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Hair Care Practices in African-American Patients

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The unique properties of hair in those patients of African descent allow a limitless range of hair-care options. For the clinician, a general understanding of hair-care practices is an important aid in the diagnosis and treatment of hair shaft and scalp disorders. This review highlights common hair-care practices in women, men, and children of color. Cleansing, moisturizing, and styling techniques are discussed, as well as potential complications associated with their use.

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For men and women of color, a well-groomed head of hair serves as a visual marker for social affiliation and personal identity. Styling practices are determined by individual hair characteristics and preferences, but they are also influenced by prevailing cultural trends. For example, in the first half of the twentieth century, African-American musicians popularized slick, smooth conks and pompadours, but by the 1970s, the trend moved on to sky-high afros and beaded braids. Other factors that influence hair-care practices include convenience, ease of styling, occupation, recreational activities, and climate. The unique properties of hair of African origin are conducive to the expression of personal style. The curved, elliptically-shaped hair shaft^{1,2} lends itself to mouldable styles that retain their form and texture. When heat or chemical agents are applied to African hair, the strands temporarily or permanently release their intrinsic coil properties and can be fashioned in innumerable ways. This immense diversity of options for hair care is not without drawbacks. African hair is innately fragile. The inappropriate use of styling aids may weaken the hair shaft and lead to breakage, scalp inflammation, and potentially permanent hair loss. This review highlights hair care techniques commonly practiced by men, women, and children of African descent. The rationale for product selection and expected outcomes of styling techniques will be discussed, as well as dermatologic conditions associated with specific hair care practices.

Hair-Care Products

In almost every retail store in the United States, a special section of the hair care aisle is dedicated to shampoos, conditioners, styling aids, and hair color products for African-American men and women. Often, the specific ingredients are identical to those in products designed for other ethnicities. However, goods that are marketed towards African-American consumers are often carefully formulated and packaged to address concerns that are prevalent in hair of African origin. Products that advertise straightening, anti-inflammatory, and moisturizing properties are particularly popular.

Shampoos

Shampoos are detergents that cleanse the hair and scalp. Many African-American consumers choose conditioning shampoos that remove debris and leave the hair mildly to moderately coated with product to decrease hair combing friction and improve manageability.^{3,4} Because seborrheic dermatitis is a common concern, many people also select shampoos that contain keratolytic, antipruritic, and anti-Malassezia ingredients. In recent years, shampoos with ceramides have been shown to decrease hair breakage, a frequent complaint in African-American women.⁵

As in all ethnicities, shampoo frequency in patients of African descent often depends on hair texture and style. Men and women with a loose curl pattern may wash their hair several times a week. Individuals with more tightly coiled or complex hairstyles may shampoo less frequently, often at intervals greater than once every 2 weeks. Inadequate cleansing of the hair and scalp leaves a build up of damaging styling aids and may exacerbate seborrheic dermatitis.^{6,7} Proper shampoo frequency and product selection are an important part of the maintenance of healthy hair, and a dermatology consultation may often be required. It is important to remem-

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ber that there is no specific frequency of hair washing that will work for all patients. The physician and patient must work together to find a reasonable frequency that works for the patient's styling needs and prevents any untoward problems, such as over-dried hair shafts, underwashed scalp with seborrheic dermatitis, or irritant dermatitis of the scalp from product build-up. On average, women with heat-styled hair will wash weekly to every other week, whereas many women with natural hair may wash their hair 2 or more times weekly.

Conditioners

Hair conditioning is an important step in the care of African-American hair. Although shampoos remove excess sebum from the hair shaft, conditioners replace sebum with a synthetic substance that reduces static electricity and improves manageability, shine and moisture content.^{3,8} Many conditioner types are available, depending on the desired hair grooming benefit. African-American consumers often choose conditioners that contain protein, silicone, or polymers that soften and restore damaged hair. Leave-in conditioners are formulated as products that can be applied to damp hair and not rinsed out, as well as products that are applied to dry hair before styling. These products protect the hair shaft from heat and styling damage.

