

Cutaneous Body Image: How the Mental Health Benefits of Treating Dermatologic Disease Support Military Readiness in Service Members

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PRACTICE POINTS

- The term *readiness* refers to the ability to recruit, train, deploy, and sustain military forces that are ready to “fight tonight” and succeed in combat.
- Maintaining readiness requires a holistic approach, as it is directly affected by physical and mental health outcomes.
- Cutaneous body image (CBI) refers to an individual’s mental perception of the condition of their hair, nails, and skin. Positive CBI is related to increased quality of life, while negative CBI, which often is associated with dermatologic disease, is associated with poorer health outcomes and even self-injury.
- Treatment of dermatologic disease in the context of active-duty military members can positively influence CBI, which may in turn increase service members’ quality of life and overall military readiness.

It is well established that many common skin diseases may result in mild to severe cosmetic disfigurement. Similarly, patients with these conditions have an increased risk for depression, anxiety, feelings of stigmatization, and self-harm ideation. There also is an increased risk for hospitalizations for mental health in patients with acne, rosacea, and hidradenitis suppurativa (HS). Cutaneous body image (CBI) is an individual’s mental perception of the condition of their hair, nails,

and skin. A positive CBI may be related to increased quality of life, and a negative CBI may be associated with poorer outcomes, such as insomnia, worsened overall morbidity of dermatologic disease, and intentional self-injury. For military service members who face a multitude of operational demands and who must be ready to “fight tonight,” a holistic approach that addresses both physical and mental health is critical. Military dermatologists have the tools and expertise available to treat cutaneous disease, which by extension may improve body image, quality of life, and morale in military service members. Herein, we discuss how dermatologic treatments that often are thought of as nonessential cosmetic therapies can positively influence CBI and thus increase military readiness.

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According to the US Department of Defense, the term *readiness* refers to the ability to recruit, train, deploy, and sustain military forces that will be ready to “fight tonight” and succeed in combat. Readiness is a top priority for military medicine, which functions to diagnose, treat, and rehabilitate service members so that they can return to the fight. This central concept drives programs across the military—from operational training events to the establishment of medical and dental standards. Readiness is tracked and scrutinized constantly, and although it is a shared responsibility, efforts to increase and sustain readiness often fall on support staff and military medical providers.

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The eTable is available in the Appendix online at www.mdedge.com/dermatology.

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In recent years, there has been a greater awareness of the negative effects of mental illness, low morale, and suicidality on military readiness. In 2013, suicide accounted for 28.1% of all deaths that occurred in the US Armed Forces.¹ Put frankly, suicide was one of the leading causes of death among military members.

The most recent Marine Corps Order regarding the Marine Corps Suicide Prevention Program stated that “suicidal behaviors are a barrier to readiness that have lasting effects on Marines and Service Members attached to Marine Commands. . . Families, and the Marine Corps.” It goes on to say that “[e]ffective suicide prevention requires coordinated efforts within a prevention framework dedicated to promoting mental, physical, spiritual, and social fitness. . . [and] mitigating stressors that interfere with mission readiness.”² This statement supports the notion that preventing suicide is not just about treating mental illness; it also involves maximizing physical, spiritual, and social fitness. Although it is well established that various mental health disorders are associated with an increased risk for suicide, it is worth noting that, in one study, only half of individuals who died by suicide had a mental health disorder diagnosed prior to their death.³ These statistics translate to the military. The 2015 Department of Defense Suicide Event Report noted that only 28% of service members who died by suicide and 22% of members with attempted suicide had been documented as having sought mental health care and disclosed their potential for self-harm prior to the event.^{1,4} In 2018, a study published by Ursano et al⁵ showed that 36.3% of US soldiers with a documented suicide attempt (N=9650) had no prior mental health diagnoses.

