## Cells Form Parts of the Hair

As cells begin their journey upward through the hair follicle, they are separated into specific types. In other words, some cells will become cuticle scales, others will make up the cortex and others will

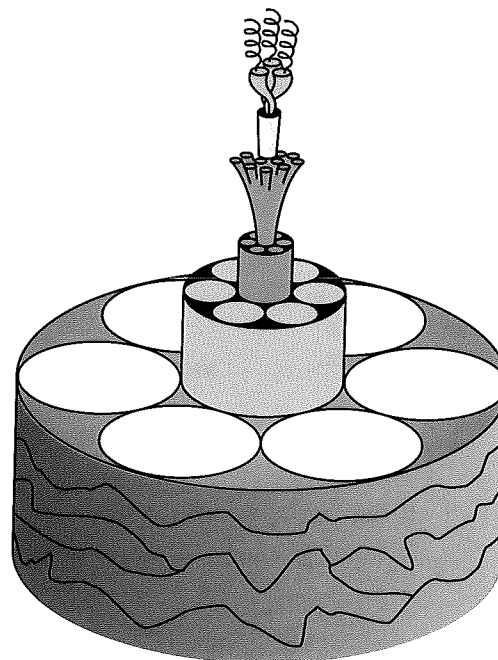


have the particular formation of medulla cells. The journey that began deep in the skin, then grew through the outer layers now becomes the visible hair fiber (shaft or strand). Another result of this process of traveling upward is keratinization. **Keratinization is a process whereby cells change their shape, dry out and form keratin protein.** Once keratinized, the cells that form the hair fiber or strand are no longer alive.

## Amino Acids = Protein = Hair

Hair is made up primarily of protein, which is made from the linking together of amino acids. The cortex of the hair is made of chains that take the shape of a helix or coil. These amino acid chains coil around each other and become protofibrils. Protofibrils then twist around each other to become microfibrils. Microfibrils follow the same process and become macrofibrils that also spiral together. This process, when complete, forms the cortex of the hair. The cortex is then covered with the cuticle scales, which also contain protein. This twisting gives hair the ability to stretch like a spring without breaking.

**The prefix PROTO means first, the prefix MICRO means small and the prefix MACRO means large. Other examples would be prototype, microscope and macrobiotics.**

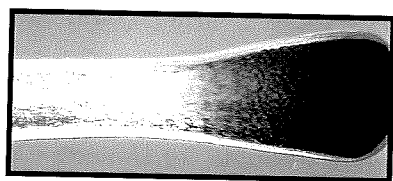


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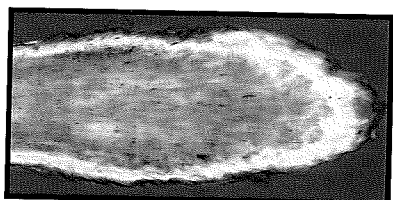
## Stages of Hair Growth

Genes determine the growing stages of the hair. There are three stages of hair growth:

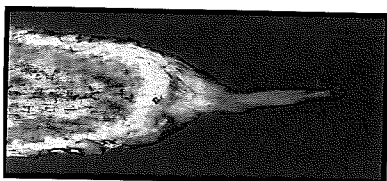
1. The **anagen or active growing stage**, during which time each hair bulb has an attached root sheath. On the average 90 percent of a person's hair is in this stage which lasts from two to six years. Hair color is darker during the anagen stage.
2. The **catagen, a brief transitional stage**, when all cell division stops. This stage lasts only a few weeks.
3. The **telogen or resting stage**, when each hair bulb has no attached root sheath. At this time the hair falls out. On the average 10 to 15 percent of hair is in the resting stage, which generally lasts 3-4 months. Eventually, cell division is again stimulated, producing new hair, and the growth cycle starts again.



ANAGEN



CATAGEN



TELOGEN

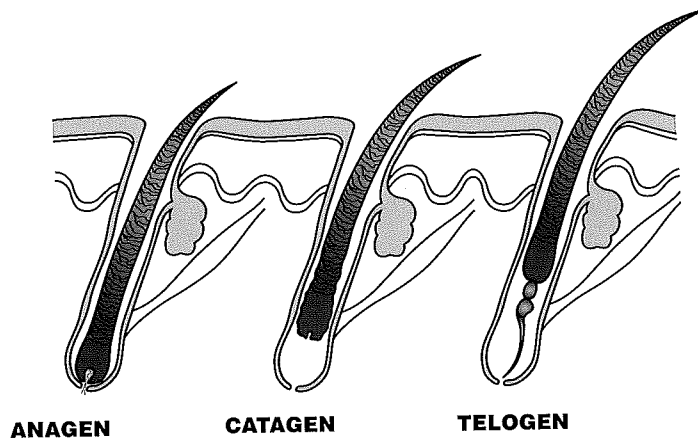
In humans, a mosaic pattern of hair growth occurs because each hair follicle has its own unique growing cycle. \* **Illness and lack of necessary vitamins and minerals can also affect hair and hair growth. In fact, anything that**



"In humans, the average rate of hair growth is 1/2" (1.25 cm) per month."

alters the physiological state of the body can affect the hair follicle and hair growth. Disease and medication can also affect hair growth by either stimulating the onset of the telogen phase or by causing the production of abnormal, brittle hairs. If a person has been ill or taking any medication, chemical services can damage hair that may be weak already.

Contrary to an old myth, hair does not grow after death of a human body. Hair never grows on palms, soles of feet, lips and eyelids.



Eyebrows and eyelashes are replaced every 4-5 months. Eyelashes are technically called cilia.

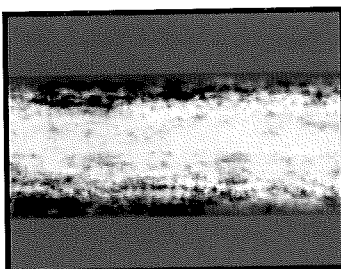
## Hair Structure and Behavior

If all hair is made up primarily of protein, then why is everyone's hair so different? Why does a shampoo that works well on one person's hair not work well on another's?

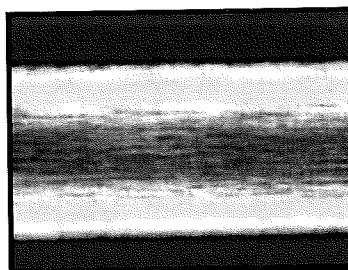
The answer lies in the physical structure of hair. There are three factors that affect the behavior of hair.

1. The first factor is **heredity**. The genes that each person inherits from his/her parents will determine many things about the makeup of the hair, such as its color, shape and diameter.
2. The second factor is the **environment** or weather. If it's rainy or humid, hair will absorb moisture from the air. This extra moisture will alter some of the bonds that give hair its shape and, depending on the type of hair, it may become either limp or frizzy. On the other hand, wind may dry out the hair and sun may damage it. Both of these weather conditions—unusually wet or dry—can cause a need for products that either take excess moisture out of the hair or put more moisture back in.
3. The third factor is the **products or appliances** used on the hair. For example, shampoos, conditioners, hair dryers, curling irons, perms, relaxers and hair color all affect the structural organization of the hair.

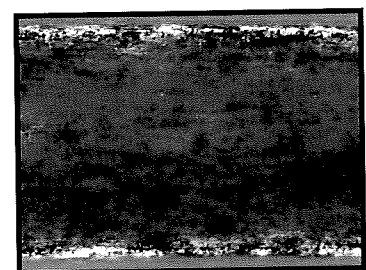
To better understand the differences in peoples' hair, you will need to take a closer look at hair's structural organization. The following series of slides taken of hair magnified hundreds of times show differences in diameter of hair.



FINE

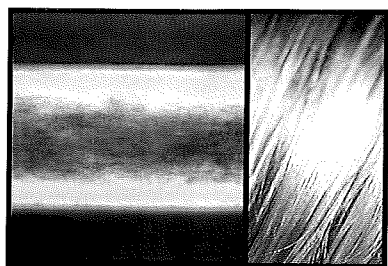


MEDIUM

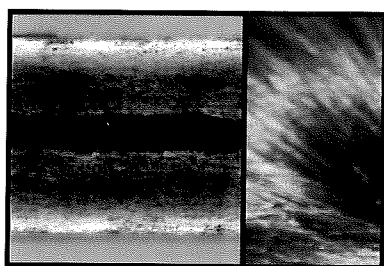


COARSE

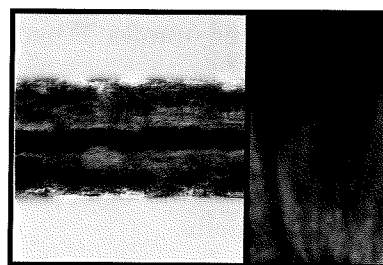
In the next series, observe the difference between Caucasian hair, Asian hair and Afro-centric hair. Notice that the structural organization of hair as shown by diameter and amount of pigment are very different among the three races. Keep in mind that diameter and amount of pigment may vary within each race as well.



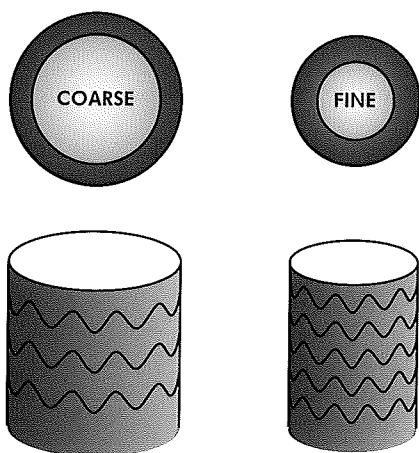
CAUCASIAN



ASIAN



AFRO-CENTRIC



CUTICLE / CORTEX RATIO

One result of genetic coding is the diameter of the hair shaft. In the picture on the left, notice the cuticle of a cross-sectional view of fine hair. Next, notice the picture of coarse hair.

As you've already seen, the cuticle is the protective part of the hair shaft and is made up of a harder protein than the cortex. If the hair is fine, treatments will affect it differently than if it's coarse. Examples include how well the hair holds a set and how the hair takes a perm or relaxer. It's an exaggeration to say that fine hair is "all cuticle," but that is often how it behaves. In cross section, up to 40% of fine hair can be cuticle, compared with 10% or 12% in coarse hair. The diameter of coarse hair is much larger than fine hair.

