



# Take 5 For Safety



U.S. ARMY COMBAT READINESS/SAFETY CENTER

4905 5th Ave. Fort Rucker, AL 36362-5363  
Comm. (334) 255-3770 Fax (334) 255-2266  
<https://safety.army.mil>

## Beat the cold

**ART POWELL**  
Strategic Communication Directorate  
U.S. Army Combat Readiness/Safety Center  
Fort Rucker, Ala.

When it comes to the cold, not all injuries are created equal. Due to their training and issued gear, Soldiers and other military members are considerably better prepared than the general population to stay safe in even the coldest conditions. That's why it might come as a surprise to learn frostbite — among the most serious of all winter ailments — is the leading cold weather injury reported in not only our Army, but also the U.S. Air Force.

According to the Armed Forces Health Surveillance Center, 556 U.S. service members suffered at least one cold injury between July 2009 and June 2010. The most common injury varied widely between services: frostbite for both the Army and Air Force, hypothermia for the Marine Corps and Coast Guard, and immersion foot for the Navy. The good news is that among active component members, cold injury rates have remained remarkably stable during the past four years.

Whether they work inside a heated building or stay outside for long periods of time, all members of our Army team must be aware of the hazards of cold weather. Training for and preventing cold injuries is a command and leadership function, as well as a personal responsibility for every Soldier, Family member and Civilian. And while the cold makes job-related tasks more difficult, it does not make them impossible. The key to overcoming harsh conditions and successfully completing the mission lies with understanding cold weather injuries and how to prevent them.

The AFHSC offers the following descriptions of the most common cold weather injuries:

**Frostbite.** Frostbite is the freezing of skin tissue that can extend through all layers of the skin and freeze muscle and bone. Frozen skin may turn red and then gray-blue with blisters. In the worst cases, the skin dies and turns blue-black; at this stage, amputation is often required. Deep frozen skin feels “wooden” to the touch with zero mobility of the affected body part. Instantaneous frostbite can occur when skin comes into contact with super-cooled liquids including petroleum, oils and lubricants, antifreeze and alcohol, all of which remain liquid at temperatures as low as minus 40 F.

**Frostnip.** Frostnip is the freezing of the top layers of the skin and is considered the first degree of frostbite. Frostnip usually results from short-duration exposure to cold air or contact with a cold object like metal. Exposed skin such as the cheeks, ears, fingers and wrists are more likely to develop frostnip.

**Chilblains.** Chilblains is a nonfreezing cold injury that results from repeated, prolonged skin exposure to cold and wet (high humidity) temperatures above freezing. Exposed skin becomes red, tender and hot to the touch and is usually itchy. These symptoms can worsen to an aching, prickly (pins and needles) sensation and then numbness. Chilblains can develop in exposed skin in only a few hours. The most commonly affected areas are the ears, nose, fingers and toes.

**Immersion foot/trench foot.** Immersion foot is a nonfreezing injury that results from prolonged exposure to wet conditions between 32 F and 60 F or inactivity with damp socks and boots. Immersing feet in cold water, infrequent changing of socks, poor hygiene and allowing sweat to accumulate in boots or gloves will soften the skin, causing tissue loss and often infection.

**Hypothermia.** Hypothermia is a potential life-threatening condition defined as a general cooling of the body's core temperature below 95 F (normal body temperature is 98.6 F). Hypothermia occurs when body heat loss exceeds heat production due to prolonged cold exposure. Although hypothermia is usually associated with cold climates, it can occur at temperatures well above freezing, especially when a person is exposed to wet conditions for an extended period of time.

**Dehydration.** Dehydration, most commonly associated with hot weather, is a lack of water in the body. It is very easy to become dehydrated in cold weather, and many individuals fail to drink enough liquids and underestimate fluid loss from sweating. Proper hydration is especially important in cold weather because dehydration adversely affects the body's resistance to the cold, increasing the chance of injury.

For additional information on cold injuries, visit <http://www.cdc.gov/niosh/topics/coldstress> or [AFHSC.Web@amedd.army.mil](mailto:AFHSC.Web@amedd.army.mil).

-30-



ARMY SAFE  
IS ARMY STRONG

