



AVOID WORKER HEAT STRESS AFTER COVID DURING THE SUMMER HEAT

It's summer! Hot weather is here! KEEP WORKERS safe during covid!



Heat stress occurs when the body is under stress because it cannot get rid of excess heat.

Primary factors contributing to heat stress

Environment

- Air temperature
- Airflow
- Humidity
- Radiant heat (e.g., sun, kiln)

Worker

- Acclimatization
- Hydration
- Clothing
- Medical conditions

Work

- Workload
- Work rate

Heat stress

SOURCES FOR HEAT STRESS

- Work processes & machinery (ie. smelter)
- Weather - humidity, no wind, air circulation
- Illnesses causing fever [Keep in mind that some [COVID-19 symptoms](#) are similar to heat-related illness. If you or a worker are experiencing such symptoms, stop working and seek the appropriate medical care.]
- Heat generated by muscles from physical exertion
- PPE – masks, gloves, face shields, gowns

Covid Risk FACTORS that can lead to Heat Stress – refer to APPENDIX A to find out why

1. Workplace has closed temporarily – physical deconditioning
2. Worker has been out of the work environment for more than 1 week
3. PPE required for COVID-19 (plastic gowns and gloves)
4. Work rate and work load increased due to fewer workers
5. Longer shifts during hot work environment

STRATEGIES TO CONTROL HAZARDS – APPENDIX B

How to Reduce risk for heat-related illness during the COVID-19 Pandemic



1. ACCLIMATIZE - allow worker to take time to get used to (re-acclimatize) heat
2. SHIFT BUDDY – co-buddy to check for symptoms of heat-related illness
3. BREAKS / WORK SCHEDULE - longer and more frequent rest breaks
4. PRODUCTIVITY - Adjust target expectations for completed work
5. PPE - MASKS - cloth face coverings or masks are lightweight and light in color
6. HYDRATION - Rehydrate and cool down safely
7. WATER REFILL STATION: Encourage workers use a refillable drinking bottle
8. FANS: Avoid workers standing in front to prevent spreading respiratory droplets

EMERGENCY FIRST AID – APPENDIX C – WEAR MASK, GLOVES & PHYSICAL DISTANCE

- Train workers to recognize and prevent heat stress
- Immediately move worker into a cool or shaded area
- Remove PPE to facilitate cooling
- provide them with cool liquids to drink
- If you suspect heat stroke: Call 911
- Cool the affected worker aggressively

APPENDIX A –

5 COVID RISK FACTORS INCREASE WORKER'S VULNERABILITY TO HEAT STRESS

As the temperature or heat burden increases, workers may feel:



Increased irritability



Loss of concentration and ability to do mental tasks



Loss of ability to do skilled tasks or heavy work

- Loss of your body's natural ability to adapt to heat (acclimatization). This can occur if your workplace has closed temporarily [ie. due to COVID]
- Lack of a re-acclimatization component of work re-entry plan if the worker has been out of the work environment for more than 1 week [ie. due to COVID restrictions]
- Increased heat burden associated with cloth face coverings or masks or, additional PPE required for COVID-19 (plastic gowns and gloves). These can:
 - Trap heat close to the skin and prevent normal cooling like sweat evaporation.
 - Increase the effort required to breathe through a cloth face covering or mask, or, for healthcare workers, a respirator.
 - Increase anxiety you may feel during wear
- Increased physical activity if workers need to do more than their usual job tasks due to social distancing requirements. For example, might have to walk more or lift objects more frequently if there are fewer employees at your workplace
- Longer work shifts, resulting in spending more time in the hot work environment to catch up on work missed during earlier shutdowns.



APPENDIX B –

Strategies TO reduce/prevent risk for heat stress during the COVID-19 Pandemic

ACCLIMATIZE – Allow workers to take time to get used to the heat [link to deconditioning article]

- If the worker has been away from work for more than 1 week, place them on a re-entry work schedule that will allow the worker to be slowly re-introduced to working in a hot environment - can regain their ability to work in hot conditions in 2 to 3 days
- Workers new to the job may take up to 14 days to fully acclimatize
 - Recommended for **new workers**: schedule should be no more than 20% of the usual duration of work in the heat on day 1 and increase by 20% on each additional day

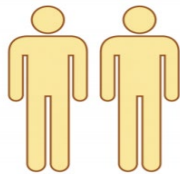
For workers who have had previous experience with the job, the acclimatization schedule should be no more than:

DAY 1	DAY 2	DAY 3	DAY 4
50% EXPOSURE	60% EXPOSURE	80% EXPOSURE	100% EXPOSURE

Set up a buddy system

Check your workers routinely to make sure...

- ☑ they make use of readily available water and shade.
- ☑ they don't have heat-related symptoms.



SHIFT BUDDY – co-buddy to check for symptoms of heat-related illness

- Continue to follow workplace physical distancing requirements.
- Rely on verbal check-ins with co-worker as masks may hide facial clues
- Verbal check-ins may include asking each other easy questions and listening for a correct reply given without hesitation or slurring.
- If worker indicates they feel unwell or their reply is difficult to understand, alert your supervisor and begin first aid procedures.