The cuticle is a hard, resistant layer of protein compared with the soft, elastic quality of the cortex. If a particular hair is 90% cortex and 10% cuticle, then that hair behaves like the cortex. That means it has more elasticity and ability to be molded and reshaped. But if the cuticle (which is harder or firmer and not easily stretched) makes up 40% of the hair fiber, then that hair will behave more like the cuticle and be more resistant to perms, relaxers or holding a set.



FINE HAIR STYLED



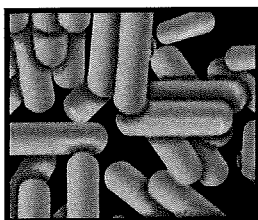
COARSE HAIR STYLED

## Natural Hair Color

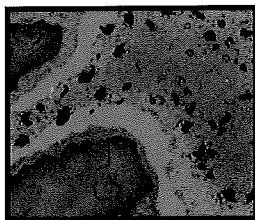
One of the most fascinating aspects of hair is how it gets its color. Many people know that a pigment (coloring matter) called chlorophyll gives plants their green color. Most people don't know that a pigment called melanin gives skin and hair their color. In the hair, melanin is found mainly in the cortex, the hair strand's second layer. Here is how the natural coloring process works:

1. Genes in the human body determine the number of melanocytes in the hair and the type of melanin they produce.
2. Melanin is produced by melanocytes, cells that exist among the dividing cells within the hair bulb.
3. Melanocytes that rest near the hair bulb's nourishment center, the dermal papilla, collect together and form bundles of a pigment protein complex called melanosomes.
4. The size, type and distribution of these melanosomes will determine the natural color of the hair.

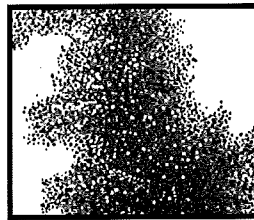
In simple terms, melanin is formed by various melanocytes (melanin cells) that bundle together to create melanosomes (pigment protein complex).



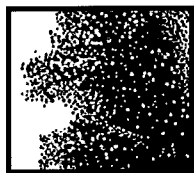
**MELANOCYTES**



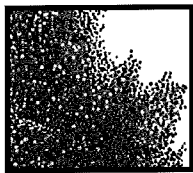
**MELANOSOMES**



**MELANIN**



**EUMELANIN**



**PHEOMELANIN**

There are two types of melanin that create the large variety of hair colors, eumelanin and pheomelanin. Eumelanin is brown/black in color and pheomelanin is red in color. It is the amount and distribution of one or both of these melanins that influence the resulting hair color.

If the amount of pheomelanin is very concentrated and near the cuticle layer, the hair color will appear more red. People with very dark, black hair may even have melanin in the cuticle layer, while lighter hair has melanin only in the cortex. **When there is a total lack of pigmentation in the hair and skin, the resulting condition is called albinism. A person with this condition is called an albino.**

Gray hair is caused by reduced color pigment, melanin, in the cortex layer of the hair. Gray hair is sometimes referred to as mottled hair, indicating white spots scattered about in the hair shafts. Gray hair grows from the papilla with the gray color, not as some might believe, turning gray after it has protruded above the skin. The natural aging process in humans is the cause of graying hair. However, some serious illnesses or emotional conditions may cause the hair to turn gray. A hereditary condition occurring at birth may cause some to gray prematurely. This is usually a defect in pigment formation.

## Melanin in the Skin

Melanin in both the skin and hair serves as protection from the sun's damaging rays. For instance, if skin is exposed to sunlight, more melanin is created and sent to the surface to protect these sensitive cells, resulting in more color, or what is commonly called a "suntan." Although skin color is passed on through the genes, races that originated closer to the equator developed a higher content of melanin in their skin to better protect it against the sun. The same is true for hair. For example, white hair, which lacks melanin, is at the greatest risk for sun damage and can turn yellow from too much exposure. Therefore, you should recommend products with sunscreen and encourage your clients to wear hats when they anticipate spending extended periods of time in the sun.

# HAIR CARE

Now it's time to apply the science and "humanize" your newly gained knowledge. It is, after all, people you'll be dealing with in your career as a cosmetologist, not just knowledge. Each person you'll work with is unique. The condition of each person's hair will differ, at least slightly, from any other you may have seen before. Sometimes those differences will be dramatic. Hair in poor condition will not hold a style or show off your design talent. Before you pick up shears or a comb, you will need to evaluate your client's hair.

## Hair Evaluation

Hair is a fiber, and like all natural fibers, hair has different characteristics. Becoming familiar with your client's hair prior to any service will allow you to support his/her individual hair needs.

### 1. Determine your client's hair type and distribution

Knowing whether your client's hair type is fine, medium, or coarse tells you what it can and cannot do on its own. You will usually determine your client's hair type by touch and visual examination. **The degree of coarseness or fineness in the hair fiber is referred to as texture.** The texture of coarse hair has the feel of wool, medium hair, the feel of cotton, and fine hair, the feel of silk. Other terms used to describe the feel of the hair include rough, wiry or soft. Once you know that, you're on your way to determining the particular cleansing and conditioning products that will best meet the hair's needs.



Visual examination will give you a lot of clues. You can usually see whether the hair is dry or oily but, when you suspect it's been chemically altered, confirm this with your client. Ask the client, "Is your hair currently permed or tinted? Relaxed?" These are key questions to determine which cleansing and conditioning products will work best.

A damaged or rough cuticle can cause hair to snag, look dull, or be hard to manage. You can test for cuticle damage by running your thumb and finger along a strand of hair against the direction of growth. The more "drag" you feel, the more damage you can assume. Additional visual examination would include determining hair density. **The density of the hair is judged by the number of active hair follicles per square inch on the scalp.** For instance, a person with a thick head of hair will have many more active hair follicles than a person with

thin hair. Density is usually referred to as light, medium or heavy (sometimes as thin, medium or thick). Density of the hair influences the amount of hair that should be parted and wrapped around a perm rod, roller or curling iron. Heavy density requires smaller subsections than light hair to allow for absorption of styling and processing lotions. In addition, placing too much hair on a perm rod or roller weakens the expected curl. Larger subsections can be used for light density hair.

## 2. Determine your client's hair condition

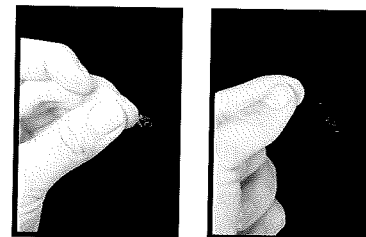
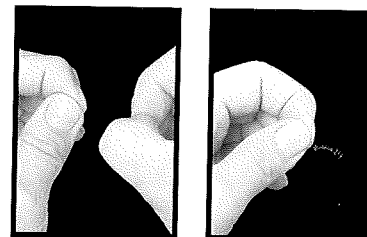
Once you know the type of hair fiber with which you will be working, you need to know the condition of that fiber. The condition of the hair is usually determined by two key factors:

- a. **Hair porosity, the amount of moisture able to be absorbed by hair.** Raised cuticles influence the amount of liquid that can penetrate the hair. *Resistant porosity* describes hair that is able to absorb the least amount of moisture, usually due to the closeness of the cuticle layers. Resistant porosity is also called "poor porosity." *Average porosity* describes hair with the normal ability to absorb moisture. Such hair is in good condition, suitable for most services. *Extreme porosity* describes hair that is damaged from chemical services, such as overprocessing or the environment. Hair with extreme porosity is not in good condition and would require treatments prior to chemical services. *Uneven porosity* is a combination of both porosities.
- b. **Hair elasticity, the ability of hair to stretch and return to its original shape without breaking.** Elasticity is also referred to as resiliency. Additional descriptive words to use when discussing elasticity with your client include pliability, buoyancy and springiness. Hair with normal elasticity is lively, able to spring back and usually has a shiny appearance. Normal dry hair is capable of being stretched about one-fifth of its length. Wet hair is able to be stretched 40% to 50% of its length.

### Test for Structural Strength

While visual examination for elasticity is not absolutely accurate, it can tell you a great deal. Just by looking at the hair and handling it, you'll make judgements about what it needs. You can also perform this test for elasticity. (Note that this test is intended for straight or wavy hair.)

- Remove a strand of hair from the side of the head above the ears.
- Hold it between your thumb and forefinger and, with your thumbnail and index finger of the other hand, run the distance of hair rapidly as you would curl a ribbon with scissors. This will create a series of small curls.
- Gently pull the hair taut for 10 seconds and release. If the hair completely, or almost completely, returns to the curl pattern, it is in good condition. If it returns only 50% or less, it is structurally weak and needs conditioning.



GOOD

WEAK

### 3. Consider the effects of your climate

Once you have thoroughly evaluated the fiber, it's important to consider the climate in which you live. Is your climate primarily dry or humid? Because the amount of moisture in the air governs the amount of moisture in the hair, predominant humidity makes a big difference in the way hair looks and feels and, thus, a difference in the shampoo and conditioners you'll use. In humid regions, where hair becomes heavy with moisture, curl retention is a challenge, and protein conditioning may be needed to balance the moisture intake. In dry climates, hair tends to be flyaway, so moisturizing and surface conditioning become very important to reduce static and soften the hair fiber.

The more information you can gain from the client, the easier it will be to achieve good results. You will want to give your client's hair whatever it needs to look, feel and behave beautifully, beginning with the right hair analysis and followed by proper shampooing and conditioning.

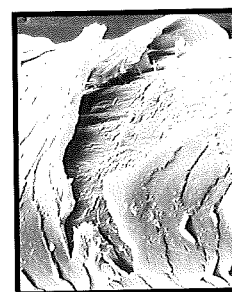
## Common Hair Conditions

Each hair strand has about seven to twelve layers of cuticle scales. The cuticle layers protect the inside of the strand, which is called the cortex.

In healthy hair, the scales should lie flat along the cortex. The acid mantle lubricates the outermost layer of the cuticle and reduces friction. Friction, as in combing and brushing, is one way in which the cuticle can be damaged.

