



DIR
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Safety and Health Warehousing and Storage

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High Hazard Unit South
February 13, 2025



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Agenda

Safety and Health Warehousing and Storage

- Common Safety and Health Hazards
- Warehouse Quotas
- Resources



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Warehousing and Storage

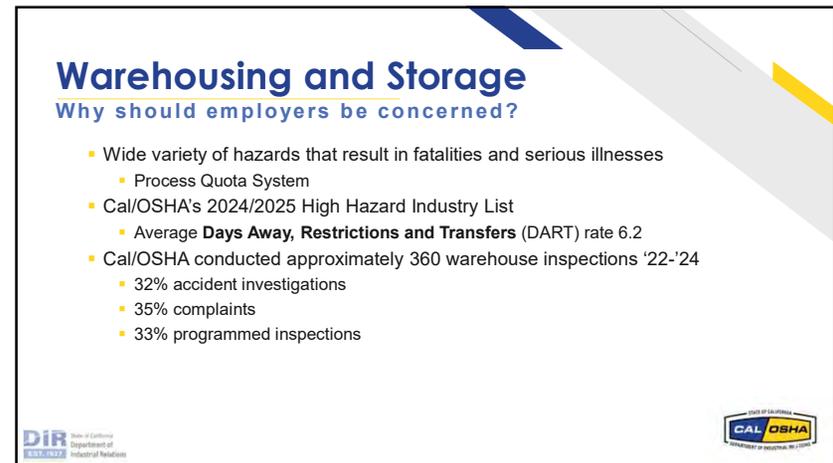
Who is covered?

Employers that primarily operate warehousing and storage facilities

- General merchandise
- Refrigerated goods
- Other warehouse products
- Generally, do not sell goods
- Can provide logistical services
 - Distribution
 - Labeling
 - Inventory control
 - Management
 - Light assembly
 - Order entry and fulfillment
 - Packaging
 - Transport arrangement




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Warehousing and Storage

Why should employers be concerned?

- Wide variety of hazards that result in fatalities and serious illnesses
 - Process Quota System
- Cal/OSHA's 2024/2025 High Hazard Industry List
 - Average **Days Away, Restrictions and Transfers (DART)** rate 6.2
- Cal/OSHA conducted approximately 360 warehouse inspections '22-'24
 - 32% accident investigations
 - 35% complaints
 - 33% programmed inspections



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Warehousing and Storage

Common Hazards

- Material handling
- Excessive heat
- Machinery
 - Powered industrial trucks
 - Robotics
 - Material handling equipment
- Hazardous chemicals
- Slips/trips/falls
- Pallets
- Blocked aisles and exits





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Warehousing and Storage

What do employers need to do?

- Injury and Illness Prevention Plan (section 3203)
 - Cal/OSHA Guidance
 - Guide to Developing Your Workplace Injury & Illness Prevention Program
 - Injury & Illness Prevention Program for High Hazard Employers
 - <https://www.dir.ca.gov/dosh/PubOrder.asp>
- Dual Employers
 - Staffing agencies
 - Both employers are required to implement Injury and Illness Prevention Program





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Warehousing and Storage

Foot Protection (section 3385)

- Required for employees exposed to
 - Falling objects
 - Crushing
 - Penetrating actions
- Must meet ASTM F 2412-05 and ASTM F 2413-05 requirements




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Warehousing and Storage

Forklifts and other powered industrial trucks (sections 3650, 3662, 3664, 3668, 5146, 5155, and 5164).

- Serious injury, illness, or death can result if:
 - Employees are not properly trained on equipment
 - Policies on operations are not enforced.
 - The equipment is not properly maintained.
 - Adequate ventilation controls are not implemented to control exhaust emissions
 - Storage batteries are not maintained (section 5185)
 - Fire hazards
 - Chemical hazards





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Warehousing and Storage

Portable fire extinguishers (section 6151)

- Proper placement
- Employee training
- Maintenance and Testing





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Warehousing and Storage

Air tank operating permits (section 461)

- Requires Permit to Operate
- Posted in conspicuous place
- Provide to Cal/OSHA upon request
- Cal/OSHA Pressure Vessel Unit
 - <https://www.dir.ca.gov/dosh/pressure.html>





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Warehousing and Storage

Emergency eyewash and shower equipment (section 5162)(section 5185n)

- Chemical hazards
 - Chemical storage
 - Cleaning products
- Corrosive hazards
 - Battery charging stations
- Meets ANSI Z358.1-1981
- Hazard Communication Program (section 5194)




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Warehousing and Storage

Repetitive motion injuries (section 5110)

- High risk for employees performing
 - Identical work activity
 - Heavy or awkward lifting
 - Awkward postures
 - High hand forces (pinching, gripping)
- Employers must develop and implement program to minimize RMI's
 - Engineering controls
 - Workstation redesign
 - Adjustable fixtures
 - Tools
 - Administrative controls
 - Job rotation
 - Work pacing



Ergonomics Resources




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Warehousing and Storage

Warehouse Quotas (AB 701)



A “quota” is defined as “a work standard under which an employee is assigned or required to perform at a specified productivity speed, or perform a quantified number of tasks, or to handle or produce a quantified amount of material, within a defined time period and under which the employee may suffer an adverse employment action if they fail to complete the performance standard.”