Hair Emollients

Cream, oil, and pomade emollients are primarily, but not exclusively, purchased by African-American consumers. These agents are applied immediately after and in between shampoos to improve manageability and add shine to dry hair. The products coat the hair shaft and repel water to maintain style integrity. Some products also tout the benefits of materials to stimulate hair growth, although no peer-reviewed data are available to support these claims. A layering technique of hair shaft emollients can be beneficial when the hair is dry or overstressed from heat or chemical applications. This technique includes applying a conditioner after rinsing out shampoo, followed by a leave-in conditioner to wet hair, followed by a leave-in pomade oil to wet hair, and lastly followed by the application of an additional oil-based product to coat dry hair before styling.

Pomades made of petrolatum, lanolin, and vegetable, animal, and mineral oils⁹ may be applied directly to the scalp to soothe dryness and irritation. This process, commonly called "greasing" the scalp, is often performed before the application of chemical straightener, heat styling, or while braiding. Ointments are also used to alleviate the signs and symptoms associated with inflammatory scalp conditions such as seborrheic dermatitis. However, application of these materials may actually exacerbate the underlying inflammatory process and mask disease that is amenable to standard anti-seborrheic treatment.¹⁰

Styling Aids

In general, styling aids such as gels, molding wax, mousse, and sprays bind hair strands into place. This condition is a desirable one for many African-American consumers because

a given style may last for days to weeks. However, gels and sprays may dry out the hair shaft, making it more susceptible to fracture.⁷ A regular cleansing schedule should be established to effectively remove product build-up and prevent long-term damage.

Hair Color

Hair color is a popular form of self-expression. From natural hues to vivid tints, people of color may often experiment with a dramatic new look. Hair color formulations are the same for all hair types. Coloring agents may be temporary, semi-permanent, or permanent, depending on the desired duration and final color. Although generally well tolerated, the application of hair coloring agents must be used with caution. Individuals sensitized to paraphenylenediamine, other dyes, and bleaching agents may develop allergic contact dermatitis with coloring services.¹¹ African-American patients have been shown to have greater rates of sensitization rates to paraphenylenediamine compared with caucasian patients.¹² In addition, hair dyes are known to weaken the hair shaft and precipitate hair breakage.³ (Fig. 1). This effect is especially magnified in people who have additional chemical services such as relaxers (discussed in the section "Women of Color: Chemical vs Natural Hair Styling"). Coloring and relaxers should ideally be spaced by days to weeks to decrease damage potential.

Women of Color: Chemical vs Natural Hair Styling

Typically, women are the most frequent consumers of hair-care goods and services in the African-American community. Women spend significant time and expense on daily hair grooming, both at home and at hair salons. Professional styling services are obtained for special occasions, as well as for basic maintenance. The stylist may be the primary hair caretaker, and weekly salon visits are not uncommon. At home, women use countless products and styling aids to achieve a desired look. Some women practice home hair care with



Figure 1 Woman with chemical curling agent and color that has weakened the hair, causing breakage.

Table 1 Hair Style Types

Short natural hair cut or afro
Long natural hair
Dreadlocks, twists, braids/cornrows
Chemically relaxed hair
Heat-styled hair
Braided extensions
Sewn-in weaves
Shaved hair

expert skill; others use inadequate or ill-chosen products and techniques that can damage hair and mask dermatologic conditions. Table 1 lists common hair styles worn by African American women.

A simplified model of black women’s hair grooming may be organized by relaxed vs. natural hair (Fig. 2). Braiding, weaving, and heat styling may overlap between the two. A relaxer is a chemical compound applied at varying intervals to permanently break hydrogen disulfide bonds along the hair shaft and release the tight curl pattern. In the African-American community, the terms relaxer and perm may be used synonymously, although a traditional permanent wave actually adds curl to straight hair. In an initial relaxer, the chemical is applied to the hair closest to the scalp and combed through to the tip to cover all “virgin” hair that has never been relaxed. The now-straightened hair is irreversibly altered and does not need retreatment. Depending on how fast the hair grows, relaxers are applied to new growth at several weeks intervals.

Relaxers have evolved over the decades, from early chemical mixtures containing lye, lard, and boiled eggs⁷ to current lye relaxers made with sodium or potassium hydroxide and no-lye relaxers containing guanidine hydroxide. The newest relaxer formulations also contain special compounds to soften, coat, and protect the hair shaft from damage (Fig. 3). Lye relaxers are traditionally applied as a salon service. The chemicals can be irritating, but short application times result in less drying potential and faster hair shaft penetration.