During your professional analysis of the hair fiber, a number of observations will alert you to possible problems you might encounter as you service the client's hair:

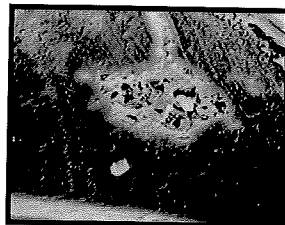
1. **Broken hair.** One of the most common causes of hair breakage is excessive stretching or traction. Hair subjected to excessive chemical processes, sun exposure and chlorine exposure may also exhibit breakage. The technical term for broken hair is **abraded hair**. One of the most common types of cuticle damage is called an **abraded cuticle**. Abrasion can result from brushing or manipulating the hair while styling it, especially when it's still wet. Wet hair is more fragile than dry hair. Rubber bands, tight hair clips and braids can actually break the cuticle. So can wrapping hair too tightly around a roller.
2. **Split ends.** The technical terms for split ends are *fragilitis crinium* (frab-JIL-I-tas KRI-nec-um), *brittle hair* or *trichoptilosis* (tri-kop-ti-LOH-sis). Split ends start as small cracks in the cuticle that deepen into the cortex. Eventually the hair is split entirely. Often there is no cuticle left in the region of a split and, if not cut off, the ends become frayed and unsightly. Split ends can be temporarily "sealed" by protein reconditioning. However, the process must be repeated frequently to keep the splits closed. In severe cases, it is advisable to cut off the split ends and reinforce the hair with a protein conditioner to prevent the freshly cut ends from splitting.



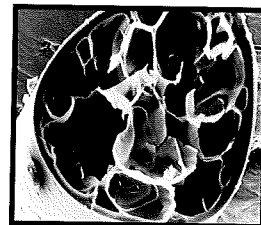
3. **Matting.** Excessive matting, called **pilica polonica** (PIL-i-ca POL-a-ni-ca), is characterized by a mass of hair strands tangled together in a mat that cannot be separated. The only remedy lies with a pair of shears. The cause of pilica polonica is usually excessive chemical hair lightening. In some cases, excessive friction can be the cause, as in repeated backcombing.
4. **Nodules.** **Trichorrhexis nodosa** (TRIK-o-rek-sis no-DO-sa), or knotted hair, is characterized by the presence of lumps or swelling along the hair shaft. These lumps are broken or partly broken places on the hair shaft. They can be caused by poorly performed chemical services, mechanical damage from curling irons or backcombing or by an inherited defect in the hair's keratin protein structure. Physical knotting of the hair (known as trichonodosis) results from friction of the scalp, as in vigorous towel drying or rubbing against a pillow.
5. **Canities** (ka-NEESH-eez). Canities is the name given to grayness or whiteness of the hair. Congenital canities occur at or before birth primarily in albinos and occasionally on people with normal hair. Acquired canities refers to the loss of pigment in the hair as a person ages (graying of hair) or an onset may happen in early adult life. Causes of acquired canities may be extended illness, nervous strain or heredity.
6. **Ringed hair.** When alternating bands of gray and dark hair exist, the condition is referred to as ringed hair.
7. **Hypertrichosis** (hi-per-tri-KOH-sis) describes an abnormal coverage of hair on areas of the body where normally only lanugo hair appears. Hypertrichosis is also referred to as hirsuties (hur-sue-SHEEZ) or superfluous hair. Removal methods range from tweezing to electrolysis, depending on the amount of hair to be removed, location and client preference.
8. **Monilethrix** (mo-NIL-e-thriks). Beads or nodes formed on the hair shaft is a condition referred to as Monilethrix. Breaks in the hair occur between the beads or nodes. Treatments may be given to improve the hair condition.

**Mechanical damage results from the incorrect use of styling tools.** Some brushes can pull the hair and stretch it until it breaks or they can wear down and loosen the cuticle cells. If a dryer is used too close to the hair or a hot curling iron is left on too long, the hair may become brittle and the cortex could possibly melt.

Usually, if the cortex is damaged, the cuticle has been damaged, too. However, sometimes the hair is damaged inside with only barely noticeable damage to the cuticle scales. Compare the picture of a normal cortex with the picture of the melted cortex as seen below. Other examples of heat styling damage include blistering and fracturing of the hair fiber due to improper heat-styling or use of low quality styling appliances.



**NORMAL CORTX**



**MELTED CORTX**



# Common Scalp Conditions

Listed below are the more common scalp disorders or diseases which you may come in contact with as a professional cosmetologist.

Disorder or Disease	Medical Term	Description	Treatment
Psoriasis <i>Disorder</i>	Psoriasis (soh-REYE-ah-sis)	Thick, crusty patches of red irritated scalp resulting from an autoimmune disease of the skin	Refer client to a physician
Dandruff <i>Disorder</i>	Pityriasis (pit-i-REYE-ah-sis)	Chronic scalp condition with excessive flaking, which accumulates on the scalp or falls to the shoulders, as well as itchi-ness, tightness and irritation of the scalp	Frequent shampooing with an anti-dandruff shampoo con-taining either pyrrithione zinc, selenium disulfide or ketoconazole
Dry Dandruff <i>Disorder</i>	Pityriasis capitis simplex (kah-PEYE-tis SIM-pleks)	Dry flakes attached to the scalp or on the hair which can appear translucent	
Greasy or waxy dandruff <i>Disorder</i>	Pityriasis steatoides (ste-a-TOY-dez)	Oily flakes combine with sebum which stick to the scalp in clusters and can appear yellowish in color	

*Leading cause of dandruff is a naturally occurring microscopic fungus called Malassezia (mal-uh-SEEZ-ee-uh). The fungus feeds on the scalp's natural oils and creates by-products that cause irritation on the scalp. The body reacts to the irritation by accelerating the amount and rate of flaking of dead skin cells.*

## External Parasites

Be advised that the conditions listed on the chart below are contagious and require you to refer the client to a physician.

Disorder or Disease	Medical Term	Description	Treatment
Ringworm <i>Disease</i>	Tinea (TIN-ee-ah)	Red, circular patch of small blisters; caused by a vegetable parasite	Refer client to a physician
Ringworm of the Scalp <i>Disease</i>	Tinea capitis	Enlarged open hair follicles that are surrounded by clusters of red spots (papules); hair is likely to break in area infected; black spots may also be visible	Refer client to a physician
Honeycomb Ringworm <i>Disease</i>	Tinea favosa (fa-VO-sah) or Favus (FAY-vus)	Dry, yellow, encrusted areas on the scalp called scutula (SKUT-u-la); may have a peculiar odor; shiny pink or white scars may result	Refer client to a physician
Itch Mite <i>Disorder</i>	Scabies	Red and watery vesicles or pus-filled areas caused by an animal parasite (itch mite) burrowing under the skin.	Refer client to a physician
Head Lice <i>Disorder</i>	Pediculosis capitis (pe-dik-u-LOH-sis)	Infestation of head lice on the scalp causing itching and eventual infection	Refer client to a physician

## Hair Loss

As a salon professional, you are often the first person asked to respond to questions about hair loss. So knowing how to adequately address client concerns will greatly affect your client's well-being.

### Number of Hairs on Head

Red = 90,000      Brown = 110,000  
Black = 108,000      Blonde = 140,000

There is an average of 1,000 hairs to a square inch on the average head.

## Normal Hair Loss

Hair actually covers most of your body before you are born. Lanugo is the term assigned to this baby fine, silky hair, which is shed shortly after birth. Lanugo is replaced with vellus which covers most of the body including the head, and is often not visible to the naked eye. Vellus is short, fine, non-pigmented hair found more abundantly on women. Certain follicles are predetermined to produce long, thick pigmented hair, like normal scalp and eyebrow hair. This hair is referred to as terminal hair and replaces vellus hair around the time of puberty.

Everyone loses some hair every day. **Actually between 40 and 100 strands of hair is the average daily hair loss.** That's not as much as it sounds, considering that the average head has about 100,000 individual strands of hair.

## Androgenetic Hair Loss

Alopecia, or excessive hair loss, may be caused by a fungal or bacterial infection or inflammatory disease of the scalp. This abnormal condition occurs in both men and women. If the scalp appears abnormal at all, do not attempt any services. Instead suggest that your client see a dermatologist. When there is no apparent scalp abnormality, hair loss may be caused by nutritional deficiency, drugs, emotional trauma and other physiological changes.

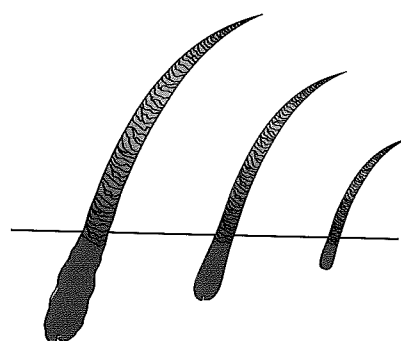
The most common form of alopecia is androgenetic alopecia, a combination of heredity, hormones and age that causes progressive shrinking, or miniaturization, of certain scalp follicles. This shrinking causes a shortening of the hair's growing cycle. Over time, as the active growth phase (anagen) becomes shorter, the resting phase (telogen) becomes longer. Eventually, there is no growth at all.

## Recognizing Androgenetic Alopecia

In general, asking questions about family history will give a good indication of whether the hair loss is androgenetic or another type of alopecia. Ask your client if his/her parents or more distant relatives have hair loss, whether thinning has been gradual over several years or sudden or patchy. If the hair loss was sudden or patchy, advise your client to talk to a physician. If your client is a woman, ask her about crash diets, oral contraceptives, medications such as certain cardiovascular conditions, vitamin deficiencies, and thyroid disorders to rule out hair loss created by these factors.

Because hair length and thickness are determined by how long the hair is allowed to grow before entering the next resting and shedding phase, the hair-loss process is thus a gradual conversion of terminal hair follicles to vellus-like follicles.

The net result is an increasing number of short, thin hairs that are barely visible above the scalp surface, and eventually no more hair is produced out of these follicles. In addition, more follicles are in the resting phase at the same time. Consequently, there is less scalp coverage.



**PROGRESSIVE MINIATURIZATION  
OF THE HAIR FOLLICLE**

Despite the dramatic reduction in follicle size with androgenetic alopecia, the follicle is not altered in structure nor does the number of follicles change.

In men, androgenetic alopecia is known as male pattern baldness and frequently progresses to the familiar horseshoe-shaped fringe of hair. In women, it appears as a generalized thinning of the hair over the entire crown of the head. A significant difference between the genders is that most women exhibit scattered hair thinning. It is extremely rare for a woman to “go bald.”

