Management of Facial Hair in Women

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Facial hair in women generally is considered to be unwanted. The presence of facial hair in women and its associated conditions, treatmens options, and management strategies are not commonly discussed in most medical care settings. The United States military, which includes more than 220,000 active-duty female service members, has strict and specific grooming standards, which for many years have been a hot topic focused primarily on male service members. Facial hair in women is not addressed in military grooming standards across the services, but one can postulate that the expectation is for women not to have facial hair and to adhere to grooming standards. Women can be impacted considerably by pseudofolliculitis barbae (PFB) as well as hirsutism and its many causes. This comprehensive review discusses management options for women with facial hair in the military; however, the treatment options addressed also are applicable to civilians. Given the psychosocial implications and the variety of treatment options available, it is crucial for health care practitioners to be aware of the diagnosis and management of this common medical condition and its social implications.

Facial hair growth in women is complex and multifaceted. It is not a disease but rather a part of normal anatomy or a symptom influenced by an underlying condition such as hypertrichosis, a hormonal imbalance (eg, hirsutism due to polycystic ovary syndrome [PCOS]), mechanical factors such as pseudofolliculitis barbae (PFB) from shaving, and perimenopausal and postmenopausal hormonal shifts. Additionally, normal facial hair patterns can vary substantially based on genetics, ethnicity, and cultural background. Some populations may naturally have more visible vellus or terminal hairs on the face, which are entirely physiologic rather than indicative of an underlying disorder. Despite this, societal expectations and beauty standards across many cultures dictate that facial hair in women is undesirable, often associating hair-free skin with femininity and attractiveness. This perception drives many women to seek treatment—not necessarily for medical reasons, but due to social pressure and aesthetic preferences.

Hypertrichosis, whether congenital or acquired, refers to excessive hair growth that is not androgen dependent and can appear on any site of the body. Causes include genetic predisposition, porphyria, thyroid disorders, internal malignancies, malnutrition, anorexia nervosa, or use of medications such as cyclosporine, prednisolone, and phenytoin.[1] Hirsutism, by contrast, is characterized by the growth of terminal hairs in women at androgen-dependent sites such as the face, neck, and upper chest, where coarse hair typically grows in men.[2] This condition often is associated with excess androgens produced by the ovaries or adrenal glands, most commonly due to PCOS although genetic factors may contribute.

Before initiating treatment, a thorough history and physical examination are essential to determine the underlying cause of conditions associated with facial hair growth in women. Clinicians should assess for signs of hyperandrogenism, menstrual irregularities, virilization, medication use, and family history. In cases of a suspected endocrine disorder, further laboratory evaluation may be warranted to guide appropriate management. While each cause of facial hair growth in women has unique

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The eTable is available in the Appendix online at www.mdedge.com/cutis.
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management considerations, the shared impact on psychosocial well-being and adherence to grooming standards in the US military warrants an all-encompassing yet targeted approach. This comprehensive review discusses management options for women with facial hair in the military based on a review of PubMed articles indexed for MEDLINE conducted in November 2024 using combinations of the following search terms: *hirsutism*, *facial hair*, *pseudofolliculitis barbae*, *women*, *female, military*, *grooming standards*, *hyperandrogenism*, and *hair removal*.

Treatment Modalities

The available treatment modalities, including their mechanisms, potential risks, and considerations are summarized in the eTable.

Mechanical—Shaving remains one of the most widely utilized methods of hair removal in women due to its accessibility and ease of use. It does not disrupt the anagen phase of the hair growth cycle, making it a temporary method that requires frequent repetition (often daily), particularly for individuals with rapid hair growth. The belief that shaving causes hair to grow back thicker or faster is a common misconception. Shaving does not alter the thickness or growth rate of hair; instead, it leaves a blunt tip, making the hair feel coarser or appear thicker than uncut hair.[3] Despite its relative convenience, shaving can lead to skin irritation due to mechanical trauma. Potential complications include PFB, superficial abrasions known more broadly as shaving irritation, and an increased risk for infections such as bacterial or fungal folliculitis.[4]

Chemical depilation, which uses thioglycolates mixed with alkali compounds, disrupts disulfide bonds in the hair, effectively breaking down the shaft without affecting the bulb. The depilatory requires application to the skin for approximately 3 to 15 minutes depending on the specific formulation and the thickness or texture of the hair. While it is a cost-effective option that easily can be done at home, the chemicals involved may trigger irritant contact dermatitis or folliculitis and produce an unpleasant odor from hydrogen disulfide gas.[5] They also can lead to PFB.

Epilation removes the entire hair shaft and bulb, with results lasting approximately 6 weeks.[6] Methods range from using tweezers to pluck single hairs and devices that simultaneously remove multiple hairs to hot or cold waxing, which use resin to grip and remove hair. Threading is a technique that uses twisted thread to remove the hair at the follicle level; this method may not alter hair growth unless performed during the anagen phase, during which repeated plucking can damage the matrix and potentially lead to permanent hair reduction.[5] Common adverse effects include pain during removal, burns from waxing, folliculitis, PFB, postinflammatory hyperpigmentation, and scarring, particularly when multiple hairs are removed at once.

