

Contemporary African-American Hair Care Practices

As trends and sensibilities regarding hair practices shift, it is important for physicians to understand the needs of African-American patients in order to appropriately discuss healthy hair habits.

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Many African-American women desire to maintain healthy hair while wearing hairstyles that reflect their personality and individual style. Recent reports reveal that some African-American women decide to avoid exercising or water sports due to concerns about their hair.^{1,2} Given that 80 percent of African-American women are overweight or obese, avoiding exercise because of hair presents a public health challenge and an opportunity. Former US Surgeon General, Dr. Regina Benjamin, partnered with a popular hair show tailored toward African-American hair stylists to challenge them to create “exercise-friendly” hairstyles.³

In the late 1900s, the standard of beauty encompassed having long, straight hair, which continued into the twentieth century. In recent years, a movement to embrace “natural hair” has caused a significant transition. Many Black women no longer desire to chemically alter their natural curl patterns. Consumer trends research has confirmed this to be true with a documented 26 percent decrease in relaxer sales between 2008 and 2013 and a 17 percent decrease between 2006 and 2011.⁴ African-American hair blogs have risen in popularity in concert with the movement toward natural hair and healthier lifestyles.

This article will offer an update on current Black hair care practices, including scientific evidence and recommendations from popular natural hair care bloggers.

HAIR STRUCTURE

The biochemical composition of ethnic hair is identical to those with naturally straight hair, but the morphology on cross-section is oval and the strand appears as a twisted oval rod.⁵ Elliptical shaped strands and curved hair follicles make curly or kinky hair more prone to form knots and tangles compared to straight hair.⁶ Ethnic hair has decreased

water content and sebaceous gland activity that can lead to increased hair dryness as the natural oils are unable to migrate down the hair shaft, also increasing the risk of seborrheic dermatitis (SD).⁷ Moisturizing the hair strand is often important as the tight curl pattern makes the hair more susceptible to breakage with styling manipulation.⁸

HAIR CLEANSING

Shampoos targeted for curly hair can help to decrease hair combing friction and improve manageability.⁸ African-American women often limit shampooing to weekly or every other week to decrease the drying effects of frequent cleansing.⁵ The specific frequency of shampooing varies by activity level, with more active women often shampooing two to three times weekly. Inadequate scalp cleansing contributes to the high prevalence of SD among African-American women.⁸ Shampooing too frequently can increase hair breakage due to the decreased amount of sebum on the hair shaft.⁹

Using conditioning shampoos with protein-derived substances can help to strengthen the hair while shampoos with ceramides can help decrease hair breakage.^{10,11} Sulfates are surfactants largely responsible for the lathering quality of shampoos. These chemicals have been blamed for removing natural hair oils, damaging color-treated hair, causing frizziness, and irritating the skin and scalp,¹² arguably leading to the popularity of sulfate-free shampoos.

Conditioner washing, also termed “co-washing”, is a method of hair cleansing where a cleansing conditioner is used. The purpose is to keep the hair moisturized by decreasing the amount of sebum loss from cleansing with a shampoo. However, co-washing is not meant to completely replace shampooing.¹³ It is important to use a clarifying shampoo after co-washing three to four times to prevent product

TABLE 1. BENEFITS OF COMMON HAIR OILS USED^{18,19}

	Provides Moisture	Deep Conditions	Strengthens	Anti-Dandruff	Promote Hair Growth	Prevent Hair Damage	Prevent Hair Loss	Thickens Hair	Boost Shine	Anti-Frizz
Coconut Oil	☑	☑	☑	☑	☑	☑		☑		
Extra Virgin Olive Oil	☑	☑	☑	☑			☑			
Castor Oil	☑	☑			☑		☑	☑		
Jojoba Oil	☑	☑	☑	☑			☑			
Argan Oil	☑	☑			☑				☑	☑
Avocado Oil	☑	☑	☑						☑	
Almond Oil	☑		☑		☑		☑		☑	
Tea Tree Oil	☑	☑		☑	☑		☑			

buildup.¹⁴ Recently, a popular cleansing conditioner has been accused of causing hair loss.¹⁵ The photos associated with the cases demonstrate circular patches of non-scarring hair loss consistent with Alopecia Areata.

