

INTRODUCTION

Cold injuries are most likely to occur when an unprepared individual is exposed to winter temperature. The cold weather and the type of combat operation in which the individual is involved impact on whether he or she is likely to be injured and to what extent. Clothing, physical condition and mental make up also are determining factors.

COLD INJURY

- DEFINITION

An injury caused by exposure to extreme cold that can lead to loss of body parts and even to death.

CAUSES

- Excessive cold weather
- Prolonged exposure to cold environment

RISK FACTORS

- Age (infancy, elderly age)
- General health
- Fatigue
- Predisposing medical condition
- Medication
 - a) peripheral vasodilator medication
 - b) diuretics

TYPES OF COLD INJURY

- 1) Hypothermia
- 2) Frostbite
- 3) Chilblains
- 4) Dehydration
- 5) Carbon monoxide poisoning
- 6) Snow blindness

1) HYPOTHERMIA

- DEFINITION

Defined as a lowered core body temperature usually below 34.4 degree C.(94 degree F.)



SYMPTOMS


- Shivering
- Dizzy , drowsy
- Irritability
- Confusion
- Slowed, slurred speech
- Altered vision

STAGES OF HYPOTHERMIA

- Shivering
- Apathy and decreased muscle function
- Decreased vital signs
- Death

CLASSIFICATION

1. Mild hypothermia: 90 degree to 95 degree
2. Moderate hypothermia: 82 degree to 89 degree
3. Severe hypothermia less than 82 degree F.

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- **TREATMENT** Prevent further cold exposure
 - Evacuate immediately if severe hypothermia
 - Remove wet clothing
 - Re warm with body –to- body contact or in a warmed sleeping bag.
 - Warm sweet liquids if needed.
 - Give CPR if needed.

PREVENTION

- Eat properly & often
- Warm liquids & water.
- Wear uniform properly
- Keep active
- Warming tents
- Get plenty of rest



2) FROSTBITE

DEFINITION

Frostbite is freezing of body tissue often accompanied the hypothermia. When ice crystal form between the cells of the skin and then grow by extracting fluid form the cells. Circulation is obstructed , causing additional damage to the tissue affected. It affect hand ,feet, ears, nose, and cheeks.





SYMPTOM

- Initially redness in light skin or grayish in dark skin.
- Tingling , stinging sensation.
- Turns numb , yellowish , waxy or gray color.
- Feels cold, stiff, woody

TREATMENT

- Remove from cold and prevent further heat loss.
- Remove constricting clothing and jewelry.
- Rewarm affected area evenly with body heat until pain returns.
- Do not massage affected parts.

PREVENTION

- Wear uniform properly
- Keep socks and clothing dry
- Protect yourself from wind
- Drink hot fluids and eat often
- Insulate yourself from the ground
- Caution skin contact with super-cooled metal or fuel
- Seek medical aid for suspected cases.

3)CHILBLAINS

- DEFINITION

Cold wet condition (between 32-60degree F, high humidity) repeated , prolonged exposure of bare skin can develop in only in a few hours ears, nose, cheeks, fingers, and toes.

SYMPTOMS

- ✓ Initially pale and colorless
- ✓ Worsens to achy, prickly sensation then numbness
- ✓ Red , swollen ,hot, itchy, tender skin upon rewarming
- ✓ Blistering in severe cases

TREATMENT

- Prevent further exposure
- Wash, dry gently
- Don't massage or rub
- Dry sterile dressing
- Seek medical aid

PREVENTION

- Keep dry and warm
- Cover exposed skin
- Wear uniform properly
- High risk during wet weather, in wet areas ,or sweat accumulated in boots or gloves.



4) DEHYDRATION

- DEFINITION

A loss of body fluids to the point of slowing or preventing normal body functions increases chance of becoming a cold weather casualty , esp. hypothermia can lead to heat cramps.

SYMPTOMS

Dark urine

- Headache
- Dizziness, nausea
- Weakness
- Dry mouth , tongue , throat , lips
- Lack of appetite
- Irritability
- Stomach cramps or vomiting
- Increased or rapid heartbeat

TREATMENT

- Drink water or other warm liquids
- Avoid caffeinated liquids
- Do not eat snow
- rest

PREVENTION

- Monitor urine color
- Do not wait until you are thirsty
- Drink hot liquids for warmth

5) CARBON MONOXIDE POISING

- DEFINITION

when oxygen in the body is replaced by carbon monoxide colorless, odorless, tasteless gas resulting from incomplete combustion inadequate ventilation from engines, stoves, heaters.

SYMPTOMS

- Headache
- Dizziness
- Weakness
- Ringing in ears
- Nausea
- Drowsiness
- Bright red lips, eyelids

TREATMENT

- Move to fresh air immediately
- Provide mouth- to-mouth resuscitation if victim is not breathing
- Seek medical aid promptly

PREVENTION

- Ensure proper ventilation
- Turn heaters off when not need
- Never sleep in vehicle with engine running
- Ensure heaters are regularly serviced.

6) SNOW BLINDNESS

- DEFINITION

Inflammation and sensitivity of the eyes caused by ultraviolet rays of the sun reflected by the snow or ice.

SYMPTOMS

- Gritty feeling in eyes
- Redness and tearing
- Eye movement will cause pain
- headache

TREATMENT

- Remove from sunlight
- Blindfold both eyes or cover with cool, wet bandages.
- Recovery may take 2-3 days.

PREVENTION

- Eye protection
- Dark uv protective glasses
- Do not wait for discomfort to begins.


NURSING MANAGEMENT

• NURSING DIAGNOSIS

- 1) High risk for altered body temperature related to illness or trauma affecting temperature regulation.
- 2) Hypothermia related to exposure to excessively cool environment.
- 3) Ineffective thermoregulation related to trauma or illness.



PREVENTIVE MEASURES

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- Dress
 - Rest
 - Food
 - Limit exposure
 - Injury control officer
 - Plan operation around weather
 - Provide rewarming tents and hot liquids
 - Carbon monoxide precautions
 - Frequent rotations

CONCLUSION

- Always be prepared for extreme weather conditions. Once a cold injury has occurred, you are more susceptible to it occurring again . prevention is critical and may save someone's life. Don't let the weather become your worst enemy.

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A bouquet of pink roses and a pink butterfly on a black background. The roses are in various stages of bloom, with some buds still closed. The butterfly is positioned on the left side of the bouquet. The text "THANK YOU" is written in a green, serif font across the center of the image.

THANK YOU