Women with androgenetic alopecia usually first notice a gradual thinning of their hair, mostly on top of their heads as their scalp becomes more visible. Over time, the hair on the sides may also become thinner. Women retain their frontal hairline, which may be straight or “M”-shaped.

In the area where the scalp shows the most, look for a large number of miniaturized follicles that are producing shorter, thinner, fewer hairs than the long ones. Unlike hairs that have been cut short and have a flat end, miniaturized hairs. Hold an index card near the scalp to help you see the miniaturized hairs. If you see a lot of miniaturized hairs, your client has androgenetic alopecia.

In addition to identifying miniaturized hairs by holding an index card close to the scalp, in the case of female clients, you may:

1. Part the hair in the middle of the scalp and look at the width of the part. A part that shows more scalp than normal indicates hair loss (a part on a normal head is very narrow).
2. Ask if the diameter of the ponytail has become smaller over the years (if applicable). A smaller diameter is one of the signs of androgenetic alopecia.
3. Ask your client if there are many hairs left on the brush after brushing once or if there are many hairs in the shower drain after shampooing. Check if your client has excessive shedding by simply running your hand through her hair. In general, anyone who has unusual, excessive shedding should see a doctor.

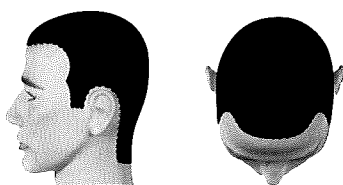
In the case of men, ask the client if the size of the bald spot has progressively increased over the years. In frontal balding, ask if the hairline has been progressively receding. With male clients, it is important to evaluate pattern separately from density because a man with a small pattern but a poor density may not respond to treatment as well as a man with a large area of hair loss and a fair density.

**The degree of hair loss can be evaluated by rating pattern and density:**

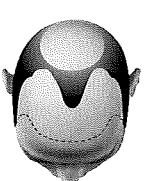
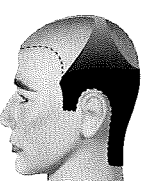
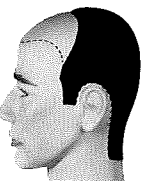
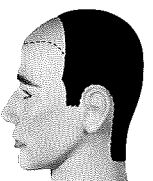
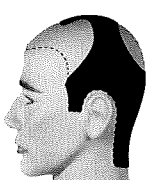
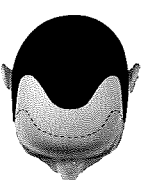
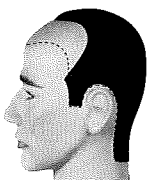
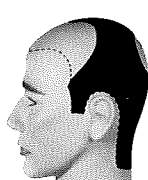
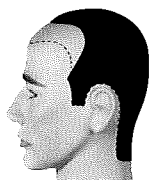
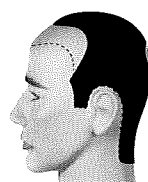
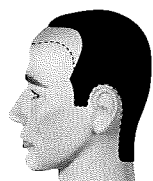
- Pattern refers to the shape and location of the area with hair loss.
- Density refers to how much hair is covering the scalp in the area of hair loss.

**Note:** Because women experience a single pattern of hair loss, only density needs to be evaluated.

## DEGREES OF MALE-PATTERN BALDNESS



**NORMAL**



**FRONT HAIRLINE**

**HAIRLINE/CROWN**

Hair loss is identified according to various measurement systems. Each system identifies the pattern and density of the hair loss. Pattern refers to the shape and location of the hair loss, while density refers to how much hair covers the scalp in the area of the hair loss. These types of illustrations are often labeled so you can record and track your client's hair loss from one visit to another.

## Other Types of Hair Loss

### Postpartum Alopecia

Some women experience a “loss of hair” after having a baby. This temporary hair loss at the conclusion of pregnancy is called *postpartum alopecia*. The cause of this phenomenon is simple. During pregnancy, hair stays longer in the anagen cycle. Then, after childbirth, these hairs enter the telogen phase. Many women become concerned about this “sudden” loss of hair. But, actually, loss of hair is the result of the body’s hormonal balance returning to its previous state. It isn’t long until the amount of hair seems balanced again.

### Alopecia Areata

Sudden loss of hair in round or irregular patches without display of an inflamed scalp is referred to as alopecia areata. This type of hair loss occurs in individuals who have no obvious skin disorder or serious disease. Alopecia areata is an autoimmune skin disease that is confined to a few areas and is often reversed in a few months, though recurrences may occur. The National Alopecia Areata Foundation estimates that 4 million men, women and children suffer from this type of hair loss.

### Telogen Effluvium

Premature shedding of hair in the resting phase (telogen) can result from various causes such as childbirth, shock, drug intake, fever, etc. This premature shedding of hair during the resting phase is called telogen effluvium. Some women also experience sudden hair loss when they stop taking birth-control pills or if they follow a crash diet too low in protein. The hair loss is usually reversed once the condition is corrected.

### Traction or Traumatic Alopecia

Hair loss due to repetitive traction on the hair by pulling or twisting is called traction or traumatic alopecia. **Traction** (excessive stretching or pulling) **alopecia** *may be caused by wearing tight chignons or pony tails, tight rollers, tight corn rows or excessive tension during brushing and combing, especially when hair is wet.* This hair loss is often caused by mechanical damage. However, it can also be caused by chemical damage, such as the excessive application of permanent wave solutions. This condition is usually reversed once the trauma has stopped.

## Hair Loss Treatments

### Treatment of Androgenetic Alopecia

Several products have been developed to treat androgenetic alopecia. If your client is working with a physician who has prescribed one of the treatments available to regrow hair and has requested assistance from you in applying product treatments, read and follow the manufacturer’s directions.

Other hair loss treatments that your client might consider include:

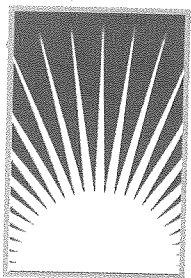
1. FDA-approved products that regrow hair or prevent hair loss.
2. Products that provide an ideal environment for possible hair regrowth or loss prevention.



“The Food and Drug Administration (FDA) has ruled that products claiming hair regrowth or hair loss prevention cannot be marketed without prior FDA review and approval.”

3. Surgical options are available mostly for men. Hair transplants, hair plugs and scalp reductions are performed by physicians or dermatologists. Several visits are necessary to achieve gradual results that allow periods of recuperation for the patient.
4. Wigs, toupees, hair additions or hair weaving are available as non-medical options. For additional information, refer to chapter entitled "Wigs and Hair Additions."
5. Cosmetic hair thickeners are products designed to volumize the hair. These products do not grow hair or put a halt to hair loss. They simply coat the hair, therefore giving it more body.

Whether you are dealing with hair loss, damaged or healthy hair, your goal remains the same: To leave your clients' hair in good, even better, condition following a service. Your knowledge of trichology will serve as the foundation for determining the right products to use and recommend for clients facing challenges with their hair. The extra effort you put forth will help win you a loyal clientele.



Hair loss today is often associated with cancer treatments. As a professional, it is important for you to know what resources are available to help your clients.

One of these resources, **Look Good... Feel Better (LGFB)** is a free, national, public-service program created from the concept that if a woman with cancer can be helped to look good, her improved self-esteem will help her approach her disease and treatment with greater confidence.

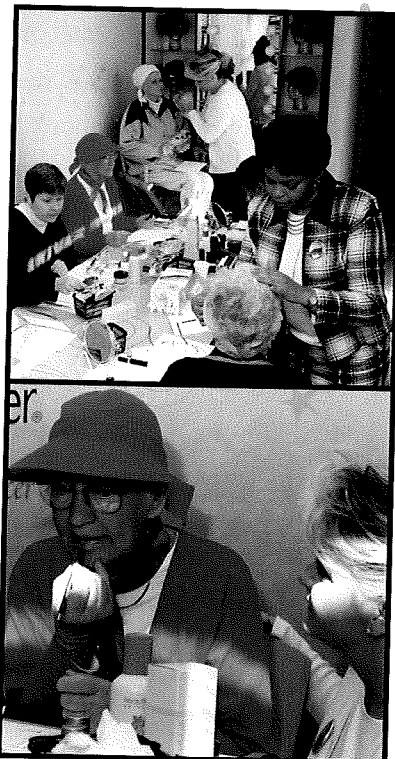
**Look Good...Feel Better is offered through a national partnership of:**

- The **Cosmetic, Toiletry, and Fragrance Association (CTFA) Foundation** - a charitable organization established and supported by the trade association that represents the U.S. cosmetics industry. The CTFA Foundation provides makeup, materials and financial support (through the cosmetic industry).
- The **American Cancer Society (ACS)**, the nationwide, community-based, voluntary health organization dedicated to eliminating cancer as a major health problem. ACS administers the program nationwide and serves as the primary source of information to the public.
- The **National Cosmetology Association (NCA)** is a national organization of more than 45,000 hairstylists, wig experts, estheticians, makeup artists and nail technicians. NCA organizes and helps train the volunteer cosmetologists.

The three sponsoring partners work together to provide:

- Patient education, through group or individual sessions
- Free program materials, including videos and pamphlets
- Free makeup kits for patients in group workshops

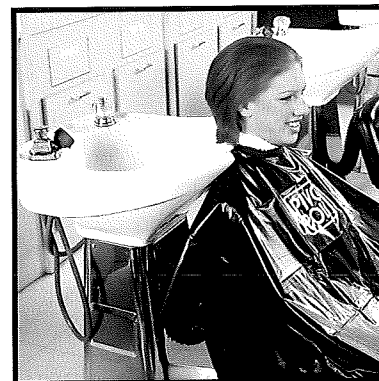
For more information, go to: [www.lookgoodfeelbetter.org](http://www.lookgoodfeelbetter.org)  
or call 1.800.395.LOOK



# DRAPING, SHAMPOOING AND SCALP MASSAGE

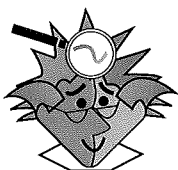
Draping, shampooing and scalp massage are quite often the first service contacts you have with a client in the salon. Making this contact a delightful, memorable service experience can have enormous impact on building client loyalty to you and the salon.

