# Treatment Consideration for US Military Members With Skin Disease

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## PRACTICE **POINTS**

- Certain conditions and treatments are incompatible with military service and may result in separation.
- Dermatologists must consider a patient's profession when choosing a treatment modality.

Recent changes to military medicine precipitated by the National Defense Authorization Act for Fiscal Year 2017 are expected to result in civilian specialists playing a larger role in the care of our military population. Medical readiness and deployment eligibility should be taken into consideration when establishing a treatment plan for service members. This article highlights unique factors civilian dermatologists must consider when treating active-duty military patients with acne, atopic dermatitis (AD), psoriasis, dissecting cellulitis of the scalp (DCS), and lupus erythematosus (LE).

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The National Defense Authorization Act for Fiscal Year 2017[1] has changed military medicine, including substantial reduction in military medical personnel as positions are converted to combat functions. As a result, there will be fewer military dermatologists, which means many US soldiers, sailors, airmen, and marines will seek medical care outside of military treatment facilities. This article highlights some unique treatment considerations in this patient population for our civilian dermatology colleagues.

## Medical Readiness

In 2015, General Joseph F. Dunford Jr, 19th Chairman of the Joint Chiefs of Staff, made readiness his top priority for the US Armed Forces.[2] Readiness refers to service members' ability to deploy to locations across the globe and perform their military duties with little advanced notice, which requires personnel to be medically prepared at all times to leave home and perform their duties in locations with limited medical support.

Medical readiness is maintaining a unit that is medically able to perform its military function both at home and in a deployed environment. Military members' medical readiness status is carefully tracked and determined via annual physical, dental, hearing, and vision examinations, as well as human immunodeficiency virus status and immunizations. The readiness status of the unit (ie, the number of troops ready to deploy at any given time) is available to commanders at all levels at any time. Each military branch has tracking systems that allow commanders to know when a member is past due for an examination or if a member's medical status has changed, making them nondeployable. When a member is nondeployable, it affects the unit's ability to perform its mission and degrades its readiness. If readiness is suboptimal, the military cannot deploy and complete its missions, which is why readiness is a top priority. The primary function of military medicine is to support the medical readiness of the force.

## Deployment Eligibility

A unique aspect of military medicine that can be foreign to civilian physicians is the unit commanders' authority to request and receive information on military members' medical conditions as they relate to readiness. Under most circumstances, an individual's medical information is his/her private information; however, that is not always the case in the military. If a member's medical status changes and he/she becomes nondeployable, by regulation the commander can be privy to pertinent aspects of that member's medical condition as it affects unit readiness, including the diagnosis, treatment plan, and prognosis. Commanders need this information to aid in the member's recovery, ensure training does not impact his/her care, and identify possible need of replacement.

Published accession guidelines are used to determine medical eligibility for service.[3] These instructions are organized by major organ systems and broad disease categories. They provide guidance on medically disqualifying

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conditions. The Table outlines those conditions that apply to the skin.[3] Individual military branches may have additional regulations with guidance on medically disqualifying conditions that are job specific. Additional regulations also are available based on an area of military operation that can be more restrictive and specific to those locations.[4]

Similarly, each military branch has its own retention standards.[5,6] Previously healthy individuals can develop new medical conditions, and commanders are notified if a service member becomes medically nondeployable. If a medical condition limits a service member's ability to deploy, he/she will be evaluated for retention by a medical evaluation board (MEB). Three outcomes are possible: return in current function, retain the service member but retrain in another military occupation, or separate from military service.[7] Rarely, waivers are provided so that the service member can return to duty.

## Readiness and Patient Care

Importantly, readiness should not be seen as a roadblock to appropriate patient care. Patients should receive treatment that is appropriate for their medical condition. Much of the difficulty within military medicine is