No-lye relaxers were developed for home use. The active ingredients cause less scalp irritation but require longer processing times and have more desiccating potential.³ No matter which relaxer is chosen, some hair damage inevitably occurs. A common place to note damage is at the junction



Figure 3 Woman of African descent who has healthy chemically relaxed hair with a crisp style held in place with hair gel.

between previously relaxed hair and virgin hair close to the scalp. Virgin hair can withstand greater traction, pulling, and brushing, but relaxed hair is inherently weaker, with breakage occurring at the transition point. Relaxers are best applied by experienced professionals with training in the appropriate application method and processing time. The home stylist may also apply relaxers, but he or she should be well versed in proper technique.

Natural hair is the other broad category of hair care practice in black women. In general, women with natural hair do not apply chemical products to permanently change their curl pattern. The choice is dependent on many factors: texture of hair, personal style preference, cultural trends, and even spiritual beliefs. In many people of color, the curl pattern is loosely rather than tightly coiled; therefore, extra measures to permanently straighten the shaft are not needed for style maintenance. Women with more tightly curled hair may wish to avoid the damaging aspects of chemical treatment. Their hair can be cut into attractive, modern styles that suit personal taste. It can also be heat-restructured, or fashioned

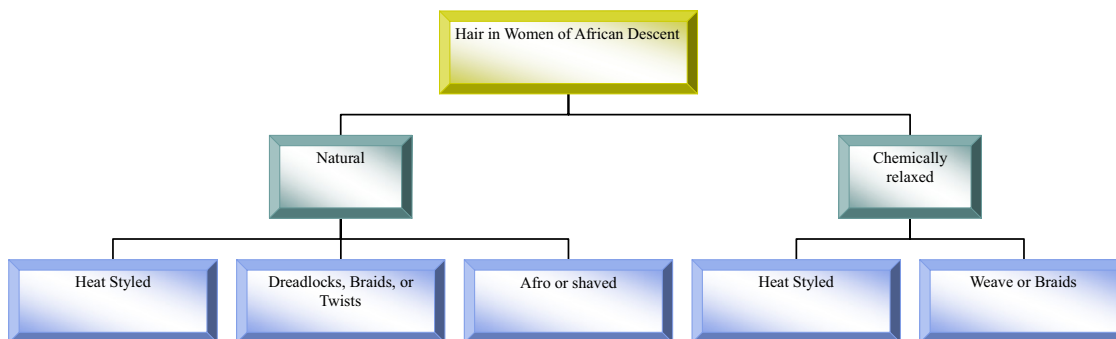


Figure 2 Line diagram of the typical styling techniques and how they overlap.



Figure 4 Close view of braids with additional purchased hair strands woven into natural hair. Notice color accent of added material and small amount of hair under tension from the weight of the braid.

in braids, twists or dreadlocks (Fig. 4). The dreads and twisted styles can be very intricate and long, giving added length to the hair as the retained hair that would normally be shed stays attached to the end of the twist or dread. Once the hair becomes at least shoulder length, the hair can then be styled using hair ornaments and bands that give a more conservative appearance to the natural style. However, it should be noted that not all natural hairstyles are inherently healthy or easy to maintain.

As in relaxed hair, heat styling, tight braiding, and misuse of products can contribute to problems with the hair shaft and scalp. When braids or other twisted styles are left in too long, there can be problems with weakening of the hair shaft and inadequate scalp cleansing. In general, the hair must be washed with a shampoo-containing product and water at least every 2 weeks, no matter what style is being used. Styles may still require frequent salon visits or in-home styling sessions to achieve a desired look.

Heat Styling

African-American women use heated tools to change the characteristics of their hair. The effects of heat are temporary; the style is lost when the hair comes into contact with water. Heat can be used to either straighten hair for movement, shine, and styling options, or it may be used to curl hair into attractive patterns. Heat is also used to dry, straighten, and smooth the hair shaft immediately after shampooing.