The safety, comfort and protection of the client's skin, hair and clothing are all part of the professional cosmetologist's responsibility and one of his/her foremost considerations.



Proper maintenance of the hair and scalp begins with a hygiene practice that many of you perform each and every day, shampooing. The purpose of shampooing is to cleanse the scalp and hair by removing dirt, oils and product build-up. The hair must be shampooed as often as necessary with a shampoo specifically designed for the type and condition of hair. If the hair is not cleansed properly, an accumulation of oil and dirt can lead to scalp disorders. If the client has any infectious diseases or disorders, refer him/her to a physician and do not proceed with the service.

Massage is a scientific method of manipulating the body by rubbing, pinching, tapping, kneading or stroking with the hands, fingers or an instrument. Massage dates back to antiquity and was used for health, beauty and medical reasons. Many believed that massage had beneficial qualities such as improving blood circulation, relieving headaches, reducing fat, diminishing fatigue, inducing sleep and preventing disease. Today, massage is not only a service in itself, but is included in other services such as shampooing, manicures and facials. This section of your chapter will focus on scalp massage offered alone or during a shampoo service. Your review of draping, shampooing and massage will begin with the important area of proper draping procedures.



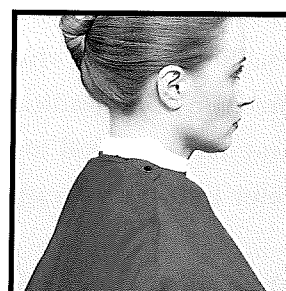
“Did you know that in ancient times many superstitious people believed that the spirits protected their heads and that they might injure the spirits if they shampooed their hair? Shampooing the hair became a ceremonial practice performed once a year in honor of a god's or goddess' birthday.”

## Draping Theory

Draping is performed prior to hair care services, such as shampooing and scalp massage, to protect the client's skin and clothing. Prior to draping, ask the client to remove any jewelry (necklace, earrings, hair pins and eyeglasses) and store it in a safe place. For your protection and the protection of others in the service area, ensure that jewelry and other valuables, such as purses, are stored in a safe place and are not blocking traffic areas, where they could cause an accidental fall or injury.

Many regulating agencies require that shampoo capes used to drape the client during cosmetology services must be laundered in a solution capable of disinfecting the cape. Guidelines to protect the client also include making sure that the neck of the cape does not come in direct contact with the client's skin. Therefore, always use a neck strip and/or towel between the client's neck and the neckband of the cape. Use the following guidelines when determining proper procedures for draping:

- In general, a towel and plastic or water-proof cape is used for shampooing, wet hair cutting, wet styling and chemical services. The plastic cape protects the client and the client's clothing from becoming wet or damaged during these services.
- A neck strip is usually used to replace a towel following a shampoo service if a hair cutting service is going to be performed next. The neck strip is less bulky and will allow the hair to fall naturally. The neck strip is also used during dry hair cutting to help prevent loose hairs from embedding into the client's clothing.
- A cloth cape is usually used for dry styling or dry hair cutting services. The cloth cape is lighter weight and therefore more comfortable for the client and allows dry hair to slide to the floor more easily.

**TOWEL****PLASTIC CAPE****NECK STRIP****CLOTH CAPE**

## Shampooing and Conditioning Theory

The shampoo service is performed prior to most hair services except certain hair color or chemical straightening services. Since most hair colors are applied to dry hair, the hair is not shampooed unless it is extremely oily or dirty. However, in some instances color products require that color be applied to towel dried hair, following a shampoo service. Always read manufacturer's directions to be sure. For example, shampooing is not performed prior to chemical relaxing services since it could cause increased irritation, a burning sensation or actual burning once the chemical product is applied to the hair.



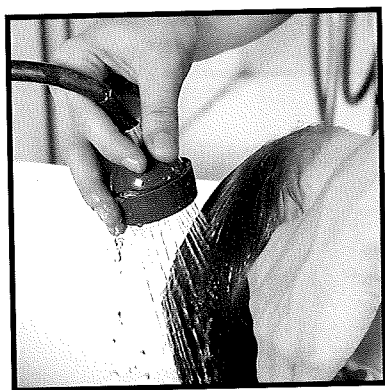
Understanding the pH (potential hydrogen) level of shampoos and conditioners will help you make the right selection for each hair type and condition. For instance shampoos with a high pH level



can make the hair dry and brittle, so for dry brittle hair, an acid-balanced shampoo would be recommended. Shampoos and conditioners are reviewed more in depth in the "Chemistry" chapter.

## Water

Water ( $H_2O$ ) is classified as soft or hard. **Soft water is generally preferred for shampooing.** Soft water is rain water or water that has been chemically treated. Hard water contains minerals and does not allow the shampoo to lather freely. However, it can be softened by a chemical water softening process. Knowing which type of water you are working with in the salon will enable you to make the proper choice of shampoo. For more information on water, refer to the "The Role of Water" on page 122 in the "Chemistry" chapter.



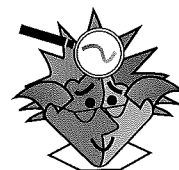
You always need to remember to **monitor the temperature of the water before applying the water stream to your client's scalp** and during the rinsing portion of the service. This can be done by holding the shampoo hose and positioning a finger in the water stream. In addition, make sure the amount of water pressure is moderate and not so forceful that it is uncomfortable for your client. Excess water pressure is a primary cause of water-spill accidents.

Sometimes water may be present on the floor in the shampoo area. **Always wipe up any water areas to prevent accidents that may occur if someone slips when crossing a wet traffic area in the school or salon.**

## Brushing and Combing

**Prior to the shampoo service, the hair should be brushed to remove tangles from the hair.** Brushing also stimulates blood circulation to the scalp while removing dust, dirt and product build-up from the hair. Combing with a large-tooth comb or plastic brush with wide spacing is generally performed after a shampoo service to remove tangles from wet hair.

Usually brushes made from natural bristles are recommended, since they have many overlapping bristles that aid in cleaning the hair better than nylon bristles. **Keep in mind that brushing the hair prior to a chemical service or if any cuts or abrasions are evident is not recommended.** Since there are different ways to brush the hair, consider the following factors: Does the hair have extreme product build-up that makes it difficult to part the hair prior to brushing? Is the hair long or short? Is the hair naturally straight or curly? Under all circumstances, you should begin brushing the hair from the ends first, then work toward the scalp.



"Be careful not to drop the hose during the shampoo service. Many beginning cosmetologists have had this 'showering' experience!"

This will allow you to detangle the hair without adding additional stress or more tangles to the hair. Once the hair is free of tangles you can brush the hair thoroughly from the scalp to the ends.

### Removing Tangles From Wet Hair

After the shampoo, tangles should be removed in a specific, methodical manner:

- Always start at the lowest point of the tangled area, in this photo the nape section. While lifting the weight of the tangled hair, release a section of hair with a large-tooth comb.
- Starting at the ends of the hair and progressing toward the scalp, comb downward through the hair. You may wish to hold the hair at the base to minimize discomfort while detangling. Keep in mind that chemically treated hair tends to tangle more easily than normal hair.
- Continue combing this section until all tangles are removed. To remove stubborn tangles, use short, gentle strokes.
- Part off another section immediately above the first section.
- Remove tangles in the same manner as before, starting at the ends. Comb through these two untangled sections and blend the hair together.
- Continue this procedure throughout the crown, sides and finally the top section.



In addition to knowing the importance of proper draping and shampooing, it will be key for you to understand the theory behind scalp massage and the relaxing and/or stimulating effects caused by this beneficial component of your client's shampoo experience.

### Scalp Massage Theory

Scalp massage involves manipulations performed on the scalp to relax the muscles and stimulate blood circulation. Scalp treatments combine the benefit of massage with the use of products designed to improve the condition of the scalp. The relaxation experienced by the client during scalp massage is a "value-added" benefit that helps build client loyalty.



Although products such as essential oils, lotions or creams used in scalp treatments provide a specific benefit, these products may leave a residue on the hair. Plus the stimulation from the massage may cause scalp sensitivity for the client. For these reasons, you should avoid performing a scalp treatment immediately prior to a chemical service. Be guided by the condition of the client's hair and scalp, as well as manufacturer's directions.

When massaging the scalp, it is important to:

- Establish a soothing or stimulating 'rhythm' when performing the manipulations
- Maintain contact with the client throughout the manipulations to maintain a relaxing or stimulating experience
- Carry out manipulations with firm, controlled movements to maximize the full benefit of massage and gain your client's confidence
- Keep your nails at a moderate length to avoid scratching the scalp

Just as products vary, so will the manipulations you choose to use during the scalp massage. Customizing your own sequence of manipulations is another method you may use in creating client satisfaction and loyalty. Listed here are the basic massage manipulations and the effects they cause. As you review this area, be aware that effleurage, petrissage and tapotment are the three primary scalp manipulations, with petrissage being the most important. Petrissage stimulates the sebaceous glands, which produce natural oil (sebum). This oil is often lacking in the case of dry hair and scalp.

## The Five Basic Manipulations of Massage

Manipulation	Movement	Effect
Effleurage (ef- <b>LOO</b> -rahzh)	Light, gliding strokes or circular motions made with the palms of the hands or pads of the fingertips; often used to begin and/or end a treatment; used on the face, neck and arms	Relaxing, soothing
Petrissage ( <b>PAY</b> -tre-sahzh)	Light or heavy kneading and rolling of the muscles; performed by kneading muscles between the thumb and fingers or by pressing the palm of the hand firmly over the muscles, then grasping and squeezing with the heel of the hand and fingers; generally performed from the front of the head to the back; used on the face, arms, shoulders and upper back	Deep stimulation of muscles, nerves and skin glands; promotes the circulation of blood and lymph
Tapotment (tah- <b>POHT</b> -mant) or Percussion or Hacking	Light tapping or slapping movement applied with the fingers or partly flexed fingers; used on the arms, back and shoulders	Stimulates nerves, promotes muscle contraction; increases blood circulation
Friction ( <b>FRIK</b> -shun)	Circular movement with no gliding used on the scalp or with a facial when less pressure is desired; applied with the fingertips or palms	Stimulates nerves; increases blood circulation
Vibration (vi- <b>BRAY</b> -shun)	Shaking movement; your arms shake as you touch the client with your fingertips or palms	Highly stimulating

## Draping, Shampooing and Scalp Massage Essentials

There are many types of shampoos available and designed for specific hair types and conditions. Shampoos are designed for dry, oily, normal, color-treated and gray hair to name but a few. As a cosmetologist, making the proper selection will allow you to achieve the desired results. For shampoo ingredients, refer to the “Chemistry” chapter.

