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PRESS RELEASE

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FOR IMMEDIATE RELEASE

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COLD STRESS: WHY YOU NEED TO RECOGNIZE IT

Excessive loss of body heat can lead to serious illness, injury, even death.

What is cold stress and why should farmers and ranchers be aware of its symptoms?

Cold stress occurs when skin temperature, and eventually internal body temperature, decreases during exposure to cold temperatures. Near freezing temperatures, especially when combined with increased wind speed, cause heat to leave the body. Wetness, dampness – even from body sweat – also expedites loss of body heat. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur.

Anyone working outside in cold and windy conditions is at risk for cold stress. When working outside, it's important to be aware of air temperature and wind chill factors to gauge the level of cold stress risk.

Factors that increase the risk of cold stress include:

- Wetness/dampness
- Improper dress
- Exhaustion
- Predisposing health conditions such as hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

The risks of cold stress include permanent tissue damage and death. Types of cold stress include trench foot, frostbite and hypothermia.

Trench foot is a non-freezing injury of the feet caused by prolonged exposure to wet and cold conditions. This injury may occur in temperatures as high as 60 degrees (Fahrenheit) if feet are constantly wet since wet feet lose heat 25 times faster than dry feet.

Trench foot symptoms include reddening skin, tingling, pain, swelling, leg cramps, numbness, and blisters.

If trench foot injury is suspected, call 911 or seek medical assistance as soon as possible. Remove wet shoes/boots and socks. Dry the feet and avoid standing or walking. Keep affected feet elevated until medical help is available.

Frostbite occurs when skin and tissues freeze. It may lead to permanent damage to the body, including amputation in severe cases.

Risk of frostbite is increased for people with reduced blood circulation or those who aren't dressed to withstand cold temperatures.

Symptoms of frostbite include reddened skin and development of gray-white patches in fingers, toes, nose or ear lobes. Tingling, aching, loss of feeling, hardening of the skin and blisters may occur in affected areas.

If these symptoms occur, follow these first aid guidelines:

- Protect the frostbitten area by loosely wrapping a dry cloth around it. Protect the area from contact until medical help is available.
- Do NOT rub the affected area. Doing so causes damage to both the skin and underlying tissue.
- Do NOT apply snow or water to the affected area.
- Do NOT break blisters.
- Do NOT try to re-warm the frostbitten with heating pads or warm water before getting medical assistance. If a frostbitten area is rewarmed and then frozen again, tissue damage may increase. The safest practice is to allow medical professionals to rewarm the affected area.

Normal body temperature is 98.6 degrees (Fahrenheit). Prolonged exposure eventually uses up the body's stored energy and the body may begin losing heat faster than it can warm itself. When body temperature drops to less than 95 degrees (Fahrenheit), hypothermia occurs. This condition is most likely to occur at very cold temperatures, but it may happen even at temperatures above 40 degrees (Fahrenheit) if a person becomes chilled from rain, sweat, or immersion in cold water.

Symptoms of hypothermia include:

- Uncontrolled shivering
- Loss of physical coordination
- Confusion
- Slurred speech
- Slowing of heart rate/breathing
- Unconsciousness
- Death

Shivering indicates that the body is losing heat. While it helps the body rewarm itself, uncontrolled shivering should not be ignored. The affected person may not realize what's happening to them since low body temperature adversely affects the brain, causing a victim to lose the ability to think clearly or move well, making hypothermia a particularly dangerous result of cold stress.

If hypothermia is suspected, follow these first aid guidelines:

- Call 911 immediately in an emergency.
- Move the affected person to a warm, dry area.
- Remove any wet clothing and replace it with dry clothing.
- Wrap the entire body (including head and neck) in layers of blankets and with a vapor barrier (i.e. tarp, garbage bag). Do not cover the victim's face.

If medical help is more than 30 minutes away:

- Unless the victim is unconscious, give warm sweetened drinks to help increase body temperature. Do not use alcoholic beverages.
- Place warm bottles or hot packs in armpits, sides of chest, and groin. Call 911 for additional rewarming instructions.

Victims of hypothermia may stop breathing. In that case:

- Call 911 immediately.
- Treat the victim as per the hypothermia instructions here, but do not attempt to give them any fluids.
- For 60 seconds check the affected person for breathing and pulse.
- If after 60 seconds no breathing or pulse is detected, a trained person may initiate rescue breaths for 3 minutes.
- Check again for 60 seconds to detect breathing or pulse.
- If there is no breath or pulse, continue rescue breathing.
- Consult the 911 operator or emergency medical services before initiating chest compressions.
- Periodically reassess the person's physical status.

To help prevent cold stress, recognize the weather and environmental conditions that may lead to cold stress. Learn about and know how to recognize symptoms of cold stress and the appropriate first aid responses.

Additional cold stress prevention steps:

- Know how to select proper clothing for cold, wet, and windy conditions.
- Regularly monitor your and/or coworker's physical conditions.
- Schedule frequent short breaks in warm, dry areas to allow the body to warm up.
- As much as possible, schedule work activities during the warmest part of the day.
- Use the buddy system and work in pairs.
- Provide warm, sweet beverages to assist the body in generating heat. Avoid alcoholic beverages, which expedite loss of body heat.
- When appropriate, use radiant heaters in the work area.

Anytime you work outside, stay aware of temperature changes and wind chill advisories and warnings. Always monitor your physical condition while working in a cold environment and dress appropriately. Stay dry in cold conditions because moisture or dampness causes increased loss of body heat. Keep extra clothing handy in case of the need to shed wet clothes. Learn as much as you can about the best safety practices and implement them.

Source: Occupational Safety and Health Administration (OSHA)

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