The pressing or hot comb is a classic styling tool that is still in use by African-American women. It is a metal comb with closely spaced teeth, heated either on a kitchen stove or in a compact, heated styling oven. The comb is passed through hair 1 or more times to achieve a desired amount of straightening. A petroleum-based product is often applied to the hair before pressing, to lock in shine and softness. LoPresti et al¹³ described hot comb alopecia as a form of scarring hair loss that results from hot petroleum dripping into the follicular

unit. This theory of scarring alopecia has not been proven. Additional heated implements include curling irons, flat irons, and crimpers. Blow dryers use forced heat to quickly evaporate excess water from the hair shaft, resulting in dry hair. If the forced air is directed in close proximity to the strands and brushed aggressively, blow-drying also results in hair straightening.

Hair care products, chemical services, and multiple heated styling tools are often used in a stepwise styling process to achieve a desired look. The combination of multiple styling modalities may contribute to hair shaft fragility and breakage. Trichorrhexis nodosa¹⁴ and bubble hair¹⁵ are common sequelae of heat styling. To avoid long-lasting and potentially permanent hair and scalp damage, care must be taken to use appropriate styling products and tools judiciously. Highlights of a typical day at an African-American hair salon are listed in Table 2.

Weaves and Hair Extensions

Hair extensions and weaves are now common across all segments of the American population. Women of African descent are experienced users of these devices and have developed ingenious techniques to simulate the appearance of longer or fuller hair. Hair extensions are added to both relaxed and natural hair.

Braided hair styles are plaits of varying lengths that have human or synthetic hair braided-in seamlessly with the natural scalp hair (Fig. 5). Depending on the growth rate and texture of the native hair, braids can last for many months. Braids are often worn by women of color to give their hair a break from chemical and heat styling. However, continuous unidirectional traction and tight braided patterns can lead to significant breakage and traction alopecia. In addition, the braided style may impede cleansing of the natural scalp hair and result in exacerbation of seborrheic dermatitis.

Weaves are strands of human or synthetic hair that are attached to the scalp or natural hair to make long, loose hair styles. Several methods of weave attachment are available. Commonly, natural scalp hair is braided in cornrows close to

Table 2 Salon Hair Styling

1. Hair is sectioned; pomade emollients are applied to the scalp and hairline
2. A lye-based relaxer is applied to hair close to the scalp and smoothed to coat the base of each strand
3. After several minutes, relaxer is rinsed, and hair is treated with a neutralizing agent. Moisturizing shampoo and conditioner are applied and rinsed
4. Hair is blown dry with forced air directed at the hair shaft
5. Styling pomades, sprays, and liquids are applied
6. Hair is sectioned and curling irons or flat irons are passed over locks to straighten hair to complete the style
7. Finishing hair sprays or spritzes are applied
8. The style is maintained at home, often covered with a protective cloth at night



Figure 5 Shown is an intricately braided style using thick wefts of synthetic hair woven into the braids of natural hair.

the scalp and then multi-strand wefts are sewn to the braids with thread that matches the hair color. Alternatively, adhesives may be placed on the edge of a weft and then affixed to the scalp. Hair extensions and falls may also be clipped to the hair with barrettes and combs.

Weaves give the appearance of glorious hair. However, years of chronic traction and neglect may take a devastating toll on the underlying natural scalp hair. Severe traction alopecia is a common endpoint. To maintain healthy scalp hair, braided or weaved-in styles should be applied with as little traction as possible. The direction of the braided hair should be changed frequently, and caution must be used in already over-processed hair.

Men of Color

Although men of color practice the entire range of hair care options, most choose to simplify their routine. This typically involves a few simple styling products, regularly spaced haircuts, and occasional coloring services. For added texture, men may brush petrolatum and waxy pomades into their hair to create subtle waves. A wave cap or do-rag (as in hair-do) is typically worn to maintain the style. Words, initials, and designs may be shaved into haircuts for added flare. Some African-American men grow long dreads, afros, or braid their hair into neat cornrows. Other men feel at their best when the scalp is completely shaved bare.

Acne keloidalis nuchae (AKN), a common dermatologic condition in African-American men, is manifested by firm, follicular papules on the posterior neck and scalp. As the papules progress, they can form large keloid-like plaques and subcutaneous abscesses. The direct cause of AKN has not been established; however, many authors believe that the condition is exacerbated by haircuts and shaving. When tightly curled hair is cut short, it leaves a sharp tip on the distal end of the shaft. As the hair grows, the sharp tip curves and pierces the scalp epithelium, resulting in an inflammatory reaction to hair keratins in the dermis. For patients prone to AKN, clinicians often recommend longer hairstyles that do not require frequent razor cuts.¹⁶

Children

The hair care practices of African-American boys and girls commonly reflect those of their parents and caregivers. Therefore, it is important to instill proper hair hygiene habits at an early age to prevent unhealthy patterns later in life. Early hair care experiences are also an excellent opportunity to teach children of color about the unique beauty and versatility of hair in its natural state.