Hair conditioners and rinses are used on shampooed hair to condition, soften and make the hair tangle free for ease in combing. They are also used to restore the hair to its normal pH and remove soap residue. There are liquid rinses, thick creams and leave-in conditioners, all of which yield different effects. The liquid rinses and thick creams are applied and left in the hair anywhere from a few seconds to 10 minutes. The leave-in conditioners are left in the hair until the next shampoo. Frequent use of cream rinses and conditioners can result in product build-up that can leave the hair dull and lifeless. Clarifying shampoos are designed to remove this product build-up.

### Draping, Shampoo and Scalp Massage Products

PRODUCT	FUNCTION
<b>Shampoos</b>	
All-purpose	Cleanse the hair without correcting any special condition
Acid-balanced (non-stripping)	Cleanse all hair types, especially lightened, color-treated or dry, brittle hair
Plain	Cleanse normal hair but not recommended for chemically treated or damaged hair
Soapless	Cleanse hair with either soft or hard water
Medicated	Prescribed by the client's doctor to treat scalp and hair problems and disorders; note: medicated shampoos may affect color-treated hair
Clarifying	Remove residue such as product build-up
Anti-dandruff	Control dandruff and scalp conditions
Liquid Dry	Cleanse the scalp and hair for clients who are unable to receive a normal shampoo; effective in cleaning wigs and hairpieces
Powder Dry	Cleanse the hair of clients whose health prohibits them from receiving a wet shampoo service

PRODUCT	FUNCTION
Conditioning	Improve the tensile strength and porosity of the hair
Color	Enhance color-treated hair and tone non-color-treated hair temporarily; available in a variety of colors
Thinning Hair	Cleanse the hair without weighing it down
<b>Rinses</b>	
Vinegar and Lemon (Acid)	Keep the cuticle compact, remove soap scum, return the hair to its pH balance and counteract the alkalinity present after a chemical service
Cream	Soften, add shine and smoothness to the hair while making the hair tangle-free for ease in combing
Anti-dandruff	Control dandruff and scalp conditions
Acid-balanced	Close the cuticle after a color service to prevent the color from fading
Acid	Remove soap scum
Color	Add temporary color to the hair, which lasts from shampoo to shampoo; for more information on color rinses, refer to nonoxidative colors in the Hair Coloring chapter
<b>Conditioners</b>	
Instant	Coat the hair shaft and restore moisture to the hair
Normalizing	Close the cuticle after alkaline chemical services
Body Building	Displace excess moisture, providing more body to the hair; made from protein
Moisturizing	Add moisture to dry, brittle hair
Customized	Moisturize and build body
<b>Scalp Treatments</b>	
Essential Oils	Provide invigorating, stimulating or soothing scents; allow fluid movement on the scalp
Scalp Toner	Adds a refreshing, stimulating feeling to the scalp; may have mild anti-septic properties and cleansing ability
Moisturizing Agent	Replenishes or restores moisture to dry scalp; formulated as creams, oils or lotions

## Draping, Shampooing and Scalp Massage Implements and Supplies

IMPLEMENT/SUPPLIES	FUNCTION
Towels	Protect the client's skin and clothing; also used to dry the hair
Plastic Client Cape	Protects the client and his/her clothing during wet and/or chemical hair services
Cloth Client Cape	Protects the client and his/her clothing during dry hair cutting or styling
Neck Strip	Protects the client's skin
Natural-Bristle Hair Brush	Increases blood circulation to the scalp, removes dirt, debris and product build-up from the hair prior to the shampoo service
All-Purpose Comb	Detangles and combs the hair after the shampoo service
Plastic Cap	Covers hair to allow deeper penetration of conditioning treatment

## Draping, Shampoo and Scalp Massage Equipment

EQUIPMENT	FUNCTION
Shampoo Chair	Allows client to sit or lay down during the shampoo service
Shampoo Bowl	Holds and drains water and product during a shampoo service
Shampoo Dispensary	Displays shampoos and conditioners
Towel Shelves or Cabinet	Store towels

## Infection Control and Safety

Infection control and safety are essential while performing scalp massage services in order to protect the health and well-being of you and your client.

1. Do not brush the hair prior to a chemical service. If any cuts or abrasions are evident, a chemical service should not be recommended.

2. If shampoo gets into the client's eye, rinse immediately with tepid water. An eye wash cup (a cup that is held over the eye and is used to flush the eye with water) is recommended. If irritation persists, recommend that the client see a physician.
3. Disinfect shampoo bowl and implements as required by your regulating agency.
4. Discard contaminated and non-reusable materials (neck strip, cotton, etc.)
5. Wipe up any water-spill areas immediately.
6. Always test the temperature of the water prior to applying the water stream to your client's scalp. Continue to monitor the water temperature during rinsing by keeping one finger under the nozzle.
7. Ensure that the amount of water pressure is moderate to strong and not so forceful that it is uncomfortable for your client. Excess water pressure is a primary cause of water-spill accidents.
8. Decrease pressure during massage manipulations if client expresses sensitivity.
9. Keep the back of the cape on the outside of the chair during the shampoo service to prevent the water from running down the client's back and dampening the clothes.
10. Remember to detangle the hair thoroughly prior to and after the shampoo service.
11. Wash your hands with antibacterial soap prior to the shampoo service.
12. Avoid giving a scalp massage:
  - When scalp abrasions or a serious scalp disorder are/is present
  - Immediately prior to the application of a chemical service, such as perming, relaxing, lightening or coloring
  - When the client has a history of high blood pressure or a heart condition; ask client to consult with physician before proceeding, since scalp massage may increase the circulation of the blood.
13. Wear gloves if required during a shampoo or scalp massage service; check with your area's regulating agency for guidelines.



CAPE OUTSIDE CHAIR

7



## Basic Draping, Shampooing and Conditioning

Draping, shampooing and conditioning preparation and procedures vary based on the timing allowed for the service and each client's needs. For example, you may find it necessary to use a booster chair when shampooing a young child or, in some cases, it is recommended that elderly clients lean forward into the shampoo bowl rather than lean back for medical or comfort purposes.

There are several types of shampoo bowls and chairs available. Some bowls allow you to stand behind the client, which helps reduce back fatigue. Other units may have a hydraulic control that allows you to adjust the height of the chair or move it into a reclining position. Although the basic shampoo techniques remain the same, you will need to adjust your body position according to the type of shampoo bowl you are using and whether you are standing on the side or at the back of your client. Be guided by your instructor for variations and specific requirements.

### Wet Hair Service Draping, Shampooing and Conditioning Preparation

The following is a list of draping and shampooing materials that are required for a wet hair service. Draping and shampooing for chemical services will be reviewed in the chapters covering those services. Assemble the following materials prior to draping, shampooing and conditioning your client:

- Towels
- Plastic cape
- Booster chair (if applicable)
- Shampoo, rinse or conditioning products

**It is assumed in this procedure that you are moving directly from draping to shampooing. If there is a time lapse between draping and shampooing, it will be necessary for you to wash your hands again with antibacterial liquid soap prior to shampooing.**

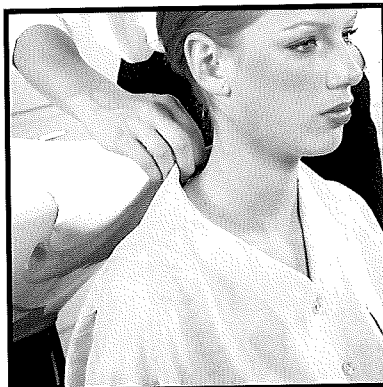
### Wet Hair Service Draping, Shampooing and Conditioning Procedure

- |   |  |
|---|--|
| • Wash and sanitize hands   | • Wet the hair                                     |
| • Ask client to remove jewelry and glasses and secure in a safe place | • Apply shampoo                                    |
| • Clip client's hair out of the way                                   | • Perform scalp massage manipulations              |
| • Turn client's collar inward if applicable                           | • Rinse thoroughly                                 |
| • Place towel lengthwise over client's shoulders, cross ends in front | • Repeat shampoo and rinse procedures if necessary |
| • Position plastic cape over towel and secure                         | • Apply rinse or conditioner                       |
| • Examine the client's hair and scalp                                 | • Rinse thoroughly                                 |
| • Position cape over shampoo chair                                    | • Towel dry client's hair                          |
| • Brush the hair  | • Detangle the hair                                |
| • Test the temperature and pressure of the water                      |  |



## Wet Hair Service Draping, Shampooing and Conditioning• Standing in Back

**1-2.** Wash and sanitize your hands. Ask client to remove jewelry and glasses and secure in a safe place. Clip client's hair out of the way with a simple twist and clip placement. Turn client's collar inward if applicable, making sure that you are taking precaution not to damage client's clothing. Place towel lengthwise over client's shoulders, and cross ends in front to secure the towel.



1



2

**3.** Position plastic cape over towel and secure, being careful to not catch neck hair in the fastener. Adjust for client comfort. Examine the client's hair and scalp thoroughly. Position cape on the outside of the shampoo chair.



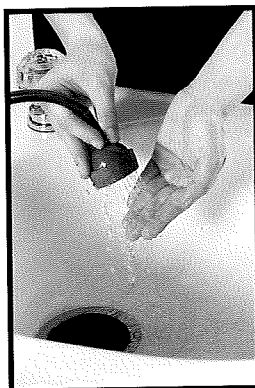
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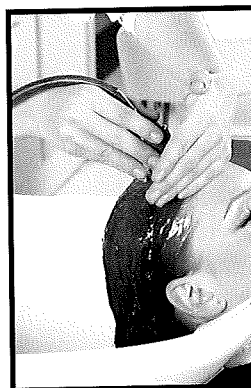
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**4.** Begin at the hair ends and brush the hair to remove tangles.

**5-7.** Test the temperature and pressure of the water to be sure it is warm and comfortable for your client. Wet your client's hair thoroughly. Ensure that the hair and scalp are saturated with water. Cup your hand over the front hairline, ears and nape to protect your client from becoming wet.