### Dermatologic Conditions Warranting Disqualification From US Military Service

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| Conditions with malignant potential in the skin |
| Current cysts of such size or location as to interfere with properly wearing military equipment |
| Current lichen planus (either cutaneous or oral) |
| Current localized fungal infections |
| Current or chronic lymphedema |
| Current scars that will interfere with properly wearing military clothing or equipment, or interfere with performing military duties |
| Current symptomatic plantar warts |
| Current symptomatic pilonidal cysts or discharging sinuses, or a surgically resected pilonidal cyst that is symptomatic, unhealed, or <6 months postoperative |
| History of: |
| Any medical condition(s) severe enough to warrant use of systemic steroids for >2 months or any use of other systemic immunosuppressants |
| Atopic dermatitis after 12th birthday |
| Bullous dermatoses |
| Chronic radiation dermatitis |
| Chronic urticaria lasting longer than 6 weeks |
| Congenital disorders of cornification, or congenital disorders of hair and nails |
| Congenital or acquired anomalies of the skin (eg, nevi, vascular tumors) that may interfere with military duties or cause irritation |
| Connective tissue diseases including scleroderma, dermatomyositis, and lupus erythematosus |
| Cutaneous malignancy before the 25th birthday |
| Dissecting scalp cellulitis, acne inversa, or hidradenitis suppurativa |
| Furunculosis or carbuncle if extensive, recurrent, or chronic |
| Oculocutaneous albinism, neurofibromatosis I or II, and tuberous sclerosis |
| Photosensitivity, including any primary sun-sensitive condition or any dermatosis aggravated by exposure to sunlight |
| Pseudofolliculitis barbae or keloidalis nuchae, severe enough to prevent daily shaving or interfere with wearing military equipment |
| Psoriasis (excluding nonrecurrent childhood guttate psoriasis) |
| Recurrent or chronic nonspecific dermatitis within the last 2 years, including contact dermatitis or dyshidrotic dermatitis requiring more than treatment with topical corticosteroid |
| Severe hyperhidrosis of the hands or feet unless controlled by topical medications |
| Severe keloid formation |
| Severe nodulocystic acne (on or off antibiotics)[a] |
| Prior burn injuries involving ≥18% of the body surface area or resulting in functional impairment to such degree as to interfere with performing military duties |

[a]Applicants undergoing treatment with retinoids including isotretinoin are disqualified until 4 weeks after completing therapy.

Data from *Medical Standards for Appointment, Enlistment, or Induction Into the Military Services (DoD Instruction 6130.03)*.[3]



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understanding and communicating how the natural disease history, prognosis, and treatment of their respective medical conditions will impact members' service.

In some cases, the condition and/or treatment is incompatible with military service. Consider the following scenario: A 23-year-old active-duty soldier with a history of psoriasis developed widespread disease of 1 year's duration and was referred to a civilian dermatologist due to nonavailability of a military dermatologist. After topical and light-based therapies failed, he was started on ustekinumab, which cleared the psoriasis. He wanted to continue on ustekinumab due to its good efficacy, but his unit was set to deploy in the coming year, and the drug made him medically nondeployable due to its immunosuppressive nature.

This real-life example was a difficult case to disposition. The service member was unsure if he could perform his military duties and deploy without continuing treatment with ustekinumab. His prior dermatology notes were requested to better assess the severity of his baseline disease, followed by a candid discussion between the military dermatologist and the patient about treatment options and their respective ramifications to his military career. One option included continuing ustekinumab, which would initiate an MEB evaluation and likely result in separation. Another option was UV therapy, which would not prompt an MEB evaluation but would not be available in deployed environments. Apremilast was offered as a third treatment option and could be used in place of UV therapy during deployment along with topical medications. This patient opted to continue treatment with ustekinumab, resulting in MEB review and separation from military service.

## Dermatology Treatment Considerations

Civilian dermatologists should be aware of specific considerations when treating active US service members with common cutaneous diagnoses such as acne, atopic dermatitis (AD), psoriasis, dissecting cellulitis of the scalp (DCS), and lupus erythematosus (LE). This discussion is not meant to be all-inclusive but provides information and examples related to common treatment challenges in this patient population.

*Acne*—Acne is common in the active-duty military population. Typically, acne should be treated per recommended guidelines based on type and severity.[8] Medical evaluation board review is warranted in cases of severe acne that is unresponsive to treatment and interferes with a service member's performance.[5,6] Unique situations in the active-duty military population include the following:

- Use of minocycline. Aircrew members have unique restrictions on many medications,[6] including minocycline, which is restricted in this population due to vestibular side effects. Doxycycline is an acceptable alternative for aircrew members; however, even this medication may require a ground trial to ensure there are no idiosyncratic effects.
- Use of isotretinoin, which is not permitted in aircrew members, submariners, or divers. If they take this medication, they will be temporarily removed from duty for the duration of treatment and for a period of time after completion (1–3 months, depending on service). Isotretinoin also is not used during deployment due to potential side effects, the need for laboratory monitoring, and iPLEDGE system requirements.

*Atopic Dermatitis*—A history of AD after the 12th birthday is considered a disqualifying condition with regard to military service,[3] though mild and well-controlled disease can easily be overlooked during entrance physical examinations. Members frequently present with eczema flares following field training exercises where they are outdoors for many hours and have been exposed to grass or other environmental triggers while wearing military gear that is heavy and occlusive, which is further exacerbated by being unable to bathe or care for their skin as they would at home.

Separation from the military is considered when AD is moderate to severe, is unresponsive to treatment, and/or interferes with performance of duty. Severity often can be evaluated based on the impact of AD on performance of duties in addition to clinical appearance. A pilot who is distracted by itching presents a potentially dangerous situation. A soldier whose AD flares every time he/she goes to the field, requiring him/her to return home early to control symptoms, can be considered moderate to severe due to lack of ability to do his/her job away from home base.

