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COLD WEATHER SAFETY TRAINING TIPS

Safety: logging

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INTRODUCTION: Winter weather has an obvious effect on outdoor workers, but everyone needs to be aware of the hazards associated with extreme cold. J.J. Keller & Associates, in the October 1999 issue of its *OSHA Safety Training Newsletter*, offers the following tips for safety training sessions for workers.

GENERAL FEATURES: Logging contractors or supervisors should consider these specific training elements for safety meetings with employees:

- 1) **Give examples of how woods workers are exposed to the cold.** Workers in the logging industry in many areas of the U.S. are routinely exposed to cold weather and have to be prepared to stay safe.
- 2) **Discuss winter storm conditions and their effects.** Winter can bring strong winds, extreme cold, ice storms, and heavy snow. Winds can cause poor visibility from blowing snow, hazardous wind chills, and very dangerous manual felling conditions. Icy roads create dangerous driving conditions. Ice build-up on trees can cause hazardous work conditions long after the storm has passed. Heavy snow may close roads or cause avalanches in mountainous areas.
- 3) **Describe how the body reacts to extreme cold.** During cold weather, about 60 percent of a person's body fuel is used to heat the body. People gain body heat from food and muscular activity. Shivering generates heat by increasing the body's metabolic rate. When exposed to extended periods of cold, workers will tire easily, as their bodies work harder to maintain normal temperature.
- 4) **Discuss factors that contribute to cold-related stress.** Environmental conditions that cause cold-related stress include low temperatures, wind, dampness, and cold water. Other risk factors include: wearing inadequate or wet clothing; alcohol, nicotine, caffeine, and certain medications that inhibit the body's ability to regulate its temperature or can impair a person's judgment; and diabetes, heart, vascular, and thyroid problems that make workers more susceptible to the effects of cold weather. Exhaustion and immobilization also speed up the effects of the cold.
- 5) **List the health hazards.** Harmful effects from exposure to cold conditions can include frostbite, trench foot, and hypothermia. Many winter deaths are caused by ice and snow or exposure to the cold. About 70 percent of the deaths related to ice and snow occur in motor vehicles. Discuss safe winter driving techniques.
- 6) **Explain frostbite.** Frostbite is damage to body tissue when the skin tissue actually freezes. Wind chill can cause frostbite at above-freezing temperatures. Frostbite starts with a tingling or stinging sensation primarily affecting ears, fingers, toes, cheeks and noses. Frostbitten areas appear white or pale. If you suspect frostbite, get medical attention immediately. Do not massage the skin or rewarm the tissue unless you have been trained in the proper procedures by a licensed health care professional.



Fig. 1: Logging workers must be aware of cold weather safety and health hazards.



- 7) **Discuss trench foot.** Trench foot is caused by long, continuous exposure to a wet, cold environment. Logging workers regularly experience such conditions. Symptoms include a tingling or itching sensation, burning, pain, and swelling. Blisters can form in extreme cases. Move the victim to a warm, dry area. The affected tissue should be carefully washed and dried, rewarmed, and slightly elevated. Seek medical assistance.
- 8) **Stress the dangers of hypothermia.** Hypothermia is a condition such that the person has a low body temperature. Hypothermia's first symptoms (shivering, inability to do complex motor functions, lethargy, and mild confusion) occur as the core body temperature drops to 95°F. As the body temperature continues to fall, speech becomes slurred and the victim can behave irrationally. Unconsciousness and heart failure can result from severe hypothermia. Treatment for hypothermia involves conserving the victim's remaining body heat and providing additional heat sources. Get medical help when moderate or severe hypothermia is suspected.
- 9) **Explain how protective clothing can help.** Fight the elements through the use of insulating layers. Wear at least three layers of clothing: an inner layer (cotton or synthetic weave) to allow ventilation, a middle layer (wool or special synthetics) that will retain its insulation value when wet, and an outer layer (Gore-Tex® or nylon) that will break the wind, repel water, and allow some ventilation. Pay special attention to your feet, hands, face, and head. Up to 40 percent of body heat can be lost when the head is exposed. Footgear should be insulated to protect against cold and dampness. Keep a change of clothing available in case your work clothes get wet.
- 10) **Provide protection from the cold.** Logging machines can be shielded from the wind and cold weather. Equipment handles should have thermal insulation. On-site sources of heat can be provided in machines, at the landing or felling sites.
- 11) **Discuss safe practices that employees can follow.** Allow time to adjust to cold weather before starting a full work schedule. Workers should be able to set their own pace and take extra breaks when needed. Try to reduce outdoor activities in cold weather, and try to limit work activities to the warmest hours of the day.
- 12) **Describe impact on your emergency action plan.** Severe winter weather may adversely impact your medical response plan. If there is a medical emergency, the ambulance service may be unavailable or delayed. Transporting an injured worker to the hospital may be treacherous under winter driving conditions.

COMMENT: OSHA requires that all work shall terminate and each employee shall move to a place of safety when environmental conditions such as strong winds, heavy rain or snow, and extreme cold create a hazard for the employee in the performance of his or her job. Logging contractors must train woods workers to recognize and effectively deal with the hazards associated with extreme cold weather conditions.

Keller's *OSHA Safety Training Newsletter* is available by calling J.J. Keller & Associates at 800-327-6868 or by visiting their website at www.jjkeller.com.

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