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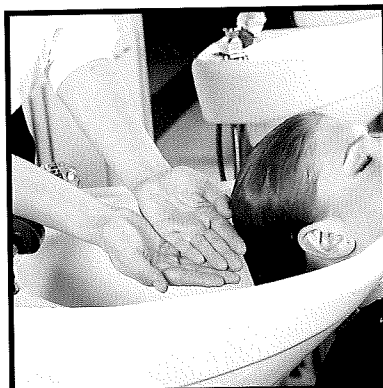


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**8-9.** Apply shampoo into your palm first, then into the hair, and work into lather.



8



9



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11



12



13



14



15



16



17

**10-11.** Perform scalp massage manipulations, starting at the front hairline. Use the cushions of your fingers, and circular or backward stroking (effleurage) manipulations. Maintain contact with the scalp and continue manipulations while you glide your hands gently toward the crown. Muscles affected during this time will be the frontalis (high on the forehead) and the aponeurosis (a-po-noo-RO-sis) (tendon connecting the frontalis and occipitalis). Repeat this and the following manipulations at least twice.

**12-13.** Glide back to the hairline and repeat the circular or backward stroking motion from the temporal area to the crown and then from in front of the ears to the crown. Maintain contact with the scalp while gliding.

**14-15.** Glide your hands behind the ear (auricular superior and posterior), and repeat effleurage manipulations up the back of the head (occipitalis). Use kneading (petrissage) movements at the nape area and work upward toward the crown, crossing over the occipitalis.

**16-17.** Massage the entire scalp area with attention to the hairline, crown and nape. Complete scalp massage manipulations. Remove excess shampoo.

**18-19. Rinse thoroughly,** protecting eyes, ears, etc. from spray and shampoo with your hand. When the spray is on, keep one finger curled over the edge of the nozzle so you can monitor any temperature changes in the water. Also keep in mind that the pressure of the water from the nozzle can range from a moderate to strong spray. Ensure that the spray is strong enough to rinse all the shampoo from the hair. Rinse the entire scalp area with additional attention at the nape. **Repeat the shampoo and rinse procedures if necessary.**

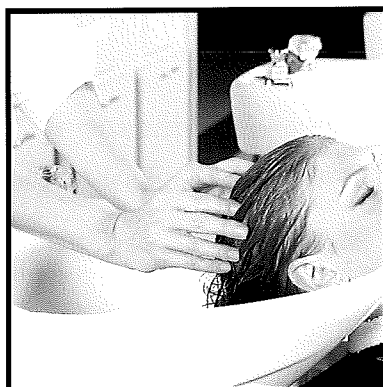


18



19

**20. Apply rinse or conditioner.** Work through the hair using gentle, stroking (effleurage) movements for 30-60 seconds. Follow manufacturer's directions for conditioning treatments that may need to be left on the hair for a longer period of time and may require a plastic cap and heat.



20

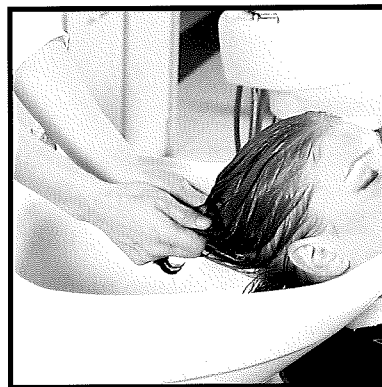


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**21-23. Rinse thoroughly,** protecting sensitive areas from finishing rinse and/or water spray. Lift the hair and allow the water to run down the length of the strands. Squeeze excess water from the hair ends.

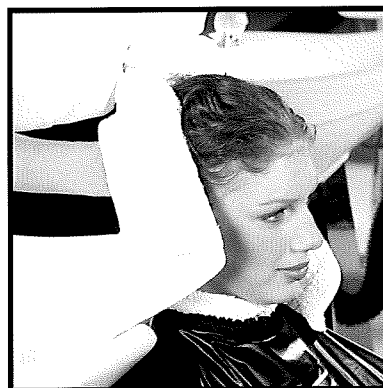


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23

**24. Towel dry client's hair** with fresh towel. Wipe away any excess moisture from client's face



24



25

**25. Detangle the hair,** beginning at the nape to avoid tangling the hair. Comb outward from the ends of the hair and work toward the scalp.



**Never use firm massage manipulations when shampoo is to be followed by any kind of chemical service. In these instances, massage during shampoo should be very brief and very light. This light massage will help avoid the undesirable penetration of any chemicals into the skin, since deep massage can open pores into the dermis.**

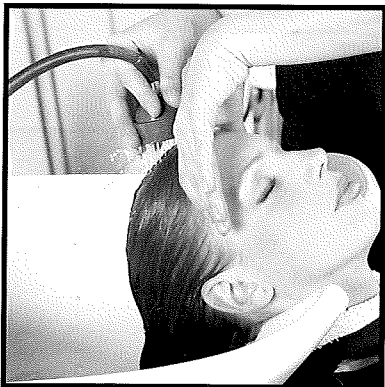
### **Optional Neck and Shoulder Massage**

Before detangling the hair after the shampoo procedure, you may wish to perform this additional massage treatment:

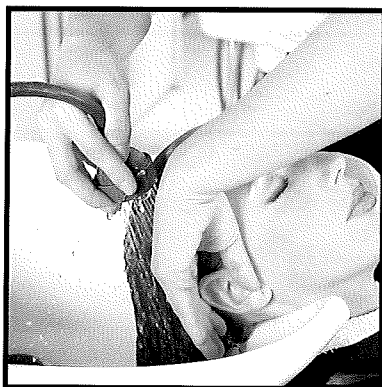
- Place fingers over muscles near shoulder joints.
- Begin a combination of effleurage and petrissage manipulations to bottom of neck.
- Move fingers up the outside of the neck, back down toward spine and back up and out to shoulder muscle joints.
- Repeat.

### **Shampooing and Conditioning • Standing at the Side**

Remember that shampooing and conditioning procedures basically remain the same, whether you are standing behind or at the side of your client. However, your body position will change and you may choose to include slightly varied scalp manipulations.



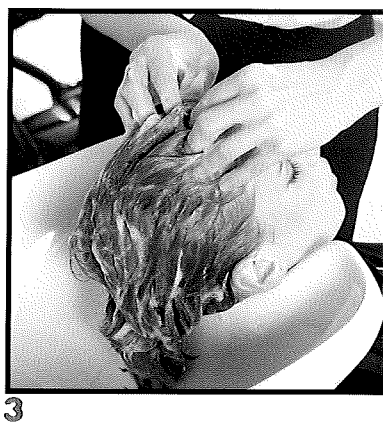
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**1-2.** Wet your client's hair thoroughly. Protect your client's face, eyes and ears by positioning your hand along the hairline and cupping the ear. Monitor the water temperature with one finger positioned under the nozzle.

**3-4.** Perform scalp massage manipulations by using a circular motion with the cushions of your fingers from the front hairline to the crown. Perform petrissage manipulations with your thumbs. Work from the center front hairline to the crown. Then return to the front hairline, this time 1" (2.5 cm) away from the center, and repeat manipulations. Work toward each side.



3



4

**5-6.** Lift and support the head. Work from side to side in the nape using a stroking movement. Then use a scissoring movement throughout the entire head. Repeat a few times.



5



6

**7-10.** Rinse the hair thoroughly from the front hairline toward the crown and ends. Use one hand to lift and support the head. Cup your other hand over the nozzle and rinse to remove the shampoo at the nape. Use both hands to gently squeeze remaining water from the hair.



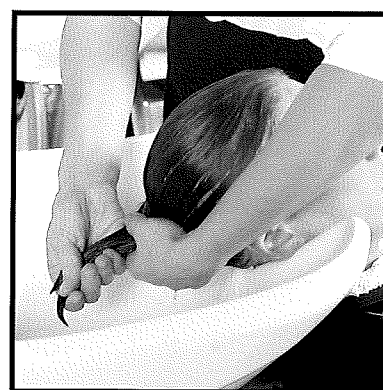
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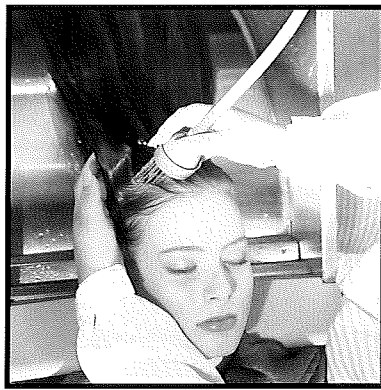
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### Long Hair Considerations

Long hair requires special considerations during shampooing and conditioning. Lift longer lengths upward while rinsing to remove the hair from the shampoo suds that have accumulated in the bowl. Shampoo bowls designed for long hair have extended basins that allow the hair to fall naturally, which prevents the hair from becoming tangled.

### Wet Hair Service Draping, Shampooing and Conditioning Completion

- Clean shampoo service area before continuing with client; disinfect comb and brush following the entire service
- Ensure there is no water left standing in the shampoo service area
- Discuss the products you used on your client and proceed to the next service

## Basic Scalp Massage

Basic scalp massage treatments involve scalp manipulations designed to relax your client's muscles and increase blood circulation. Treatments can vary according to the products and machines used. For instance, a dry scalp treatment may include a moisturizing scalp cream along with a scalp steamer or warm towels to help product penetration. Be sure to follow manufacturer's directions when using scalp treatment products.

### Basic Scalp Massage Preparation

Assemble the following materials prior to providing a scalp massage service:

- Moisturizing agent, scalp toner or essential oils
- Towel
- Client Cape

### Basic Scalp Massage Procedure

- |  |                                    |
|--|------------------------------------|
| • Wash and sanitize hands                | • Perform tapotment                |
| • Drape client for a wet hair service    | • Rotate the scalp                 |
| • Detangle hair                          | • Conclude scalp massage           |
| • Apply scalp product                    | • Shampoo client's hair            |
| • Perform effleurage scalp manipulations | • Rinse hair                       |
| • Perform petrissage scalp manipulations | • Dry hair or move to next service |
| • Perform effleurage scalp manipulations |                                    |

## Basic Scalp Massage

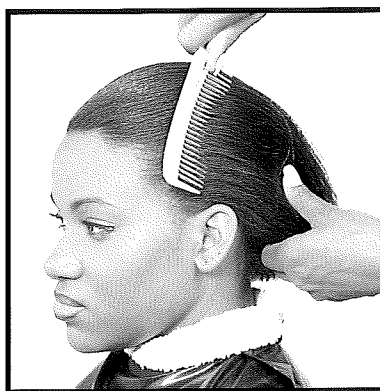
**1. Wash and sanitize your hands.** Seat the client in a comfortable chair. **Drape client for a wet hair service.**

**2. Detangle the hair.** Apply scalp product according to the treatment being performed and according to manufacturer's directions.