Pharmacologic—Pharmacologic therapy commonly is used to manage hirsutism and typically begins with a trial of combined oral contraceptives (COCs) containing estrogen and progestin, which are considered the first-line option unless contraindicated.[7] If response to COC monotherapy is inadequate, an antiandrogen such as spironolactone may be added. Combination therapy with a COC and an antiandrogen generally is reserved for severe cases or patients who previously have shown suboptimal response to COCs alone.[7] Patients should be counseled to discontinue antiandrogen therapy if they become pregnant due to the risk for fetal undervirilization observed in animal studies.[8,9] Typical dosing of spironolactone, a competitive inhibitor of 5-α-reductase and androgen receptors, ranges from 100 mg to 200 mg daily.[10] Reported adverse effects include polyuria, postural hypotension, menstrual irregularities, hyperkalemia, and potential liver dysfunction. Although spironolactone has demonstrated tumorigenic effects in animal studies, no such effects have been observed in humans.[11]

Eflornithine hydrochloride cream 13.9% is the first topical prescription medication approved by the US Food and Drug Administration for reduction of unwanted facial hair in women.[12] It works by irreversibly blocking the activity of ornithine decarboxylase, an enzyme involved in the rate-limiting step of polyamine synthesis, which is essential for hair growth. In a randomized, double-blind clinical trial evaluating its effectiveness and safety, twice-daily application for 24 weeks resulted in a clinically meaningful reduction in hair length and density (measured as surface area) compared with the control group.[13] When eflornithine hydrochloride cream 13.9% is discontinued, hair growth gradually returns to baseline. Studies have shown that hair regrowth typically begins within 8 weeks after treatment is stopped; within several months, hair returns to pretreatment levels.[14] Adverse effects of eflornithine hydrochloride cream generally are mild and may include local irritation and acneform eruptions. In a randomized bilateral vehicle-controlled trial of 31 women, both eflornithine and vehicle creams were well tolerated, with 1 patient reporting mild tingling with eflornithine that resolved with continued use for 7 days.[15]

Procedural—Photoepilation therapies widely are considered by dermatologists to be among the most effective methods for reducing unwanted hair.[16] Laser hair removal employs selective photothermolysis, a principle by which specific wavelengths of light target melanin in hair follicles. This method results in localized thermal damage, destroying hair follicles and reducing regrowth. Wavelengths between 600 and 1100 nm are most effective for hair removal; widely used devices include the ruby (694 nm), alexandrite (755 nm), diode (800-810 nm), and long-pulsed Nd:YAG lasers (1064 nm). Cooling mechanisms such as cryogen spray or contact cooling often are employed to minimize epidermal damage and lessen patient discomfort.

The hair matrix is most responsive to laser treatment during the anagen phase, necessitating multiple sessions

to ensure all hairs are treated during this optimal growth stage. Generally, 4 to 6 sessions spaced at intervals of 4 to 6 weeks are required to achieve satisfactory results.[17] Matching the laser wavelength to the absorption properties of melanin—the target chromophore—enables selective destruction of melanin-rich hair follicles while minimizing damage to surrounding skin.

The ideal laser wavelength primarily affects melanin concentrated in the hair bulb, leading to follicular destruction while reducing the risk for unintended depigmentation of the epidermis; however, competing structures in the skin (eg, epidermal pigment) also can absorb laser energy, diminishing treatment efficacy and increasing the risk for adverse effects. Shorter wavelengths are effective for lighter skin types, while longer wavelengths such as the Nd:YAG laser are safer for individuals with darker skin types as they bypass melanin in the epidermis.

It is important to note that laser hair removal is ineffective for white and gray hairs due to the lack of melanin. As a result, alternative methods such as electrolysis, which does not rely on pigment, may be more appropriate for permanent hair removal in individuals with nonpigmented hairs. Research indicates that combining topical eflornithine with alexandrite or Nd:YAG lasers improves outcomes for reducing unwanted facial hair.[18]

In military settings, laser hair removal is utilized for specific conditions such as PFB in male service members to assist with the reduction of hair and mitigation of symptoms.[19] The majority of military dermatology clinics have devices for laser hair removal; however, dermatology services are not available at many military treatment facilities, and dermatologic care may be provided by the local civilian dermatologists. That said, laser therapy is covered in the civilian sector for active-duty service members with PFB of the face and neck under certain criteria. These include a documented safety risk in environments requiring respiratory protection, failure of conservative treatments, and evaluation by a military dermatologist who confirms the necessity of civilian-provided laser therapy when it is unavailable at a military facility.[20] While such policies demonstrate the military's recognition of laser therapy as a viable solution for certain grooming-related conditions, many are unaware that the existing laser hair removal policy also applies to women. Increasing awareness of this coverage could help female service members access treatment options that align with both medical and professional grooming needs.

