When the National Science Foundation’s Office of Polar Programs organizes a team to travel to the Antarctica to drill ice cores, preparations run extremely tight. Drillers wear tight-cuff wet gear over extremely cold weather gear as well as gloves, hoods, cold-weather face masks and chemical vapor respirators—the latter to avoid exposure to some of the solvent—like acetates used in ice drilling.

Moving into the warmer climate of Alaska, where the same drilling equipment is used for as normal well drilling, additional accessories are still required—but cause of adverse weather conditions. Portable gasoline or diesel heaters are needed for both humans and equipment at the sites. Tents and sheds are erected to protect workers from cold winds and storms. Tents and sheds are erected to protect the workers from cold winds and storms. Protective clothing for cold, wet or windy conditions.

Even in the dead of winter in the northern most states of the U.S., such extreme measures may not be necessary, but exposure to cold weather should never be taken lightly and always be prepared for. Many useful measures to protect oneself from the cold are common sense. Don’t wait for an unpleasant experience to err on the cautious side and select proper clothing for cold, wet or windy conditions.

Protecting workers

Employers should have extra-insulated clothing available for situations where temperatures drop unexpectedly below 40 degrees F. Layer clothing to adjust to changing temperatures. Wear a hat and gloves in addition to polypropylene underwear that will keep water away from the skin. Take frequent short breaks in a warm, dry shelter to allow the body to warm up and perform work during the warmest part of the day. Use the buddy system and avoid exhaustion or fatigue because energy is needed to keep muscles warm. Drink warm, sweet beverages like sugar water and sports drinks but avoid drinks with caffeine or alcohol, and prepare for the cold with a warm, high-calorie meal such as pasta. Certain workers are more at risk of distress from cold exposure than others. These include people with predisposing health conditions, such as cardiovascular disease, diabetes and hypertension. Also at greater risk are workers who are in poor physical condition, have a poor diet, are older or take certain medications. But severe tissue damage. And, of course, get medical attention as soon as possible.

Hypothermia – medical emergency

The drillers in the Antarctic prove that the effects of hypothermia—fatigue or drowsiness, uncontrolled shivering, cool, bluish skin, slurred speech, clumsy movements or irritation, irrational or confused behavior. The conditions for hypothermia can be deceiving; it can occur when land temperatures are above freezing or water temperatures are below 98.6 degrees F. Cold-related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds or wet clothing. When the body is unable to warm itself, not only can serious cold-related illnesses and injuries occur, permanent tissue damage and death may result. At 30 degrees F and no wind speed, skin can be exposed for an hour before it begins to freeze. When a 30 mile-per-hour wind is added to that 30 degrees, exposed flesh can begin to freeze within a minute. Hypothermia occurs when the normal body temperature drops to or below 95 degrees F. This is a medical emergency and 911 or an ambulance should be called right away. While waiting for emergency assistance, move the person to a warm dry area, remove any wet clothing and replace with warm, dry clothing or wrap in blan-

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