BREAKS - Take longer and more frequent rest breaks. [refer to chart below]

- alter work/rest schedule by increasing the number and frequency of rest breaks
- modify work schedules so the majority of work hours or most physically demanding tasks occur overnight or during cooler parts of the day

Schedule and encourage frequent rest breaks...

...with water breaks in shaded or air-conditioned recovery areas.



PRODUCTIVITY - Adjust target expectations for completed work

- reassess expectations or goals if social distancing requirements add distance and time to work tasks, decreasing the number of tasks workers can safely complete each shift.

MASKS - Wear masks that are lightweight and light color

- Do not layer masks over respiratory protection
- Do not use masks with exhaust valves for source control
- SPARES: carry and/or offer spare masks so workers can replace the mask if gets wet, visibly soiled, or contaminated

During moderate activity in moderately hot conditions, workers should drink about...



**1 cup every
15 to 20 minutes.**

HYDRATION - Rehydrate and cool down safely [[link to Drink your water](#)]

- Maintain social distancing (at least 6 feet) during rest breaks. [[link to posters](#)]
- Social distancing is very important during breaks as workers will need to remove masks, or respirators that cover the mouth in order to rehydrate.

WATER REFILL STATION – provide access to water on site and cooling stations

- Encourage workers use a refillable drinking bottle
- Signage - Avoid gathering around water refill stations or where drinks are stored.

FANS – Avoid workers standing directly in front of fan

- Place fan direction downwards to prevent blowing respiratory droplets from landing onto others

Set up shade structures.

Umbrellas, buildings, and trees can also shield workers from the rays of the sun. Note: you can still get sunburn on a cloudy day.



APPENDIX C –

FIRST AID - Follow an emergency first aid plan for heat-related illnesses

→ Train workers to recognize and prevent heat stress – contact ABL's Occupational Wellness Manager, Carla Villalta who is also a Red Cross Instructor to arrange for First Aid Training through Red Cross including Preventing Disease Transmission [link to pdf with training programs]

Signs of heat stroke may include:

- Confusion
 - Difficulty with routine tasks or answering simple questions (“What is today's date?”
“Where are we?”)
 - Slurred speech
 - Nausea or vomiting
 - Extreme thirst
 - Seizures
 - Loss of consciousness
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- Immediately remove worker from the hot environment into a cool or shaded area
 - Notify management or the nearest worker who can get help
 - Remove PPE that is normally required for any job tasks, cloth face coverings or masks, and excess clothing from the affected worker to facilitate cooling
 - If the affected worker is alert, provide them with cool liquids to drink
 - **If you suspect heat stroke:**
 - Call 911
 - Cool the affected worker aggressively while waiting for the ambulance. You can use ice, cool water baths, or misting sprays.
 - if the worker is not fully conscious, take care to keep water from going into the worker's mouth and lungs.
 - If providing first aid or resuscitation, continue wearing MASK and maintain physical distancing as much as possible

HEAT STRESS Work/Rest Schedules

Using work/rest schedules can decrease the risk of heat illness

Examples of Work at Different Intensity Levels

Light work

- Operating equipment
- Inspection work
- Walking on flat, level ground
- Using light hand tools (wrench, pliers, etc.). However, this may be moderate work depending on the task
- Travel by conveyance

Moderate work

- Jack-leg drilling
- Installing ground support
- Loading explosives
- Carrying equipment/supplies weighing 20–40 pounds
- Using hand tools (shovel, fin-hoe, scaling bar) for short periods

Heavy work

- Climbing
- Carrying equipment/supplies weighing 40 pounds or more
- Installing utilities
- Using hand tools (shovel, fin-hoe, scaling bar) for extended periods

There are two Humidex guidelines to determine the appropriate actions required:

Humidex 1 refers to **unacclimatized workers** doing “moderate” work, and ranges indicate the need for **general heat stress controls**.

Humidex 2 refers to **acclimatized workers** doing “moderate” work, and ranges indicate the need for **specific controls**.

Humidex 1 general controls	ACTION RECOMMENDED	Humidex 2 specific controls
30 – 37	Warn for symptoms and extra water	36 – 42
38 – 39	Work with 15 minutes/hour relief	43 – 44
40 – 41	Work with 30 minutes/hour relief	45 – 46*
42 – 44	Work with 45 minutes/hour relief	47 – 49*
45+	Hazardous to continue physical activity	50+*

Information Sources:

- *Heat related safety in pandemic environment*
- *Canadian Centre for Occupational Health and Safety (CCOHS)*
- *Ontario Ministry of Labour, Training and Skills Development*
- *Employer Information for Heat Stress Prevention during the COVID-19 Pandemic – CDC*
- *What Workers Need to Know about Heat Stress Prevention during the COVID-19 Pandemic - CDC*
- *Workplace Safety North*