African-American boys have styles similar to their male role models. They often go to a community barber shop for haircuts, or their hair is styled at home. For many African-American girls, hair care is a time-consuming and occasionally unpleasant early experience. Because of the tightly coiled, kinked structure of the hair shaft, combing and brushing can be a mildly painful procedure. To save time and reduce discomfort, styles are selected that can be left in for several days. Girls may have intricately sectioned, braided, and twisted hair that is secured with bright plastic beads and barrettes. These styles can then be rebraided as needed with minimal effort. On special occasions, heat restructuring may be performed.

Unfortunately, African-American girls may learn to sacrifice activities such as swimming and exercise to avoid contact with water and sweat. This practice may establish a lifelong aversion to physical activity. In addition, some caretakers avoid hair difficulties by having a child's hair relaxed at a very early age. Early chemical services may be a harbinger of lifelong hair damage.

In general, the best hair care practice for both children and adults alike is to never choose style over healthy hair. People of color should engage in grooming techniques that reflect personal taste but that also protect hair from potential long-term damage.

References

1. Thibaut S, Gaillard O, Bouhanna P, et al: Human hair shape is programmed from the bulb. *Br J Dermatol* 152:632-638, 2005
2. Lindelof B, Forslind B, Hedblad M, et al: Human hair form. *Arch Dermatol* 124:1359-1363, 1988
3. Draelos ZD: Nonmedicated grooming products and beauty treatments, in McMichael AJ and Hordinsky MK (eds): *Hair and Scalp Disorders*. New York, Informa Healthcare, 2008, pp 59-72
4. Brooks G, Burmeister F: Black hair care ingredients. *Cosmet Toilet* 103:93-96, 1988
5. Bernard BA, Franbourg A, François AM, et al: Ceramide binding to African-American hair fibre correlates with resistance to hair breakage. *Int J Cosmet Sci* 24(11):1-12, 2002
6. Draelos ZD: Black individuals require special products for hair care. *Cosmet Dermatol* 6:19-20, 1993
7. McMichael AJ: Ethnic hair update: Past and present. *J Am Acad Dermatol* 48:S127-S133, 2003
8. Gray J: Human hair, in McMichael AJ and Hordinsky MK (eds): *Hair and Scalp Disorders*. New York, Informa Healthcare, 2008, pp 1-17
9. Syed A, Kuhajda A, Ayoub H, et al: African-American hair: Its physical properties and differences relative to Caucasian hair. *Cosmet Toil* 110: 39-48, 1995
10. McMichael AJ, Callender VD: Hair and scalp disorders in pigmented skins, in Halder RM (ed): *Dermatology and Dermatological Therapy of Pigmented Skins*. Boca Raton, Florida, Taylor and Francis, 2006, pp 63-90

11. Askari SK, Warshaw EM: Allergic contact dermatitis, in McMichael AJ, Hordinsky MK (eds): *Hair and Scalp Disorders*. New York, Informa Healthcare, 2008, pp 239-266
12. Deleo VA, Taylor SC, Belsito DV, et al: The effect of race and ethnicity on patch test results. *J Am Acad Dermatol* 46:S107-S112, 2002
13. LoPresti P, Papa CM, Klingman AM: Hot comb alopecia. *Arch Dermatol* 98:234-238, 1968
14. Leonard LN, Gummer CL, Dawber RPR: Generalized trichorrhhexis nodosa. *Br J Dermatol* 103:85-90, 1980
15. Gummer CL: Bubble hair: A cosmetic abnormality caused by brief, focal heating of damp hair fibers. *Br J Dermatol* 131:901-903, 1994
16. McMichael AJ, Guzman-Sanchez D, Kelly AP: Folliculitis and the follicular occlusion triad, in Bologna JL, Jorizzo JL, Rapini RP (eds): *Dermatology*. Vol. 1, 2nd ed. Spain: Mosby, 2008, pp 517-531