Expanding the scope to include mental health issues in general, only 29% of service members who reported experiencing a mental health problem actually sought mental health care in that same period. Overall, approximately 40% of service members with a reported perceived need for mental health care actually sought care over their entire course of service time,¹ which raises concern for a large population of undiagnosed and undertreated mental illnesses across the military. In response to these statistics, Reger et al³ posited that it is “essential that suicide prevention efforts move outside the silo of mental health.” The authors went on to challenge health care providers across all specialties and civilians alike to take responsibility in understanding, recognizing, and mitigating risk factors for suicide in the general population.³

Although treating a service member’s acne or offering to stand duty for a service member who has been under a great deal of stress in their personal life may appear to be indirect ways of reducing suicide in the US military, they actually may be the most critical means of prevention in a culture that emphasizes resilience and self-reliance, where seeking help for mental health struggles could be perceived as weakness.¹

In this review article, we discuss the concept of cutaneous body image (CBI) and its associated outcomes on health, satisfaction, and quality of life in military service members. We then examine the intersections between common dermatologic conditions, CBI, and mental health and explore the ability and role of the military dermatologist to serve as a positive influence on military readiness.

What is cutaneous body image?

Cutaneous body image is “the individual’s mental perception of his or her skin and its appendages (ie, hair, nails).”⁶ It is measured objectively using the Cutaneous Body Image Scale, a questionnaire that includes 7 items related to the overall satisfaction with the appearance of skin, color of skin, skin of the face, complexion of the face, hair, fingernails, and toenails. Each question is rated using a 10-point Likert scale (0=not at all; 10=very markedly).⁶

Some degree of CBI dissatisfaction is expected and has been shown in the general population at large; for example, more than 56% of women older than 30 years report some degree of dissatisfaction with their skin. Similarly, data from the American Society of Plastic Surgeons showed that while 10.9 million cosmetic procedures were performed in 2006, 9.1 million of them involved minimally invasive procedures such as botulinum toxin type A injections with the purpose of skin rejuvenation and improvement of facial appearance.⁷ However, lower than average CBI can contribute to considerable psychosocial morbidity. Dissatisfaction with CBI is associated with self-consciousness, feelings of inferiority, and social exclusion. These symptoms can be grouped into a construct called interpersonal sensitivity (IS). A 2013 study by Gupta and Gupta⁶ investigated the relationship between CBI, IS, and suicidal ideation among 312 consenting nonclinical participants in Canada. The study found that greater dissatisfaction with an individual’s CBI correlated to increased IS and increased rates of suicidal ideation and intentional self-injury.⁶

Cutaneous body image is particularly relevant to dermatologists, as many common dermatoses can cause cosmetically disfiguring skin conditions; for example, acne and rosacea have the propensity to cause notable disfigurement to the facial unit. Other common conditions such as atopic dermatitis or psoriasis can flare with stress and thereby throw patients into a vicious cycle of physical and psychosocial stress caused by social stigma, cosmetic disfigurement, and reduced CBI, in turn leading to worsening of the disease at hand. Dermatologists need to be aware that common dermatoses can impact

Resources for Suicide Prevention

- American Foundation for Suicide Prevention (<https://afsp.org/>)
- National Suicide Prevention Lifeline (1-800-273-8255)

a patient's mental health via poor CBI.⁸ Similarly, dermatologists may be empowered by the awareness that treating common dermatoses, especially those associated with poor cosmesis, have 2-fold benefits—on the skin condition itself and on the patient's mental health.

How are common dermatoses associated with mental health?

Acne—Acne is one of the most common skin diseases, so much so that in many cases acne has become an accepted and expected part of adolescence and young adulthood. Studies estimate that 85% of the US population aged 12 to 25 years have acne.⁹ For some adults, acne persists even longer, with 1% to 5% of adults reporting to have active lesions at 40 years of age.¹⁰ Acne is a multifactorial skin disease of the pilosebaceous unit that results in the development of inflammatory papules, pustules, and cysts. These lesions are most common on the face but can extend to other areas of the body, such as the chest and back.¹¹ Although the active lesions can be painful and disfiguring, if left untreated, acne may lead to permanent disfigurement and scarring, which can have long-lasting psychosocial impacts.

