



Training Circular



September Cold Weather



One thing to remember about Texas, is that if you do not like the weather, just wait a minute and it will change. Even though temperatures are still some of the hottest of the year, during September it can be expected that cold fronts will begin to move across the state. Addressed here are some concerns about cold weather exposures.



Hypothermia and frostbite are two serious consequences of working outdoors in the winter months. TDCJ has a lot of positions that require employees and offenders to be outdoors, regardless of the temperature or any other weather conditions. We cannot stop winter, therefore we need to protect ourselves from the cold by being familiar and prepared. Each year Administrative Directive AD - 10.64 (Temperature Extremes in the TDCJ Workplace), cold weather training, is provided to unit staff and offenders by Health Services, with the assistance of Risk Management. Unit wardens use the wind - chill index located in AD - 10.64 (see page 4), local weather/news stations, or the instruments located on the unit to determine the safety of cold weather working conditions.



Hypothermia

Hypothermia occurs when body heat is lost faster than it can be replaced, and the normal body temperature (98.6°F) drops to less than 95°F. Hypothermia is most common at very cold temperatures, but it can occur even at cool temperatures (above 40°F), if a person becomes chilled from rain, sweat, or submersion in cold water.

Symptoms:

Mild symptoms:

- He or she may begin to shiver and stomp the feet in order to generate heat.

Moderate to Severe symptoms:

- As the body temperature continues to fall, symptoms will worsen and shivering will stop.
- The worker may lose coordination and fumble with items in the hand or become confused and disoriented.
- He or she may be unable to walk or stand, pupils may become dilated, pulse and breathing may become slowed, and loss of consciousness can occur.

Taking Action:

- Seek medical assistance as soon as possible.
- Move the person to a warm, dry area.
- Remove wet clothes and replace with dry clothes and cover the

body (including the head and neck) with layers of blankets or with a vapor barrier (e.g. tarp, garbage bag). Do **not** cover the face.

- Give warm sweetened drinks, if alert (no alcohol), to help increase the body temperature. Never try to give a drink to an unconscious person.
- If frostbite exists, gently heat affected area with warm water or towels, a heating map, or hot water bottles.
- Monitor breathing.
- If heart has stopped, then judge the possibility of administering CPR.
- Get medical attention ASAP.

Hypothermia Category 1

- Loss of body heat
- Shivering
- Lack of interest or concern
- Speech difficulty
- Forgetfulness
- Mild unsteadiness in balance or walking
- Loss of manual dexterity
- Lips turn blue

Hypothermia Category 2

- Shivering stops
- Exhaustion
- Drowsiness
- Confusion
- Sudden collapse
- Slow pulse and breathing
- Pupils dilated
- Cardiac arrest
- May lead to category three if not treated

Hypothermia Category 3

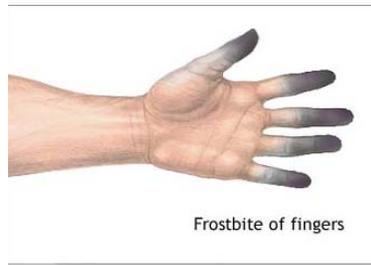
- Individual is comatose
- No palpable pulse
- No visible respiration

High Risk for Cold Illness

- Newly assigned to job
- Elderly
- Exposed to below freezing temperatures for a long period of time without adequate clothing/blankets
- Wet when exposed to cold weather

Prevention of Cold Illness

- Dress appropriately when working in extreme cold conditions
- Drink warm, sweet fluids
- Move extremities often to keep enhanced blood circulation

**Frostbite**

Frostbite is an injury to the body that is caused by freezing of the skin and underlying tissues. The lower the temperature, the more quickly frostbite will occur. Frostbite typically affects the extremities, particularly the feet and hands. Amputation may be required in severe cases.

Symptoms:

- Reddened skin develops gray/white patches.
- Numbness in the affected part.
- Feels firm or hard.
- Blisters may occur in the affected part, in severe cases.

