

Military Grooming Standards and Their Impact on Skin Diseases of the Head and Neck

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PRACTICE POINTS

- The short frequent haircuts required to maintain a tapered appearance of the hair per US military regulations may lead to inflammatory hair disorders such as acne keloidalis nuchae, dissecting cellulitis of the scalp, and folliculitis decalvans.
- The mainstay of prevention for these conditions is avoidance of inciting factors such as short haircuts, tight-collared shirts, frequent shaving, or tight hairstyles.
- Early identification and treatment of inflammatory follicular and scarring disorders can prevent further scarring, pigmentation changes, and/or disfigurement.

Military grooming standards assure that soldiers are able to meet their occupational demands and maintain a respectable appearance; however, following these standards can unmask or exacerbate various skin diseases of the head and neck. In this article, we emphasize some of the more common disorders caused by military grooming standards, including a discussion of the underlying pathogenesis and management considerations.

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The US military enforces grooming standards to ensure the professional appearance and serviceability of soldiers in all operational settings. Although most individuals are able to uphold these regulations without incident, there is a growing cohort of servicemembers with

skin diseases that were exacerbated or even initiated by haircuts, hairstyling, and shaving required to conform to these grooming standards. These skin diseases, which can affect both sexes and may not be appreciated until years into a soldier's service commitment, can have consequences related to individual morbidity and medical readiness for deployment, making it an important issue for medical practitioners to recognize and manage in servicemembers.

This review highlights several disorders of the pilosebaceous unit of the head and neck that can be caused or exacerbated by military grooming standards, including inflammatory hair disorders, traction alopecia, and pseudofolliculitis barbae. Discussion of each entity will include a review of susceptibility and causality as well as initial treatment options to consider (Table).

Inflammatory Hair Disorders

The proper appearance of servicemembers in uniform represents self-discipline and conformity to the high standards of the military. This transition occurs as a rite of passage for many new male recruits who receive shaved haircuts during their first days of basic training. Thereafter, male servicemembers are required to maintain a tapered appearance of the hair per military regulations.¹ Clipping hair closely to the scalp or shaving the head entirely are authorized and often encouraged; therefore, high and tight haircuts and buzz cuts are popular among male soldiers due to the general ease of care and ability to maintain the haircut themselves. Conversely, these styles require servicemembers

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Common Skin Diseases of the Head and Neck Caused or Exacerbated by Military Grooming Standards

Condition	Risk Factors	Presentation	Management
Acne keloidalis nuchae	Age 25–50 y, black males, frequent haircuts, wearing tight-collared shirts	Papules and/or pustules along the occipital hairline, keloidlike plaques	First line: avoid mechanical friction and short haircuts, TCS, ILS, oral retinoids, topical and oral antibiotics; second line: 1064-nm Nd:YAG laser, 810-nm diode laser, CO ₂ laser, UVB light therapy, and radiotherapy
Dissecting cellulitis of the scalp	Age 20–40 y, black males, frequent short haircuts	Boggy suppurative nodules, cysts, abscesses, and sinus tracts on the scalp	First line: topical and oral antibiotics, topical retinoids, ILS, incision and drainage of fluctuant nodules, isotretinoin +/- rifampin; second line: oral zinc supplementation, TNF- α inhibitors, oral corticosteroids, laser therapies, radiotherapy, and surgical management with wide local excision or total scalpectomy
Folliculitis decalvans	Middle-aged men (no racial predilection), close haircuts	Pustules on the scalp, alopecia	First line: antibacterial shampoo, TCS, topical antibiotics, combination oral antibiotic therapy with rifampin and clindamycin; second line: oral isotretinoin, ILS
Pseudofolliculitis barbae	Black and Hispanic males, females with hirsutism, frequent close shaving	Papules and pustules distributed in the beard area	First line: use a new or electric razor, leave hair at least 2 mm in length, shave in the direction of hair growth, topical antibiotics, TCS, retinoids, glycolic acid; second line: laser hair removal, electrolysis
Traction alopecia	Frequently seen in black and Hispanic females but all races are susceptible, tight hairstyles	Hair thinning/loss along the frontal and temporal hairlines	First line: stop tight hairstyling; second line: topical and oral antibiotics, TCS, ILS, minoxidil
Keloids	Age 10–30 y; black, Hispanic, and Asian individuals	Firm elevated scars extending past original wound edges on the scalp, neck, and face related to grooming practices	First line: prevention (eg, proper wound care, avoidance of tattoos and/or piercings), ILS; second line: ILS in combination with adjuvant injections (eg, 5-fluorouracil), excision, silicone sheeting, cryotherapy, radiation, laser treatment

