



COLD STRESS

Just as there is the potential for heat stress in spring and summer, there is the potential for cold stress in the fall and winter months. Cold stress happens when the skin temperature drops and eventually reduces the internal body temperature. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage or death may result. The body loses heat through:

- **Convection** – We can lose up to 10-15% of our body heat as air moves across the skin's surface.
- **Radiation** – The body radiates and loses heat. Your body loses 40-45% of its heat through the head and neck. Combine that with wrists and ankles, and heat loss approaches 60%.
- **Conduction** – Holding cold tools or kneeling or sitting on the cold ground will cause your body to lose heat.
- **Respiration** – When we breathe, we warm the air in our lungs. Then we exhale that warm air, resulting in significant heat loss. Breathing through your nose helps warm the air as it enters your body slightly more than breathing through your mouth.

KEEP YOUR CORE AND BODY EXTREMITIES COVERED

It is important to dress in light layers that you can add/remove as you become colder or warmer. Excessive layers can cause you to sweat, leading to wet clothing that can affect your body's ability to maintain its temperature. Wear synthetic or cotton/synthetic blends as a base layer next to your skin to wick away sweat.

MEDICAL CONDITIONS RESULTING FROM PROLONGED EXPOSURE TO COLD TEMPERATURES

People who take certain medications, are in poor physical condition or suffer from illnesses such as diabetes, hypertension or cardiovascular disease may be at increased risk during cold weather exposure.

Cold stress often causes the body to release survival hormones such as adrenalin and cortisol. These cause the liver to release more glucose for energy, which can result in higher-than-normal blood sugar levels. Cold weather can also increase blood pressure, resulting in the increased potential for heart attacks.

GENERAL GUIDELINES

- Dress in layers and cover your head and hands.
- Keep extra gloves, hats and jackets available. This enables you to add layers or replace wet clothing.
- Take frequent breaks in a warm, dry area to limit the effects of exposure to the cold.
- Include a thermometer and chemical hot packs in your first aid kit.
- If someone shows signs of cold-related stress or injuries, get them to warmth immediately.



Company Name: _____

Project #/Name: _____

Meeting Date: _____

Meeting Location: _____

Person Conducting Meeting: _____

Items Discussed

Problem Areas or Concerns

Attendees

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Comments