- Effective January 1, 2022
- AB 701 regulates use of quotas for “Warehouse Distribution Centers”
- https://www.dir.ca.gov/dlse/FAQ_warehousequotas.htm




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Warehousing and Storage

Heat Illness Prevention in Outdoor Places of Employment (section 3395).



- Heat Illness Prevention Plan for employees working outdoors
- Provision of water
- Access to shade
- Emergency response procedures
- Employee and supervisor training
 - Warning signs of heat stress
 - Environmental and personal risk factors
 - Adequate water consumption
 - Acclimatization





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Heat Illness Prevention for Indoor Workers

What Employers Need to Know

David Kang
Senior Industrial Hygienist
Regions 3, Cal/OSHA

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Warehousing and Storage

Indoor Heat(Section 3396)



- Engineering controls
 - Air conditioning
 - Ventilation
- Provision of water
- Cool-down breaks
 - Air-conditioned rooms
 - Rest areas
- Emergency response procedures
- Training

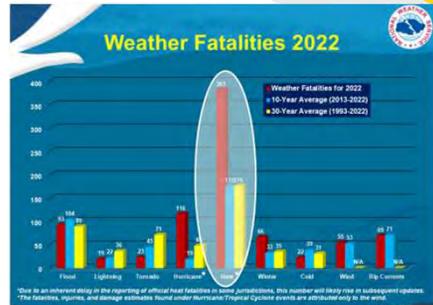




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Why heat matters?

- Heat is the leading climate-related killer
- Studies show heatwaves trending hotter, longer, and more frequent with less overnight relief
- Studies of worker's compensation data show there are over 1000 heat-related illnesses each year in California



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What is Heat Illness?



Heat illness is a serious medical condition resulting from the body's inability to cope with a heat load.



Types of heat illness include:

- heat cramps
- heat exhaustion
- heat stroke, which can lead to death



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What is Heat Illness?



Some symptoms of heat illness include:

- Headache, fatigue, dizziness, confusion, muscle pain and spasms, elevated heart rate, heavy sweating, hot/dry skin, nausea/vomiting, and fainting/unconsciousness.



The longer a person goes without assistance in excessive heat, the more likely they are to become seriously ill.



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Risk Factors for Heat Illness?

- Age, weight, level of physical fitness
- Degree of acclimatization and metabolism
- Use of alcohol or drugs or medications
- Dehydration
- Medical Conditions (diabetes, hypertension)



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Title 8 CCR Section 3395 Outdoor Heat Illness Prevention

- **Regulation has remained unchanged since 2015.**
- **Some requirements of the standard:**
 - Access to Water
 - Access to Shade
 - High Heat Procedures
 - Acclimatization
 - Employee and Supervisory Training
 - Written Procedures Including Emergency Response



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Title 8 CCR Section 3396 Indoor Heat Illness Prevention

- Establishes required safety measures for indoor places of employment
- Applies to most workplaces where the indoor temperature reaches 82°F.
- Effective on July 23, 2024



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Title 8 CCR Section 3396 Indoor Heat Illness Prevention

Some requirements of the standard:

- Access to drinking water and cool-down areas
- Assess and measure temperature and heat index
- Acclimatization
- Employee and Supervisory Training
- Provide timely emergency response and aid
- Have a written indoor heat illness prevention plan that includes procedures for how the above items will be implemented
- **Implement control measure when certain conditions are met**



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Scope

- (a)(1) $\geq 82^{\circ}\text{F}$: Entire regulation **except** subsection (e) "Assessment and Control Measures"
- (a)(2) Entire regulation **including** subsection (e)
 - $\geq 87^{\circ}\text{F}$ or $\geq 87^{\circ}\text{F}$ heat index
 - $\geq 82^{\circ}\text{F}$ for:
 - (a)(2)(C) Clothing restricts heat removal
 - (a)(2)(D) High radiant heat areas



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Definition of "INDOOR"

- Space that is under a ceiling or overhead covering that restricts airflow and is enclosed along its entire perimeter by walls, doors, windows, dividers, or other physical barriers that restrict airflow, whether open or closed
- All work areas that are not indoor are considered outdoor and covered by section 3395, Heat Illness Prevention in Outdoor Places of Employment



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What must employers do?

Heat Illness Preventative Measures

Access to Water

- Potable drinking water must be made available at no cost to all employees
- Maintain, at all times, sufficient quantities of pure and cool potable drinking water (i.e. enough to provide at least one quart per employee per hour for the entire shift)
- Located as close to work areas and cool-down areas
- Encourage the frequent drinking of water





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What must employers do?

