

# Guidelines on prevention of heat-related illness in summer from the **heatwave**



☉ Workplaces should prepare prevention measures toward heat-related illness **before the heatwave** to implement them by heatwave levels.

\* Heatwave refers to the phenomenon that severe heat above 30°C continues in particular areas in summer. The government tries to prevent damages from the heatwave by running a heatwave countermeasure period (May 20 - Sept. 30) every summer.

☑ Follow **3 Basic Rules** to prevent heat-related illness.

## Outdoor workplaces such as construction sites

## Indoor workplaces

※ (Applied workplaces) Places that have difficulties in the installation of air-conditioning devices and indoor temperature is affected by the outside temperature

### Shade

- ✓ A shaded area (rest area) near the worksite should be provided.
- ✓ Shade canopies should be installed at a place that can be ventilated with cool air.



✓ Need to implement the following measures to keep the temperature within a specific range for daily worksites.

- ① Installation of a thermo-hygrometer at the worksite.
- ② Installation of \* zone cooling system or local ventilation to prevent hot air from being stagnated.
- ③ Need to manage the indoor temperature during the night shift.

\* Air circulation device, fan, cool-air fan, mobile air conditioner, etc.

### Wind



### Water



✓ Cool and clean water needs to be provided / Regular hydration.

### Water



### Rest



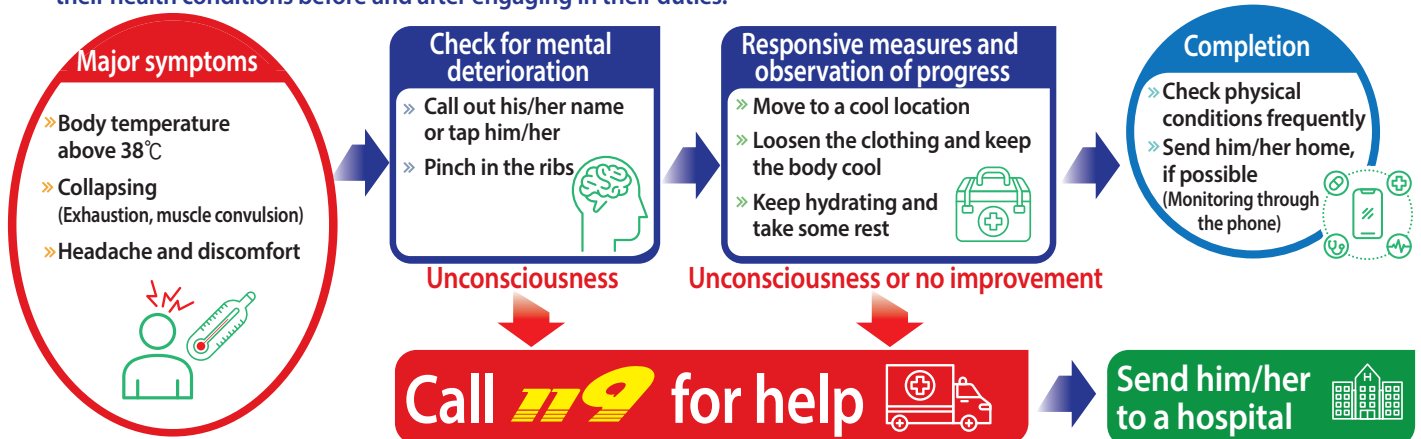
- ✓ Upon heatwave warning (watch, warning), need to provide a break for 10 to 15 minutes every hour.
  - ✓ Provide rest and minimize outdoor work during the hours of high temperature (14:00 - 17:00).
- ① Rescheduling working hours.
  - ② Adjust the workload by slowing down the working pace and focus on less-demanding tasks.
  - ③ Conduct occupational safety and health education at indoor.
  - ④ Check the health conditions of the workers.
- ※ A brief rest is crucial during hours of high temperatures, and it can enhance productivity.

### Rest



☑ Need to take immediate measures in case of **heat-related illness**.

- ☉ Need to take **immediate measures** if a worker asks to stop the task due to **pressing risks** such as **possibilities of heat-related illness**.
- ☉ In case of **heat-related illness** such as **heatstroke or heat exhaustion** due to extensive exposure to high temperature and humidity, take immediate measures, as shown below.
- ☉ In particular, the group susceptible to heat-related illness and the workers engaging in labor of high intensity are required to verify their health conditions before and after engaging in their duties.



※ This guideline is provided to prevent heat-related illness and can be applied at the equivalent or higher level based on the worksite situation and workers' opinions.



Ministry of Employment and Labor



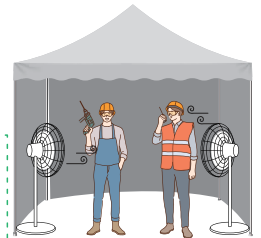
# Need to take extra countermeasures based on the level of the heatwave according to the Apparent ("Feel-like") Temperature.

During extremely hot weather seasons when indoor/outdoor worksites are continuously exposed to the heatwave, it's necessary to take extra countermeasures in addition to the basic rules to prevent heat-related illness.

## Common issues

(Attention, Caution, Alert, Serious)

- ✓ Check the weather conditions through the website of KMA (or the Weather Notification App), and provide the heatwave information for the workers.
- ✓ Prepare cool and clean water as well as shades (rest area) to rest for the workers.
- ✓ When working outdoors or at indoor hot worksites, provide cold-reserving gear such as arm protectors upon request of the worker.
- ✓ Pay extra attention to the group susceptible to heat-related illness and the workers engaging in high-intensity labor.