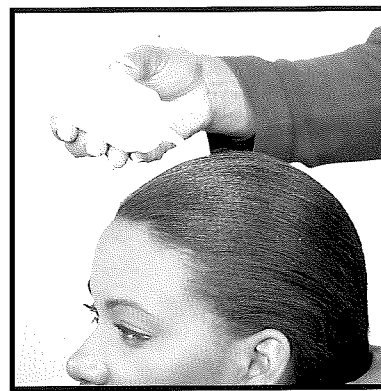
**3. Perform effleurage scalp manipulations.** Stand behind your client and begin the stroking manipulations at the front hairline (frontalis), gliding at approximately 1" (2.5 cm) intervals to the nape area. Return to the front hairline and repeat until all areas are covered.

**4. Perform petrissage scalp manipulations.** Starting at the front hairline, massage with a kneading action in a circular motion. Keep your fingers and thumbs spread out and firmly pressed to the scalp as you massage. Release your hands from the scalp only as you move to another part of the scalp. Begin the movements at the front of the head and finish in the nape.

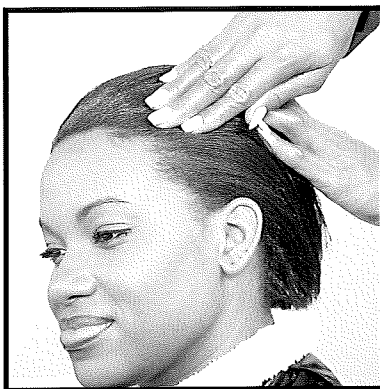
**5-6. Perform effleurage scalp manipulations.** Use lighter, circular manipulations as you move from the front hairline to the area above the ears at the crest (parietal) and then slowly returning to the top and repeating the manipulations. Cover the entire head. Then **perform tapotment.** Use the tips of your fingers and tap the scalp. Begin at the front hairline and work from side to side. Complete the tapotment technique at the nape. Customize your manipulations using a series of rotations with your thumbs, stroking movements with the palms of your hands or light strokes with the cushions of your fingers.



1



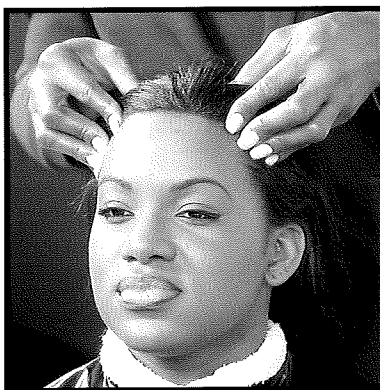
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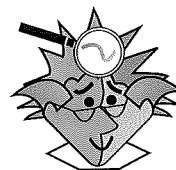
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"You may choose to perform only a part of this complete scalp massage or you may want to develop your own special routine."



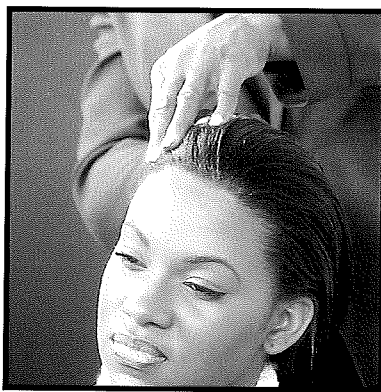
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**7-8.** Use the palms of your hands and your fingers to **rotate the scalp** gently. Squeeze the head and release.

**9-10.** **Conclude the scalp massage** by using long, gentle effleurage strokes from the nape to the front hairline. Use a feather-like motion to remove hands from the scalp. Then use a light stroking motion from the front hairline to the nape. **Shampoo the client's hair** thoroughly, being careful to remove all scalp treatment product from the hair. **Rinse the hair** thoroughly and repeat shampoo and rinse if necessary. **Dry the hair or move on to the next service** scheduled for the client.

## Basic Scalp Massage Completion

- Offer a rebook visit for your client. Discuss the next appropriate time to repeat this service based on the client's needs.
- Recommend appropriate retail products to your client.
- Clean your work area.

## Aromatherapy for the Scalp

There is an increased awareness in salons across the world about how natural plant extracts can increase the benefits experienced during massage treatments. The term aromatherapy is used to describe the combination of our sense of smell and the use of plant extracts and their healing abilities. "Aroma" refers to the natural fragrance of plants and "therapy" means "cure". The therapeutic effects of aromatherapy are incorporated into many salon services including scalp treatments.

Essential oils and scalp products containing vitamins and plant extracts address many health and wellness concerns. Therapeutic effects include invigorating the scalp, encouraging renewed hair



"Did you know that your sense of smell affects how you taste? When you have a stuffy nose from a cold, food tastes different or doesn't have a taste at all."



growth, relieving flaking associated with dryness or dandruff, increasing blood flow circulation and calming and soothing effect on the mind and body.

Aromatherapy expert, Blossom Kochar from India, shared the following list of recommended essential oils she uses in her custom recipes for the scalp. Note that essential oils should not be used directly on the skin, but blended with a base oil such as sweet almond oil or grapeseed oil. When blending oils, follow the recommended usage chart shown to the right.

#### RECOMMENDED USAGE

ESSENTIAL OIL	BASE OIL
20 - 60 drops	3.5 fl oz (100ml)
7 - 25 drops	1 fl oz (25ml)
3 - 5 drops	1 tsp (5ml)

Pre-mixed scalp therapy oils, whether purchased from a manufacturer or mixed by you, can be applied directly to the scalp prior to manipulations. Essential oils can also be mixed with shampoo, which can then be applied to the scalp prior to the manipulations of a scalp treatment or incorporated into a shampoo service.

#### Normal Hair and Scalp

Rosemary  
Chamomile

#### Oily Hair and Scalp

Patchouli  
Cedarwood  
Clary Sage

#### Dry Hair and Scalp

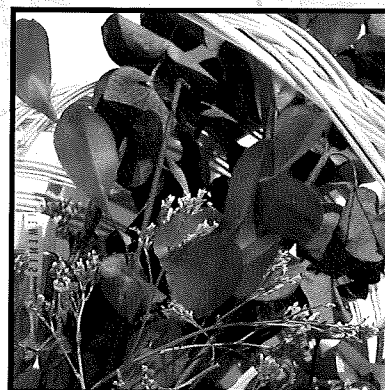
Ylang Ylang  
Sandalwood  
Lavender

#### Oily Dandruff

Lemon  
Rosemary  
Cedarwood  
Thyme

#### Alopecia (Hair Loss)

Sandalwood  
Bay  
Lavender  
Clary Sage  
Rosemary



Your understanding of the structure, growth and condition of the hair, along with your application of basic draping, shampooing and scalp massage techniques will serve as the foundation of your client's first contact with your skill level. Strive to display your best ability as you proudly offer your expertise. Remember how powerful your "touch" can be to the client. As you move through the service, ask how you are doing. Be sensitive to your client's needs, making adjustments and recommendations for hair condition, water temperature and massage manipulations. You will soon be hearing these important words from your client, "I can't wait until my next visit!" or "My hair looks great when I leave, but I really come for the massage during the shampoo service!"



### Build Your Critical Thinking Skills

In this chapter you have prepared yourself to meet the following Industry Standards for entry-level cosmetologists:

- Consult with clients to determine their needs and preferences as they relate to cosmetology services
- Provide hair related services in accordance with a client's needs or expectations
- Conduct services in a safe environment and take measures to prevent the spread of infectious and contagious disease
- Use a variety of salon products while providing client services
- Market professional salon products effectively

**It's Up to You** to know what to do. Using your training to this point, review the following case scenarios and think through how you would handle the challenge.

1. The client you have in your chair, Mrs. Brown, has been referred to you by one of your favorite clients, Mrs. James. When you performed a test for structural strength on Mrs. Brown's hair, the hair strand did not return to its curl pattern at all. Mrs. Brown would like to have a perm just like the one you gave Mrs. James last week. What would you do?
2. Several of your clients mention to you that the shampoo service they just received from your shampoo assistant was acceptable, but not as good as the service they receive from you. What do you do?

# Chapter 8

## DESIGN DECISIONS



After studying this chapter you will be able to . . .

1. Identify proportions used when creating a design for the human body and face

### DESIGN DECISION CONSIDERATIONS



### DESIGN COMPOSITION

3. Identify the design elements and principles used to compose designs

2. Recognize and analyze key areas to create and support the client's total image by using proper communication skills during the client consultation



### CLIENT CONSULTATION

Designs enrich almost every part of our lives. Wouldn't wallpaper be drab, wouldn't fabric be dull without design? Think of things you yourself have already designed – a valentine, a pinewood derby car, a flower garden, a holiday centerpiece, a scrapbook, a bedroom for a new baby, a web page . . . Design possibilities abound!

Design is even important in my life as a professor. I carefully design my lessons and all the chapters in your book. In this chapter you, too, will have the chance to see how important your design decisions can be to your career as a cosmetologist.

**You will be the professional that clients depend on to help them make important decisions about their hair, fashion and makeup. Your role as an image-maker will prove to be very rewarding for both you and your client.**

As an artist, a designer, you have great VALUE to offer your clients. You will not just be designing something *for* them. You might almost say you will be *designing them*, their hair, their face, their overall look. They will become the total image you help to create. That total image will flow from the BIG IDEA embedded in this chapter.

**Design decisions are based on the considerations you make about proportion, results of the client consultation and your understanding of design composition.**

You see that the BIG IDEA has three parts, Design Decision Considerations, Client Consultation and Design Composition. As you see in my plan for you, Design Decision Considerations involve your knowledge of the body and its proportions, Client Consultation your ability to communicate and Design Composition, your understanding of how to create exciting and successful hair and makeup styles. Refer to this chapter as you go through the other chapters in Unit 2.