Intense pulsed light (IPL) systems are nonlaser devices that emit broad-spectrum light in the 590- to 1200-nm range. They utilize a flash lamp to achieve thermal damage. Filters are used to narrow the wavelength range based on the specific target. Intense pulsed light devices are less precise than lasers but remain effective for hair reduction. In addition to hair removal, IPL devices are employed in the treatment of pigmented and vascular lesions. Common adverse effects of both laser and IPL hair removal include transient erythema, perifollicular edema, and pigmentary changes, especially in patients with darker skin types. Rare complications include blistering, scarring, and paradoxical hair stimulation in which untreated areas develop increased hair growth.

Electrolysis is recognized as the only method of truly permanent hair removal and is effective for all hair colors.[21] However, the variability in technique among practitioners often leads to inconsistent results, with some patients experiencing hair regrowth. Galvanic electrolysis involves inserting a fine needle into the hair follicle and applying an electrical current to destroy the it and the rapidly dividing cells of the matrix.[22] The introduction of thermolytic electrolysis, which uses a high-frequency alternating current (commonly 13.56 MHz or 27.12 MHz), has enhanced efficiency by creating heat at the needle tip to destroy the follicle. This approach is faster and now is commonly combined with galvanic electrolysis.[23] While no controlled clinical trials directly compare these methods, many patients experience permanent hair removal, with approximately 15% to 25% regrowth within 6 months.[22,24]

Alternative Options—Home-use laser and light-based devices have become increasingly popular for managing unwanted hair due to their affordability and convenience, with most devices priced less than $1000.[25] These devices utilize various technologies, including lasers (808 nm), IPL, or combinations of IPL and radiofrequency.[26] Despite their accessibility, peer-reviewed research on their safety profile and effectiveness is limited, as existing data primarily come from industry-funded, uncontrolled studies with short follow-up durations—making it difficult to assess long-term outcomes.[25]

Psychosocial Impact

A 2023 study of active-duty female service members with PCOS highlighted the unique challenges they face while managing symptoms such as facial hair within the constraints of military service.[27] Although the study focused on PCOS, the findings shed light on how facial hair specifically impacts the psychological well-being of servicewomen. Participants described facial hair as one of the most visible and stigmatizing symptoms, often leading to feelings of embarrassment and diminished confidence. Participants also highlighted the professional implications of facial hair, with some describing feelings of scrutiny and judgment from peers and leadership in public. These challenges can be more pronounced in deployments or field exercises where hygiene resources are limited. The lack of access not only affects self-perception but also can hinder the ability of servicewomen to meet implicit expectations for grooming and appearance.[27] There is a notable gap in research examining the impact of facial hair on military servicewomen. Given the unique environmental challenges and professional expectations, further investigation is warranted to better understand how facial hair affects women and to optimize treatment approaches in this population.

Final Thoughts

Limited awareness and understanding of facial hair in woman contribute to stigma, often leaving affected individuals to navigate challenges in isolation. Given the impact on confidence, professional appearance, and adherence to military grooming standards, it is essential for health care practitioners to recognize and address facial hair in women. Importantly, laser hair removal is covered by TRICARE for active-duty female service members with PFB, yet many remain unaware of this benefit. Increased awareness of available mechanical, pharmacologic, and procedural treatment options allows for tailored management, ensuring that women receive appropriate medical care.

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APPENDIX

eTABLE. Comparison of Facial Hair Management Strategies For Women

Treatment modality	Mechanism of action	Potential risks/adverse effects	Considerations
Shaving	Cuts hair at skin level	Irritation, PFB	Quick, inexpensive, requires frequent upkeep, residual stubble
Chemical depilation	Breaks down hair structure chemically	Irritation, contact dermatitis, folliculitis, unpleasant odor	Easy at-home use, may cause skin irritation
Epilation (plucking/waxing)	Removes hair from follicle	Irritation, pain, PFB, PIH, scarring	Longer lasting
Combined oral contraceptives	Suppress ovarian androgen production	Nausea, breast tenderness, increased risk for blood clots	Effective for hormone-related hair growth, ensure no contraindications prior to initiating treatment
Spironolactone	Blocks androgen receptors, reduces hair growth	Hyperkalemia, menstrual irregularities, postural hypotension, frequent urination	May require lab monitoring, avoid in pregnancy
Eflornithine hydrochloride cream 13.9%	Inhibits ornithine decarboxylase enzyme to slow hair growth	Acneform eruptions, erythema, burning, irritation	Effects reversible after discontinuation, not recommend for pregnancy
Laser hair removal	Selective photothermolysis destroys hair follicle	Pain, burns, PIH, erythema, paradoxical hair growth	Long-term benefit, not effective for white/gray or vellus hairs, need multiple treatments, covered by TRICARE for PFB in active-duty service members
Intense pulsed light	Broad-spectrum light targets melanin to destroy hair follicle	Pain, erythema, blistering, scarring, PIH	Less precise than laser hair removal but similar considerations
Electrolysis	Destroys hair follicle via electrical current	Pain, scarring, erythema, PIH, potential regrowth	Only permanent hair removal method; effective for any color hair

Abbreviations: PFB, pseudofolliculitis barbae; PIH, postinflammatory hyperpigmentation.