Individuals with acne have an increased likelihood of self-consciousness, social isolation, depression, and suicidal ideation. This relationship has been well established for decades. In the 1990s, a small study reported that 7 of 16 (43.8%) cases of completed suicide in dermatology patients were in patients with acne.¹² In a recent meta-analysis including 2,276,798 participants across 5 separate studies, researchers found that suicide was positively associated with acne, carrying an odds ratio of 1.50 (95% CI, 1.09-2.06).¹³

Rosacea—Rosacea is a common chronic inflammatory skin disease characterized by facial erythema, telangiectasia, phymatous changes, papules, pustules, and ocular irritation. The estimated worldwide prevalence is 5.5%.¹⁴ In addition to discomfort and irritation of the skin and eyes, rosacea often carries a higher risk of psychological and psychosocial distress due to its potentially disfiguring nature. Rosacea patients are at greater risk for having anxiety disorders and depression,¹⁵ and a 2018 study by Alinia et al¹⁶ showed that there is a direct relationship between rosacea severity and the actual level of depression. Although disease improvement certainly leads to improvements in quality of life and psychosocial status, Alinia et al¹⁶ noted that depression often is associated with poor treatment adherence due to poor motivation and hopelessness. It is critical that dermatologists are aware of these associations and maintain close follow-up with patients, even when the condition is not life-threatening, such as rosacea.

Hidradenitis Suppurativa—Hidradenitis suppurativa (HS) is a chronic inflammatory disease of the pilosebaceous unit that is characterized by the development of painful, malodorous, draining abscesses, fistulas, sinus tracts, and scars in sensitive areas such as the axillae,

breasts, groin, and perineum.¹⁷ In severe cases, surgery may be required to excise affected areas. Compared to other cutaneous disease, HS is considered one of the most life-impacting disorders.¹⁸ The physical symptoms themselves often are debilitating, and patients often report considerable psychosocial and psychological impairment with decreased quality of life. Major depression frequently is noted, with 1 in 4 adults with HS also being depressed. In a large cross-sectional analysis of 38,140 adults and 1162 pediatric patients with HS, Wright et al¹⁷ reported the prevalence of depression among adults with HS as 30.0% compared to 16.9% in healthy controls. In children, the prevalence of depression was 11.7% compared to 4.1% in the general population.¹⁷ Similarly, 1 out of every 5 patients with HS experiences anxiety.¹⁸

In the military population, HS often can be duty limiting. The disease requires constant attention to wound care and frequent medical visits. For many service members operating in field training or combat environments, opportunities for and access to showers and basic hygiene is limited. Uniforms and additional necessary combat gear often are thick and occlusive. Taken as a whole, these factors may contribute to worsening of the disease and in severe cases are simply not conducive to the successful management of the condition. However, given the most commonly involved body areas and the nature of the disease, many service members with HS may feel embarrassed to disclose their condition. In uniform, the disease is not easily visible, and for unaware persons, the frequency of medical visits and limited duty status may seem unnecessary. This perception of a service member's lack of productivity due to an unseen disease may further add to the psychosocial stress they experience.

What treatment options can be considered for military service members?

The treatments for acne, rosacea, and HS are outlined in the eTable.^{11,19} Also noted are specific considerations when managing an active-duty service member due to various operational duty restrictions and constraints.

Final Thoughts

Maintaining readiness in the military is essential to the ability to not only "fight tonight" but also to win tonight in whatever operational or combat mission a service member may be. Although many factors impact readiness, the rates of suicide within the armed forces cannot be ignored. Suicide not only eliminates the readiness of the deceased service member but has lasting ripple effects on the overall readiness of their unit and command at large. Most suicides in the military occur in personnel with no prior documented mental health diagnoses or treatment. Therefore, it is the responsibility of all service members to recognize and mitigate stressors and risk factors that may lead to mental health distress and suicidality. In the medical corps, this translates to a responsibility of all medical specialists to recognize and understand unique

risk factors for suicidality and to do as much as they can to reduce these risks. For military dermatologists and for civilian physicians treating military service members, it is imperative to predict and understand the relationship between common dermatoses; reduced satisfaction with CBI; and increased risk for mental health illness, self-harm, and suicide. Military dermatologists, as well as other specialists, may be limited in the care they are able to provide due to manpower, staffing, demand, and institutional guidelines; however, to better serve those who serve in a holistic manner, consideration must be given to rethink what is “medically essential” and “cosmetic” and leverage the available skills, techniques, and equipment to increase the readiness of the force.