### What is the group susceptible to heat-related illness?

- ▲ Patients with obesity, diabetes, high/low blood pressure, etc.
- ▲ Persons with a history of heat-related illness.
- ▲ Persons of advanced age.
- ▲ Persons newly assigned to the duties exposed to the heatwave.

### What is the labor with high intensity? The labor demands extensive physical intensity and is easily exposed to heat stress

- ▲ (Examples) Duties requiring physical labor with the entire body, such as rack/steel bar/concrete-pouring and welding works, or duties repeatedly lifting, unloading, or handling heavy objects, duties using tools such as shovel/hammer/saw while exposed to extensive heatwave.

- ✓ Need to check if the air conditioning/ventilation systems are adequate in the indoor worksites.

## Caution

Apparent Temperature at or higher than 33°C

or the heatwave watch

- ✓ Provide a break in the shade (rest area) for 10 minutes every hour.
  - Arrange additional recess hours for the group susceptible to heat-related illness and the workers engaging in the labor of high intensity.
- ✓ Reduce outdoor labors or adjust the working hours during the hours of high temperature (14:00 - 17:00).



## Alert

Apparent Temperature at or higher than 35°C

or the heatwave warning

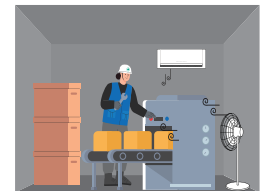
- ✓ Provide a break in the shade (rest area) for 15 minutes every hour.
  - Arrange additional recess hours for the group susceptible to heat-related illness and the workers engaging in the labor of high intensity.
- ✓ Suspend outdoor labor during the hours of high temperature (14:00 - 17:00) unless unavoidable.
  - Provide sufficient recess hours for unavoidable outdoor labor.
- ✓ Assign a person in charge to check the health conditions of the workers.



## Serious

Apparent Temperature at or higher than 38°C

- ✓ Take a break in the shade (rest area) for 15 minutes or longer every hour.
  - Arrange additional recess hours for the group susceptible to heat-related illness and the workers engaging in high-intensity labor.
- ✓ Suspend outdoor labor during the hours of high temperature (14:00-17:00) except for emergency measures required for disaster and safety management.
  - Grant sufficient recess hours when emergency works are executed.
- ✓ Restrict outdoor labor for the group susceptible to heat-related illness, i.e., heatstroke.
- ✓ Assign a person in charge to check the health conditions of the workers.



## How to check the Apparent ("Feel-like") Temperature

※ What is the Apparent ("Feel-like") Temperature? It is the temperature quantitatively expressing the human sensation where the current temperature is perceived lower under low humidity or higher under high humidity by adding the impacts from the humidity and winds.

### Outdoor worksites

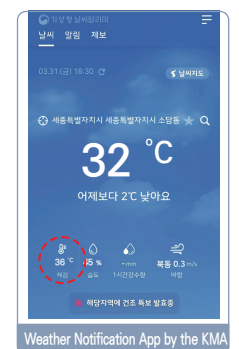
You can check the heatwave level at the Korea Meteorological Administration\* website or Weather Notification App.

\* Website of KMA (www.weather.go.kr) Weather Information } Severe Weather Announcement } Impact Forecast } Industries.

\* Heatwave Announcement: It is announced when the highest Apparent ("Feel-like") Temperature of the day is at or higher than 33°C (Watch), at or higher than 35°C (Warning), and it lasts for more than two days.

### Indoor worksites

If the temperature provided by KMA differs from the indoor temperature of the worksites, the Apparent Temperature measured by the thermo-hygrometer at the daily worksite shall be applied.



Apparent Temperature table by the KMA

Temperature Humidity	Attention							Caution		Alert			Serious
	28	29	30	31	32	33	34	35	36	37	38	39	40
40	26.6	27.6	28.5	29.5	30.4	31.4	32.4	33.3	34.3	35.3	36.2	37.2	38.2
45	27.1	28.1	29.0	30.0	31.0	32.0	32.9	33.9	34.9	35.9	36.9	37.8	38.8
50	27.6	28.6	29.5	30.5	31.5	32.5	33.5	34.5	35.5	36.4	37.4	38.4	39.4
55	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
60	28.4	29.4	30.4	31.4	32.4	33.5	34.5	35.5	36.5	37.5	38.5	39.5	40.5
65	28.9	29.9	30.9	31.9	32.9	33.9	34.9	35.9	36.9	38.0	39.0	40.0	41.0
70	29.3	30.3	31.3	32.3	33.3	34.3	35.4	36.4	37.4	38.4	39.5	40.5	41.5
75	29.7	30.7	31.7	32.7	33.7	34.8	35.8	36.8	37.8	38.9	39.9	40.9	42.0
80	30.0	31.1	32.1	33.1	34.1	35.2	36.2	37.2	38.3	39.3	40.4	41.4	42.4
85	30.4	31.4	32.5	33.5	34.5	35.6	36.6	37.7	38.7	39.7	40.8	41.8	42.9
90	30.8	31.8	32.9	33.9	34.9	36.0	37.0	38.1	39.1	40.2	41.2	42.3	43.3



Beware of Safety Accidents During Heatwaves!!



- Be sure to wear personal protective gear, i.e., safety helmets and harnesses, which are prone to be neglected.
- Be cautious of safety accidents, including fall-off and fall-down, due to deteriorating concentration.