Abbreviations: TCS, topical corticosteroid; ILS, intralesional corticosteroid; TNF, tumor necrosis factor.

to get weekly or biweekly haircuts that in turn can lead to chronic trauma and irritation. In more susceptible populations, inflammatory hair disorders such as acne keloidalis nuchae (AKN), dissecting cellulitis of the scalp, and folliculitis decalvans may be incited.

Acne Keloidalis Nuchae—Acne keloidalis nuchae, also called folliculitis keloidalis, is a chronic scarring folliculitis presenting with papules and plaques on the occiput and nape of the neck that may merge to form hypertrophic scars or keloids. This disorder most commonly develops in young black men but also can be seen in black females and white patients of both sexes.² Acne keloidalis nuchae shares many histologic features with central centrifugal cicatricial alopecia, which may suggest

a similar pathogenesis. Apart from frequent haircuts, tight-collared shirts, such as those on military service uniforms, also have been associated with AKN. Because of these suspected etiologies, first-line treatment focuses on preventing further trauma by avoiding mechanical irritation and short haircuts, which may be difficult in the military setting. For earlier disease stages, topical and intralesional corticosteroids, oral retinoids, and topical and oral antibiotics are used for their anti-inflammatory properties.³ In refractory cases, surgical excision with healing by secondary intention may be attempted.⁴ Additional treatment options include the 1064-nm Nd:YAG and 810-nm diode lasers,³ UVB light therapy, CO₂ laser, and radiotherapy.

Dissecting Cellulitis of the Scalp—Similar to AKN, dissecting cellulitis of the scalp is another inflammatory hair disorder that is worsened by frequent short haircuts.⁵ Dissecting cellulitis of the scalp is a primary cicatricial alopecia proposed to be secondary to follicular occlusion. It often is seen in black males aged 20 to 40 years and is characterized by boggy suppurative nodules and cysts with draining sinus tracts, abscesses, and resultant scarring alopecia. Dissecting cellulitis of the scalp is part of the follicular occlusion tetrad, which also includes hidradenitis suppurativa, acne conglobata, and pilonidal cysts. First-line therapies include topical and oral antibiotics, topical retinoids, intralesional corticosteroids, incision and drainage of fluctuant nodules, and oral isotretinoin with or without rifampin. Alternative treatments include oral zinc supplementation, oral corticosteroids, tumor necrosis factor α inhibitors, laser therapies, radiotherapy, and surgical management with wide local excision or total scalpectomy.^{6,7}

Folliculitis Decalvans—Folliculitis decalvans is a primary cicatricial alopecia of the scalp that most commonly presents in middle-aged men without racial predilection.⁸ Folliculitis decalvans presents with multiple pustules, crusts, tufted hairs, and perifollicular hyperkeratosis, leading to scarring of the scalp, which often is most severe on the posterior vertex. *Staphylococcus aureus* is a presumed player in the pathogenesis of folliculitis decalvans with superantigens causing release of cytokines stimulating follicular destruction. Close haircuts in conformation with military grooming standards can contribute to this condition due to mechanical trauma and subsequent inflammation. It typically is diagnosed clinically, but if histologic confirmation is desired, a sample from the periphery of early lesions is preferred.⁹ Initial treatment consists of antibacterial shampoos, topical corticosteroids, topical antibiotics, and combination oral antibiotic therapy with rifampin and clindamycin. Studies using oral isotretinoin have shown variable results,^{10,11} and the most effective treatment of recalcitrant lesions appears to be intralesional corticosteroids.¹²

Follicular and Scarring Disorders

In addition to inflammatory hair disorders, military grooming standards have been linked to the pathogenesis of diseases such as pseudofolliculitis barbae, traction alopecia, and keloids, specifically through irritation of the face, neck, and scalp, as well as damage to the follicular unit.⁵ These conditions develop because grooming regulations necessitate certain hair practices such as close shaving of facial and neck hair and keeping long hair secured relatively tightly to the scalp.