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APPENDIX

eTABLE. Dermatologic Treatment Recommendations and Considerations in Military Service Members^{11,19}

Type of treatment	Recommendations	Military considerations
Acne		
Topical	Retinoids, benzoyl peroxide washes, antibiotics	Topical treatments may be difficult to adhere to in austere or field-based training environments
Oral	Minocycline, doxycycline, sarecycline, oral contraceptives, spironolactone, isotretinoin	Isotretinoin: not permitted for use in active aircrew members, submariners, or divers; requires frequent laboratory workup, 30-day follow-ups, and administrative time for physicians and patients to adhere to iPLEDGE requirements; may not be feasible for all patients due to operational training schedule Minocycline: restricted for use in aircrew members due to potential central nervous system side effects
Lasers	Pulsed dye laser for active lesions, erbium:YAG ablative laser for facial resurfacing and scar treatment, CO ₂ fractional ablative laser for facial resurfacing and scar treatment, nonablative fractional lasers for scarring	Not readily accessible to all service members; scar treatment often is considered cosmetic and not medically necessary; military medical treatment facilities with access to lasers may be limited in use due to manpower and staffing, with priority scheduling given to noncosmetic treatments
Rosacea		
Trigger avoidance	Avoid triggers such as spicy foods, alcohol, and emotional stress; use of sunscreen and sun protective clothing	Duty location could be a trigger depending on intensity of sun
Topical	Metronidazole gel, ivermectin, sodium sulfacetamide, azelaic acid, calcineurin inhibitors	With new electronic medical record changes in the military, it is difficult to get nonformulary agents for patients (including azelaic acid, ivermectin, or oxymetazoline gel)
Systemic	Low-dose doxycycline, low-dose minocycline	Primary care providers may not feel comfortable dosing long-term antibiotics, necessitating referral to dermatology for management
Lasers	Pulsed dye laser, intense pulsed light, CO ₂ ablative laser for surgical paring and sculpting of phymatous change, erbium:YAG ablative laser for surgical paring and sculpting	Not readily accessible to all service members depending on duty station location; treatment often considered cosmetic and not medically necessary; military medical treatment facilities with access to lasers may be limited in use due to manpower and staffing, with priority scheduling given to noncosmetic treatments; treatment takes repeated sessions over weeks to months, requiring time away from work; ablative laser sculpting requires downtime for healing, which requires time away from work for a cosmetic concern
Hidradenitis suppurativa		
Acute flares	Intralesional triamcinolone injection, oral antibiotics, topical antibiotics, resorcinol	Oral antibiotics may be flight status limiting; intralesional triamcinolone injections require in-person visits to a dermatologist and often are not available at unit-level medical clinics
Chronic management	Topical antibiotics; benzoyl peroxide wash; chlorhexidine wash; longer course of oral doxycycline, minocycline, or tetracycline; dapsone; oral isotretinoin; biologic agents including adalimumab (tumor necrosis factor α inhibitor); surgical excision of affected tissues; finasteride; rifampin; metformin; laser hair removal; ablative lasers for scars	Isotretinoin: not permitted for use in active aircrew members, submariners, or divers; requires frequent laboratory workup, 30-day follow-ups, and administrative time for physicians and patients to adhere to iPLEDGE; may not be feasible for all patients due to operational training schedule Minocycline: restricted for use in aircrew members due to potential central nervous system side effects Biologic agents: may require prior authorization; may limit deployability depending on location; may trigger a medical evaluation board; may require prescription via dermatology