Pre-shampooing, also called “pre-pooing”, is a popular method involving application of various natural oils and/or homemade recipes containing eggs (to add protein) and honey (to add moisture) to the hair and scalp to prepare the hair for the manipulation and stress of shampooing. Various natural oils are often used to help lift the adherent scales in severe seborrheic dermatitis or seborrheic dermatitis, similar to the method which dermatologists often use with Fluocinolone (Derma-Smoother®) oil overnight prior to shampooing. Table 1 lists common natural oils and their suggested hair benefits, although primary research confirming this is lacking. Coconut oil is one of the most popular oils because it can penetrate the hair shaft and reduce protein loss making it a popular pre-shampoo agent.^{16,17}

HAIR CONDITIONING

Hydrating conditioners for ethnic hair contain emollients to decrease hair dryness.⁵ Strengthening conditioners contain proteins, silicones, and polymers to help damaged hair.⁸ Silicones, such as dimethicone, coat the hair strand to protect from dehydration.²⁰ Many African-American women desire to use dimethicone-free conditioners because they are water insoluble. This property often requires more sulfate-

containing surfactants to remove the product from the hair.

Deep conditioners are made of thicker creams with emollients that can penetrate the hair shaft. Heat is needed for the hair shaft to swell so the conditioner can penetrate inside over the cracks in the hair cuticle. Moisturizing deep conditioners promote moisture retention and hair elasticity while protein deep conditioners increase hair strength.

“Hot oil treatments” infuse deep moisture and can help to improve hair strength. The hair oils used for pre-shampooing can be used for hot oil treatments. The oils are warmed for a few minutes in a water bath prior to applying to the hair. Once the oil is applied, the individual can sit under a dryer or wear a plastic shower cap to allow the oils to penetrate the hair shaft.

Leave-in conditioners are applied to damp hair to help improve manageability by strengthening and making it smoother for hairstyling.²¹ Also, leave-in conditioning products can be used to protect hair from heat and styling damage with humectants for moisture retention.^{8,21}

MOISTURIZING

For many generations, oiling or greasing the scalp has been a common practice amongst African-American women in an attempt to combat hair dryness. Many hair emollient products advertise hair growth stimulation and contain different oils to entice consumer usage. Applying hair oil/grease to hair edges can contribute to pomade acne along

the forehead and temples.⁷ Furthermore, oiling the scalp can promote an environment for yeast to feed and grow, worsening the occurrence of SD. Wright et al demonstrated that use of hair oil/grease less often than daily (every two weeks) was significantly associated with SD. Using antiseborrheic shampoos for the scalp for 10 minutes then following with a hydrating shampoo for the hair at least once weekly is a combination that I call the “one-two punch” to help African-American women overcome their apprehension about using prescription anti-seborrheic shampoos.²²

Moisturizing the hair with a lightweight moisturizer, as needed, can be used to combat dryness. Using a wide-tooth comb can help to reduce hair damage induced by hair tugging with combing. Wearing a satin bonnet and/or sleeping on a satin pillowcase nightly can also reduce hair dryness and prevent hair breakage that can occur with use of cotton linens.

CHEMICAL HAIR STRAIGHTENING

Chemical relaxers, also called perms, are used to straighten curly hair. A virgin relaxer is used on hair that has never had a chemical relaxer applied. “Touch-ups” are the application of the chemical relaxer to new growth only, typically every six to eight weeks. Cystine, citrulline, and arginine in the hair structure have been found to be reduced with use of chemical relaxers possibly accounting for the increased hair fragility seen in chemically relaxed hair.²³ Chemical relaxers can cause hair to be more prone to breakage at the transition of previously relaxed hair and virgin hair.

