

# Preventive Measures for Cold-Related Illnesses During Extreme Cold



미국



- "Extreme Cold" refers to a cold weather phenomenon that can cause health problems such as hypothermia and frostbite.
- Before starting work, check the 5 basic Extreme Cold safety rules and take action on any deficiencies.

## ❄️ Extreme Cold Warning Criteria

### Cold Wave Advisory

- ▶ When the morning low temperature is expected to stay below  $-12^{\circ}\text{C}$  for 2 or more consecutive days
- ▶ When the morning low temperature is expected to drop by  $10^{\circ}\text{C}$  or more compared to the previous day, reaching  $3^{\circ}\text{C}$  or below

### Cold Wave Warning

- ▶ When the morning low temperature is expected to stay below  $-15^{\circ}\text{C}$  for 2 or more consecutive days
- ▶ When the morning low temperature is expected to drop by  $15^{\circ}\text{C}$  or more compared to the previous day, reaching  $3^{\circ}\text{C}$  or below

※ For detailed information, refer to the Korea Meteorological Administration Enforcement Decree [Appendix 1] Warning Criteria.

## ❄️ 5 Basic Extreme Cold Safety Rules



### Warm Clothing

- ▶ Wear warm clothing, a hat, and gloves
- ▶ Wear shoes with insulation and waterproofing  
\* Prepare extra socks in case they get wet from water or sweat



### Warm Shelter (Rest Area)

- ▶ Set up a warm shelter close to the work area  
\* Take preventive measures in the shelter against fire and harmful gas exposure
- ▶ During an Extreme Cold Warning, provide adequate rest.



### Warm Water

- ▶ Provide clean and warm water



### Adjust Work Hours

- ▶ Cold Wave Advisory: Adjust work hours and shorten working time
- ▶ Cold Wave Warning: Stop or minimize outdoor work during cold periods (early morning)



### Call 119 (Emergency Number)

- ▶ In case of a cold-related illness, immediately call 119
- ▶ Inform workers in advance about symptoms, preventive measures, and first aid for cold-related illnesses

Danger



Cold-Related Illness Occurrence

Below  $35^{\circ}\text{C}$

Loss of consciousness  
No breathing

Call  
**119**  
for rescue



Transport to hospital

## ❄️ Management of Cold-Related Illness Vulnerable Groups

- ▶ During an Extreme Cold Warning, minimize outdoor work during cold periods (early morning) for **vulnerable groups** and workers performing **heavy tasks**

### What are vulnerable groups

People with high blood pressure, diabetes, cerebrovascular or cardiovascular diseases, hypothyroidism, frailty, elderly, and newly assigned workers

### What are heavy tasks

Tasks involving the whole body such as formwork, rebar, or concrete work using shovels, hammers, saws, pickaxes, axes, etc., or handling heavy objects

## ❄️ Symptoms and First Aid for Cold-Related Illnesses

### Cold-Related Illnesses

### Symptoms

### First Aid Guidelines



Hypothermia

- ▶ Core body temperature below 35°C
- ▶ Shivering, fatigue, confusion, slurred speech, memory loss
- ▶ (Mild) cognitive impairment
- ▶ (Moderate) loss of consciousness, arrhythmia, slowed breathing
- ▶ (Severe) coma, cardiac arrest

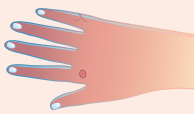
- If the body temperature is below 35°C or the person is unconscious, immediately call 119 and transport to a medical facility
- If the ambulance has not arrived or medical transport is not possible, take the following actions:
  - Move the person to a warm place as quickly as possible
  - Remove wet clothing and wrap with a blanket



Frostbite

- ▶ Skin and subcutaneous tissue frozen or damaged due to cold exposure
- ▶ Skin turns white or yellow-gray
- ▶ Skin feels abnormally hard
- ▶ Reduced sensation, numbness

- Visit a medical facility immediately for treatment
- If immediate treatment is not available, take the following actions:
  - Move the person to a warm place quickly
  - Immerse frostbitten areas in warm water for 20 - 40 minutes



Trench Foot

- ▶ Red, itchy skin
- ▶ In severe cases, congestion, blisters, or ulcers may occur

- Warm the affected area by immersing it in warm water
- Gently massage the area to promote blood circulation; do not scratch
- Keep the affected area clean and moisturized



Immersion Foot / Immersion Syndrome

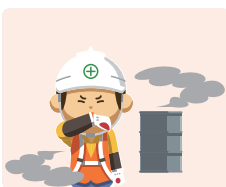
- ▶ Itching, numbness, or tingling pain
- ▶ Swollen skin that turns red, blue, or black
- ▶ In severe cases, blisters, tissue necrosis, or ulcers may occur

- Remove wet shoes and socks
- Gently wash the affected area with warm water and dry it thoroughly

※ For details, refer to the Korea Disease Control and Prevention Agency (KDCA) guideline "Understanding Cold Wave Preparedness and Cold-Related Illness Prevention."

## ❄️ Prevention of Suffocation and Slip Accidents in Winter

### Prevent Suffocation Risks When Using Briquettes at Construction Sites



- ▶ Use a hot-air heater instead of briquettes for concrete curing.
- ▶ If briquettes must be used for curing, make sure to:
  - ↳ Check oxygen and toxic gas levels, Provide sufficient ventilation, Wear proper protective equipment.

### Prevent Slipping on Icy Roads



- ▶ Wear slip-resistant safety shoes.
- ▶ Remove snow and ice before starting work, and spread sand or salt on slippery areas.