Response to treatment is more often where trouble lies for military members with AD, as patients are only permitted to take emollients, preferred cleansers, and topical medications to field training exercises and deployments. UV therapy is used to control disease in the military population but is not an option in deployed environments. Classic immunosuppressants (eg, methotrexate, mycophenolate mofetil, azathioprine, cyclosporine) may result in a good response to treatment; however, due to their side-effect profiles, need for laboratory monitoring, and immunosuppressive nature, long-term use of those medications will result in a nondeployable status. Dupilumab does not appear to have the immunosuppressive effects of other biologics; however, the medication requires refrigeration,[9] which currently precludes its use in the deployed environment, as it would be difficult to ensure supply and storage in remote areas.

Service members with a history of AD are exempt from the smallpox vaccine due to concerns about eczema vaccinatum.[10]

*Psoriasis*—Psoriasis is another dermatologic condition that does not meet military admission standards,[3] and mild undiagnosed cases may be overlooked during the entrance physical examination. Because psoriasis commonly affects young adults, it may manifest in service members after entering service. If psoriasis is extensive or refractory to treatment, an MEB evaluation may be required.[5,6] Widespread psoriasis can result in considerable discomfort when wearing body armor and other military gear. Severe localized disease can have duty implications; service members with treatment-resistant scalp psoriasis or pustular psoriasis of the feet may have difficulty wearing helmets or military boots, respectively.

Most service members with limited psoriasis vulgaris can be managed with topical steroids and steroid-sparing



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agents such as calcipotriene. Some service members opt not to aggressively treat their psoriasis if it is limited in nature and not symptomatic.

When discussing systemic treatments beyond light therapy in those with refractory disease, apremilast can be a good first-line treatment option.[11] It is an oral medication, has minimal monitoring requirements, and lacks immunosuppressive side effects; therefore, it does not adversely impact deployability. If patients do not improve in 4 months with apremilast, biologics should then be considered; however, biologics have service implications, the most important being inability to deploy while taking the medication. In rare circumstances, military dermatologists may discuss utilizing biologic therapy only in the nondeployed setting. In these cases, service members are counseled that biologic therapy will be discontinued if they deploy in the future and treatment will be sustained with topicals and/or apremilast through the deployment. The treatment plan also should be communicated to the patient's primary care provider to ensure that he/she is in agreement.

*Dissecting Cellulitis of the Scalp*—Dissecting cellulitis of the scalp may result in separation if the condition is unresponsive to treatment and/or interferes with satisfactory performance of duty.[5] In addition to causing considerable pain, this condition can prevent service members from wearing combat helmets, which limits their ability to train and deploy. One of the authors (S.C.) has had more service members undergo an MEB evaluation for DCS than any of the other conditions mentioned.

Topical tretinoin and topical antibiotics can be used in conjunction with either doxycycline or minocycline to treat DCS, with the addition of intralesional corticosteroids for painful nodules. Fluctuant lesions are treated with incision and drainage. If there is inadequate response to treatment after 2 to 3 months, oral clindamycin and rifampin can be tried for 3 months. As an alternative measure or if the condition is refractory to oral clindamycin and rifampin, isotretinoin can then be used. One of the authors (S.C.) typically recommends a temporary no-helmet profile to the patient's primary care provider until his/her next dermatology appointment. If the patient still has substantial disease despite these treatment options, it is recommended that the patient be issued a permanent profile for no helmet wear, which will prompt an MEB evaluation. Although tumor necrosis factor α inhibitors can work well in patients with DCS, the use of biologics is not conducive to continued service.

*Lupus Erythematosus*—A history of LE is disqualifying from military service. Patients who develop LE while on active duty will be referred for MEB evaluation if their disease is unresponsive to treatment and/or interferes with the satisfactory performance of duty.[5,6] In general, connective tissue diseases have an array of physical implications that can affect military service, including photosensitivity, joint inflammation, and internal organ involvement. Similar to the other dermatologic conditions described, treatment of connective tissue diseases also can present challenges to continued military service. Considerations in the case of LE that are unique to military service members include the following:

- Sun exposure. Most military service members are required to work outside in all manners of conditions, which include hot, sunny, humid, and/or dry climates. Often physicians might counsel sun-sensitive patients with LE to avoid being outside during daylight hours, limit window exposure at work, and avoid daytime driving when possible; however, these recommendations are not possible for many, if not most, service members.
- Immunosuppressive therapies are incompatible with military deployment; therefore, prescribing methotrexate, cyclosporine, mycophenolate mofetil, rituximab, or belimumab for treatment of LE would prompt an MEB evaluation if the treatment is necessary to control the disease.

## Final Thoughts

The recent changes to military medicine are needed to meet our country's defense requirements and will ultimately result in civilian specialists playing a larger role in the care of our military population. This article highlights unique factors civilian dermatologists must consider when treating active-duty military patients to ensure they remain deployable during treatment.

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