Two types of chemical relaxers are used to chemically straighten hair: lye and no-lye relaxers. Lye-containing relaxers, formulated with sodium hydroxide, should be applied by licensed cosmetologists.²³ Sodium hydroxide relaxers have a shorter application time leading to less drying potential and faster hair penetration. No-lye relaxers, formulated with guanidine hydroxide, cause less scalp irritation and are marketed for at-home application.^{8,23} Although, it has a longer processing time and more drying potential.⁸ In our experience, we have seen more breakage from no-lye relaxers, possibly because they are more often applied by non-salon professionals with likely improper technique. Prior to application, a petroleum base is applied to the scalp for protection against scalp irritation and chemical burns.

Two possible adverse effects of chemical relaxer use are central centrifugal cicatricial alopecia (CCCA) and traction alopecia (TA), especially when braids and weaves are applied to previously relaxed hair.²³ Callender et al reported that early CCCA can present with occult hair breakage at the vertex or crown of the hair scalp. Multifactorial causation, including a family history and certain hair care practices causing traction and inflammation, are believed to be

Recommendations for Proper Flat Iron Use:

- Set temperature no higher than 175°C or low/medium setting
- Use a heat protectant product containing dimethicone to minimize hair damage
- Limit flat iron use to once a week, especially in those with chemically treated hair
- Reduce the amount of hair breakage with one to two passes of small sections of hair

responsible for causing CCCA. Direct correlation of CCCA and chemical relaxer use has not been demonstrated, but case studies have been published that linked the two together.²⁵ A larger cohort study is needed to further study if there is indeed a relationship between the use of chemical relaxers and CCCA.

THERMAL STRAIGHTENING

Hot combing, also termed “hair pressing,” is a temporary hair straightening method where a metal comb is placed on a stovetop or in an electric marcel stove to heat the comb to a high temperature. Adverse effects of thermal straightening are scalp and/or nape burns, especially in children.²⁶ Oils or pomades are used to straighten hair, allowing it to last until exposure to excess humidity or water. Oil products containing petroleum were first suspected of causing scarring alopecia in African-American women, first described by Lopresti et al as “hot comb alopecia.”

Flat ironing is a hair straightening method used by

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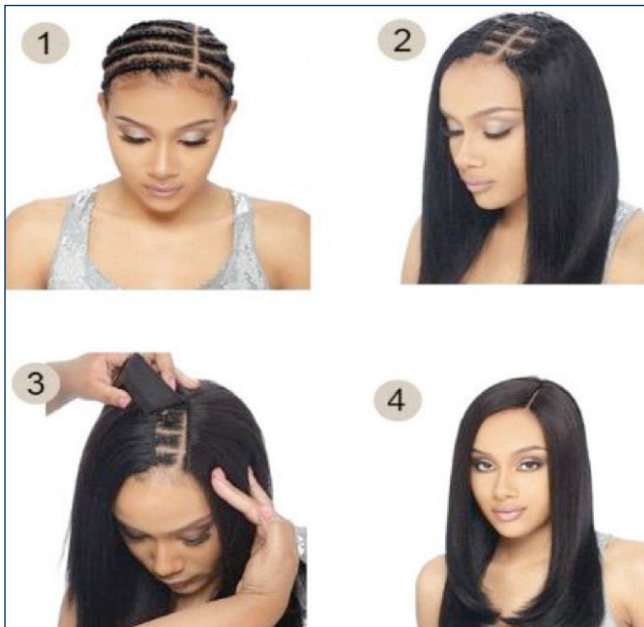


Figure 1. Sewn-In Weave

women of all ethnicities and hair types. Ceramic flat irons conduct heat throughout the hair more effectively at a lower temperature with a decreased amount of secondary hair damage. Incorrect usage of a flat iron can cause Trichorrhexis nodosa (TN).²⁸ Many women utilize flat ironing multiple times per week to maintain straightened hairstyles while inadvertently causing additional hair damage. The heat from the flat iron alters the hydrogen bonds of the inner hair structure which also damages the outer protective hair cuticle leading to TN. Setting the flat iron to 175°C-215°C for five minutes can cause hair damage.²⁸ There is a decreased threshold for damage when an increased amount of heat is applied to damp or chemically treated hair.

