



Immersion Foot

Reviewed by: Eric Kingsley, FRA Northeast Region Consultant, ekingsley@forestresources.org



BACKGROUND

The following occurred on a winter day in New England, with clear skies and temperatures in the teens.

UNSAFE ACT OR CONDITION

A forester working on laying out a timber harvest slipped and submerged a boot in a stream while crossing. The forester had his foot in the water above the top of the boot briefly, allowing water to come into the boot.

The forester quickly exited the stream, determined that he was not injured, and spent the remainder of the day marking out skid trails and marking timber. He did not experience significant cold or discomfort on the foot. Upon ending his day and returning home, the forester removed his boot to find that his foot was whiteish, tingly and wrinkled (as if he had seen in a tub for hours).

OBSERVATION AND TREATMENT

The forester had Immersion Foot (also known as Trench foot, from World War I), a non-freezing injury that happens when a foot is cold and wet for an extended period of time. As the forester's foot dried and rewarmd, he experienced extreme pain in the affected foot, so much so that he was unable to walk for a full day.

SYMPTOMS IMMERSION FOOT

The first symptoms of trench foot include tingling and itching which can progress to numbness. Feet may feel prickly or heavy, like blocks of wood. Because of this, an individual may have difficulty walking, and feet may be bright red. But they'll soon turn pale, clammy and white as the blood vessels narrow.

Once out of the cold, the skin of the feet will start to change color. Skin may look blue or purple due to poor blood flow, and may be cold and blotchy. In addition, swelling can develop.

As feet rewarm, they may become bright red again. The patient may experience extreme pain or an abnormal sensation as blood flow returns to the feet. Skin may become overly sensitive to changes in temperature and the lightest touch.

TREATMENT FOR IMMERSION FOOT

The recommended treatment for Immersion Foot is by drying, gradually warming, and elevating the foot (or feet). Following rewarming, the foot can have severe pain as it fills with blood and other bodily fluids. Feet can become reddened and swollen, with pulsating pain. Usually symptoms vanish after 12-48 hours, depending upon severity.

AVOIDING IMMERSION FOOT

Had the forester returned to their vehicle and changed to a dry pair of socks, it is highly likely that they could have avoided immersion foot. The key to avoiding immersion foot is keeping the feet warm and dry; this can be accomplished by having extra dry socks available, making sure to thoroughly dry any wet boots before wearing again, and stopping a day in the field short if necessary (the forester in question here was unable to return to the field for two days due to failure to treat the issue when it could be easily dealt with).



This Safety Alert analyzes an injury in accordance with the chain of events represented by the five dominoes above. Pioneer industry safety experts H.W. Heinrich and Alfred Lateiner developed this accident analysis system to provide a graphic sense of how injuries can be avoided. Their methodology has been accepted by safety professionals worldwide.

Safety Meeting Report

Topic(s) Discussed:

Comments / Recommendations:

Date:

Company:

Names of Employees Attending:

Meeting Conducted by:

Please follow equipment manufacturers' recommendations for safe operation and maintenance procedures.

signature