Taking Action:

- Follow the recommended treatment for hypothermia.
- Do not rub the affected area to warm it because this action can cause more damage.
- Do not apply snow/water.
- Do not break blisters.
- Loosely cover and protect the area from contact.
- Do not try to rewarm the frostbitten area before getting medical help; for example, do not place in warm water. If a frostbitten area is rewarmed and gets frozen again, more tissue damage will occur. It is safer for the frostbitten area to be rewarmed by medical professionals.

Be Aware

Winter Weather Advisories are issued when snow, blowing snow, ice, sleet, or a combination of these wintry elements are expected. The conditions should not be hazardous enough to meet warning criteria. Use caution when driving.

Freezing Rain Advisories are issued when light ice accumulation (freezing rain and/or freezing drizzle) is expected but will not reach warning criteria. Expect a glaze on roads resulting in hazardous travel. Slow down and use caution while driving because even trace amounts of ice on roads can be dangerous.

Wind-chill Advisories are issued when low wind-chill temperatures are expected but will not reach local warning criteria. Extremely cold air and strong winds will combine to generate low wind-chill readings.

Staff and Offender Care

Staff and offenders who work outside and will be exposed to cold weather conditions for extended periods. Areas such as agriculture and outside industrial areas should dress with the necessary clothing to help prevent cold weather exposure. Here are the types of clothing that may be appropriate:

- Thermal underwear
- Insulated jackets
- Cotton gloves
- Insulated hoods
- Leather gloves
- Heavy work shoes
- Heavy socks

Care shall be taken to prevent perspiration, which could soak clothes and compromise the clothing's insulation.

Remember, layers of clothing shall be removed or added according to the temperature and physical activity.



Portable Space Heaters

Colder temperatures often prompt the use of portable space heaters. The National Fire Protection Association (NFPA) 101 Life Safety Code prohibits the use of portable space heaters in correctional/detention occupancies.

Other administrative areas should exercise caution when using space heaters.

Purchase only space heaters that have been safety tested and UL approved. Make sure the unit is equipped with an emergency tip-over shut-off feature and heating element guards. Read and follow all of the manufacturer's instructions for operation and care.

Check to make sure the heater is clean and in good condition, and have all problems professionally repaired.

Do not overload circuits:

Never use extension cords or multiple plugs with a space heater, and make sure the unit is not plugged into the same circuit as other electric appliances.

Starting this fiscal year, the Risk Management Department will provide a list of frequent findings of deficiencies found during audits. These findings will be those found by Risk Management, State Fire Marshal Office (SMFO), or the State Office of Risk Management (SORM). These findings are to assist in detecting and correcting them on their units.

Division Level frequent findings

1. Electrical disconnect boxes not secure.
2. Exposed electrical wires on cords.
3. Appliances plugged into power strips. (Power strips are not designed for high power loads such as space heaters, refrigerators, and microwave ovens.)
4. Electrical outlets not GFCI protected within 6 feet of water source, in wet areas, or coin operated vending machines.

Other Hazards found:

1. Cover plates missing on switches or outlets.
2. Improper flammable/ oxygen tank storage.
3. Ansul protective caps missing in kitchen areas.

References:

- AD-10.64-Temperature Extremes in the TDCJ Workplace
⇒ <http://www.tdcj.texas.gov/>
- OSHA
⇒ <https://www.osha.gov/>
- NFPA 101 Life Safety Code
⇒ <http://www.nfpa.org>
- Laundry & Necessities Procedures Manual
⇒ 01.02 Allocation of Necessities



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Wind Speed in MPH	ACTUAL THERMOMETER READING (°F)										
	50	40	30	20	10	0	-10	-20	-30	-40	
	EQUIVALENT TEMPERATURE (FEELS LIKE) (°F)										
CALM	50	40	30	20	10	0	-10	-20	-30	-40	
5	48	37	27	16	6	-5	-15	-26	-36	-47	
10	40	28	16	4	-9	-21	-33	-46	-58	-70	
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113	
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	
Over 40 MPH (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER (Danger from freezing or ex- posed flesh)			GREAT DANGER (Danger from freezing or ex- posed flesh)			