Pseudofolliculitis Barbae—Males in the military are obligated to keep their faces clean-shaven.¹ They may acquire a medical waiver for a specified beard length if deemed appropriate by the treating physician,¹ which often leads to the need for continual waiver renewal

and also may warrant possible negative perception from peers, subordinates, and leadership. One of the most prevalent conditions that is closely associated with shaving is pseudofolliculitis barbae. The combination of close shaving and tightly coiled hairs causes the hairs to grow toward and penetrate the skin, particularly on the neck.¹³ In some cases, the hairs never actually exit the skin and simply curl within the superficial epidermis. A foreign body reaction often arises, leading to inflamed follicular papules and pustules. Affected individuals may experience pain, pruritus, and secondary infections. Postinflammatory hyperpigmentation, hypertrophic scarring, and keloid formation are common sequelae in cases of untreated disease. Pseudofolliculitis barbae also is exacerbated by pulling the skin taut and shaving against the grain, making behavioral interventions a key component in management of this condition. Preliminary recommendations include using a new or electric razor, leaving hair at least 2 mm in length, and shaving in the direction of hair growth. Other treatment options with varying effectiveness include daily alternation of a mild topical corticosteroid and one of the following: a topical retinoid, topical antibiotics, or glycolic acid. The only treatments that approach definitive cure are laser hair removal and electrolysis for which patient skin type plays an important role in laser selection.⁵

Traction Alopecia—Similar to their male counterparts, female military members must also present a conservative professional appearance, including hair that is neatly groomed.¹ If the length of the hair extends beyond the uniform collar, it must be inconspicuously fastened or pinned above the collar. As a result, loosely tied hair is unauthorized, and females with long hair must secure their hair tightly on a daily basis. Traction alopecia results from tight hairstyling over a prolonged period and commonly affects female soldiers. The etiology is presumed to be mechanical loosening of hair within the follicles, leading to inflammation. Although traditionally seen in black women along the frontal and temporal hairlines, traction alopecia has been identified in individuals of all races and can occur anywhere on the scalp.⁵ Perifollicular erythema may be the first sign, and papules and pustules may be visible. Although the hair loss in traction alopecia usually is reversible if the traction is ceased, end-stage disease may be permanent.⁶ Halting traction-inducing practices is paramount, and other treatment options that may slow progression include topical or oral antibiotics and topical or intralesional corticosteroids. Recovery of hair loss also may be aided by topical minoxidil.⁵

Keloids—Keloid formation is an important pathology to address, as it may result from several of the aforementioned conditions. Keloids are most commonly seen in black individuals but also can occur in Hispanic and Asian patients. The cause has not been fully elucidated but is thought to be a combination of dysfunctional fibroblasts with a genetic component based on racial predilection and twin concordance studies.⁵ The chest, shoulders, upper back, neck, and

earlobes are particularly susceptible to keloid formation, which can appear from 1 to 24 years following dermal trauma.⁵ Unlike hypertrophic scars, keloids generally do not regress and frequently cause discomfort, pruritus, and emotional distress. They also can hinder wearing a military uniform. Sustained remission is problematic, making prevention a first-line approach, including proper care of wounds when they occur and avoiding elective procedures such as piercings and tattoos. Intralesional corticosteroids, adjuvant injections (eg, 5-fluorouracil), silicone sheeting, cryotherapy, radiation, laser therapy, and excision are some of the treatment options when keloids have formed.⁵

Final Comment

It is important to recognize military grooming standards as a cause or contributor to several diseases of the head and neck in military servicemembers. Specifically, frequent haircuts in male soldiers are associated with several inflammatory hair disorders, including AKN, dissecting cellulitis of the scalp, and folliculitis decalvans, while daily shaving predisposes individuals to pseudofolliculitis barbae with possible keloid formation. Females may develop traction alopecia from chronically tight, pulled back hairstyles. All of these conditions have health implications for the affected individuals and can compromise the military mission. Awareness, prevention, and recognition are key along with the knowledge base to provide anticipatory avoidance and initiate appropriate treatments, thereby mitigating these potential consequences.

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