



# You Can Survive the Desert

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The Middle East and its desert environment are not new territory for the Air Force. Operations **DESERT SHIELD** and **DESERT STORM** and, most recently, **ENDURING FREEDOM** and **IRAQI FREEDOM**, have tested the desert war operations capability of our fighter, bomber, and intelligence wings. In turn, our airmen have proven their mettle in the air and on the ground ...

*Photo by SrA Tammy L. Grider*

**m**any of our airmen facing deployment to the Middle East today have been to the deserts of that region before. They remember the blistering effects of the sand, sun, and wind. However, scores of deploying airmen have not had to endure the harsh and brutal conditions awaiting them halfway around the world.

Environmental effects of the desert can have a devastating impact on people if they are not prepared for it. Certain precautions must be taken to protect airmen and their aircraft and equipment during a desert deployment. Factors such as acclimation, adequate hydration, sun protection, heat injury prevention, and other concerns must be dealt with before, and especially during, deployment to a desert region.

One of the biggest dangers facing airmen in the desert is heat, and acclimation to that heat is vital to maintaining their health. Acclimation to heat is absolutely necessary for the body to reach and sustain efficiency in its cooling process. A period of 2 weeks should be allowed for acclimation, with progressive degrees of heat exposure and physical exertion — a gradual buildup to full performance. Although this strengthens heat resistance, there is no such thing as total protection against the debilitating effects of heat.

Radiant light from the sun is another danger airmen should be prepared for in the desert. The sun's rays, either direct or bounced off the ground, affect the skin and can produce eye strain or temporarily impair vision. Overexposure to sunlight will cause sunburn, and excessive sunbathing or dozing in the desert sun can be fatal! People with fair, freckled skin, a ruddy complexion, or red hair are more susceptible to sunburn than others, but everyone is susceptible to some de-



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Photo by SSgt Matthew Hannen



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gree. A suntan will provide some protection against sunburn, but should be acquired gradually and in the early morning or late afternoon. "Gradual" means that the skin should be exposed no longer than 5 minutes on the first day, with 5 minutes more being added each additional day. Extreme caution should be used while working in the sun: the sun is as dangerous on cloudy days as sunny days, and sunscreen is not designed to give complete protection against excessive sun exposure. In all operational conditions, airmen should be fully clothed in loose garments for sun protection and reducing sweat loss. When shade is required dur-

ing the day, it can be provided best by tarpaulins or camouflage nets, preferably doubled to allow air circulation between the layers and dampened with any surplus water. Aircraft and vehicle exteriors, as well as tools, can get extremely hot when exposed to sunlight for only a few minutes; crew members and maintenance personnel must wear gloves to prevent first- and second-degree burns when touching these items.

The combination of wind and dust or sand particles can cause extreme irritation to the mucous membranes, lips, and other exposed skin surfaces. Eye irritation caused by fine particles

entering the eyes is a frequent complaint of vehicle crews, even when wearing goggles. Chapped lips are also common in the desert. The use of chapstick and skin and eye ointment is imperative in preventing and minimizing the effects of wind and sand.

Another danger of the desert is sandstorms. Fast, wind-blown sand produced in sandstorms can be extremely painful on bare skin, which is one reason why airmen must be fully clothed at all times. When visibility is reduced by sandstorms to the extent that military operations are impossible, airmen should not

leave their group unless they are secured by lines for recovery. Pieces of cloth or bandannas must be carried to cover the face and neck during sandstorms.

Climatic stress on the human body in the hot desert can be caused by any combination of air temperature, humidity, air movement, and radiant heat. The body also is affected adversely by such factors as lack of acclimation, being overweight, dehydration, alcohol excess, lack of sleep, old age, or poor health. The ideal body temperature of 98.6 degrees F is maintained by conduction and convection, radiation, and evaporation, or sweat. The most

important of these in daytime desert conditions is evaporation, since air temperature alone is probably already above skin temperature. However, if relative humidity is high, the air will not evaporate sweat easily and the cooling effect will be reduced.

Proper standards of personal hygiene must be maintained in the desert. Daily shaving and bathing are required if water is available; cleaning the areas of the body that sweat heavily is especially important. If sufficient water is not on hand for bathing, airmen should clean themselves by means of a sponge bath using solution-impregnated pads, a damp rag, or a dry, clean cloth. Underwear should be changed frequently and foot powder used often.

Everyone should be checked for signs of injury, no matter how slight, as desert dust and insects can cause infection in minor cuts and scratches. Small quantities of disinfectant in washing water can reduce the chance of infection. It is important to remember that even minor sickness in the desert can have dire consequences — prickly heat and diarrhea can upset part of the sweating mechanism and increase water loss, raising susceptibility to heat illnesses. The buddy system can help ensure that prompt attention is given to these problems before they incapacitate someone.

The desert is full of diseases. Common scourges found in the desert include plague, typhus, malaria, dengue fever, dysentery, cholera, and typhoid. Although some of these illnesses can be prevented by vaccines or prophylactic measures, proper sanitation and personal cleanliness are vital to disease prevention. Proper mess sanitation is also essential in the desert.

The desert should not be feared, but preparation is key to surviving in the desert. Arm yourself with the facts and stay safe! ▶

*Courtesy of the Army Safety Center*