Keratin treatments were initially marketed as “Brazilian Blowouts.” The process involves, applying a formaldehyde or non-formaldehyde containing solution to the hair, followed by blow-drying and flat ironing to seal the straightened hair appearance for two to two-and-a-half months. It is marketed that it can be safely used by those with chemically relaxed hair, highlights, and color-treated hair. A controversy associated with keratin treatments is the use of formaldehyde in the product. The health problems associated with formaldehyde exposure include blindness, bloody noses, skin sensitivity, breathing difficulties, and an increased risk of cancer.^{29,30} Newer keratin treatments are being marketed as formaldehyde-free in order to increase consumer use after the detrimental effects about formaldehyde became public knowledge. However, those products marketed as



Figure 2. Preservation of the Anterior Hairline called the “Fringe Sign” in Traction Alopecia



Figure 3. Traditional Locs are thicker while Sisterlocks are thinner in caliber

formaldehyde-free have been found to be converted to formaldehyde with the use of high heat.³¹

TRACTION HAIRSTYLES

Traction hairstyles include braids, cornrows, ponytails, sewn-in or glued-in weaves (shown in Figure 1), twists, dreadlocks, and sisterlocks. Cornrows and braids are often used to decrease the frequency of using chemical relaxers and thermal straightening by giving the hair “a break” from chemicals and/or to allow the previously relaxed hair to “grow out.” These types of hairstyles involve manipulating the hair into formations, which can place prolonged

tension on the follicles that can lead to traction folliculitis, traction alopecia, and irreversible scarring alopecia.³² TA is hair loss secondary to tension placed on the follicles often manifesting as thinning of hair along the hairline with preservation of the anterior hairline, called the fringe sign shown in Figure 2.³³ It is recommended to only apply braids, cornrows, and hair weaves to natural hair, as the risk of TA increases when traction styles are applied to relaxed hair.³⁴ CCCA has been associated with wearing braids, cornrows, and sewn-in & glued-in weaves for cumulative years.²⁵ Less frequent cleansing and excess hair oil use with hair weave use can increase the incidence of SD and tinea capitis.²²

Dreadlocks (which many prefer the term Locs) and Sisterlocks (shown in Figure 3) involve sectioning natural hair and palm rolling or twisting the hair using balm or wax to “lock” the hair. “Locking” the hair is a permanent process until the locs are cut off, but more recently techniques have been developed to pick out locs with the combination of water and conditioners. Dreadlocks have a rich history with the Rastafarian culture, but are often worn today due to the low maintenance. Sisterlocks are similar to dreadlocks except the locks are created with a special interlocking technique to make locs thinner and lighter.

HAIR COLOR

Hair color is used by all hair types for numerous reasons and come in various colors. There is no difference in hair color formulations for different hair types.⁸ Hair color application can weaken the hair and induce hair damage. Permanent hair color is associated with more hair drying and breakage due to formulation with ammonia and peroxide.^{35,36} Also, hair dye use can cause irritant or allergic dermatitis.²¹

Henna is used by those with natural hair to strengthen, deep condition, and even color hair every one to two months. This is a hair care routine that has been used for thousands of years as hair dye in the East Indian culture. On black/brown hair it appears reddish-orange in sunlight.³⁵ Black henna is a known cause of allergic contact dermatitis and therefore is recommended to avoid as a hair color.³⁷

CONCLUSION

African-American hair care can be a complex process. Many of the habits of Black hair care practices are based on traditions passed down through generations. New practices, such as co-washing & pre-pooing, stem from the desire to have healthy hair without the use of harsh products and chemicals. It is important for healthcare providers to be knowledgeable of current practices in order to appropriately discuss healthy hair habits in a culturally respective manner. ■

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