Heat Illness Preventative Measures

Cool-Down Areas

- Access to at least one cool-down area
- Cool-down areas must be kept at less than 82°F and shielded from other high-radiant heat sources
- Large enough to accommodate the number of workers on rest breaks so they can sit comfortably without touching each other
- Close as possible to the work areas





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What must employers do?

Heat Illness Preventative Measures

Acclimatization

- All employees shall be closely observed by a supervisor or designee during heat waves when no effective engineering controls are in use to lower temperature.
- Employees newly assigned to high heat areas shall be closely observed by a supervisor or designee for the first 14 days of employment.





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What must employers do?

Heat Illness Preventative Measures

Assess and measure temperature

- Measure the temperature and heat index. Record whichever is greater
- Identify & evaluate other heat illness environmental risk factors
- Active involvement of employees in this assessment





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What must employers do?

Heat Illness Preventative Measures

Implement control measure when certain conditions are met

These conditions are when:

- Temperature or heat index is 87°F or higher.
- Temperature is 82°F or higher and employees are either
 - Wearing clothing that restricts heat removal or
 - Working in an area with high radiant heat.
- Control measures minimize the risk of heat illness and are engineering controls, administrative controls, and personal heat-protective equipment.




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What must employers do?

Heat Illness Preventative Measures

Control measures

Control measures are a way to minimize the risk of heat illness. They include:

- Engineering Controls
- Administrative Controls
- PPE




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What must employers do?

Heat Illness Preventative Measures

“ENGINEERING CONTROL” means

Control or device that removes or reduces hazardous conditions or creates a barrier between the employee and hazard.





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What must employers do?

Heat Illness Preventative Measures

Examples of **ENGINEERING CONTROLS**:

- Isolation of hot processes
- Isolation of employees from sources of heat
- air conditioning
- Cooling fans, cooling mist fans, evaporative coolers
- Natural ventilation (when cooler outdoors)
- Local exhaust ventilation
- Shielding from a radiant heat source
- Insulation




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What must employers do?

“ADMINISTRATIVE CONTROL” means

Method to limit exposure to a hazard by adjustment of work procedures, practices, or schedules.



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What must employers do?

Examples of **ADMINISTRATIVE CONTROLS**:

- acclimatizing employees
- rotating employees
- scheduling work earlier or later in the day
- using work/rest schedules
- reducing work intensity or speed
- reducing work hours
- changing required work clothing
- using relief workers



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What must employers do?

Heat Illness Preventative Measures

Examples of Personal Heat-protective Equipment

- Water- or air-cooled garments, cooling vests, jackets, and neck wraps. The cooling source can be reusable ice packs or cooled air connected to an external source
- Supplied-air personal cooling systems
- Insulated suits
- Heat-reflective clothing
- Infrared reflecting face shields.



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What must employers do?

Heat Illness Preventative Measures

Training

- Risk factors for heat illness
- The employer's procedures for complying with this regulation
- The importance of frequent water consumption and acclimatization.
- Signs and symptoms of the different types of heat illness
- The importance of employees immediately reporting to the employer signs and symptoms of heat illness in themselves or co-workers.
- The employer's procedures for responding to signs and symptoms of heat illness, such as first aid.
- Emergency response procedures, including contacting emergency medical services with clear directions to the worksite.
- Prior to supervising employees, the supervisor must be trained in all of the information listed above and how to monitor and respond to hot weather reports, if the work area is affected by outdoor temperatures.



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What must employers do?

Heat Illness Preventative Measures



Emergency Response and Aid

- Provide first aid or emergency response to any workers showing heat illness signs or symptoms, including contacting emergency medical services
- Designate one or more employees to call for emergency services
- Supervisor to take immediate, appropriate action
- If indicators of serious heat illness, implement emergency response procedures
- Employees exhibiting or reporting signs or symptoms of heat illness shall be monitored and not left alone
- Onsite first aid or appropriate emergency medical services shall be offered
- Contact emergency medical services and ensure that clear and precise directions to the site can be provided




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What must employers do?

Heat Illness Preventative Measures

Written indoor heat illness prevention plan

This includes how heat illness prevention procedures will be implemented






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Comparison Table

Requirement	Outdoor Heat (T8CCR 3395)	Indoor Heat (T8CCR 3396)
Scope and Application	<ul style="list-style-type: none"> • Applies to outdoor workplaces 	<ul style="list-style-type: none"> • Applies to indoor workplaces when the ambient temperature is greater than 82°F
Provide Clean Drinking Water	<ul style="list-style-type: none"> • Provide access to potable water that is fresh, suitably cool, and free of charge • Located as close as possible to work areas 	<ul style="list-style-type: none"> • Provide access to potable water that is fresh, suitably cool, and free of charge • Located as close as possible to work areas and cool-down areas
Access to Shade and Cool-Down Areas	<ul style="list-style-type: none"> • For outdoor workplaces, shade must be present when temperatures are greater than 80°F. When temperatures are less than 80°F, shade must be available upon request • For indoor workplaces, provide access to at least one cool-down area which must be kept at a temperature below 82°F • Shade and cool-down areas must be: <ul style="list-style-type: none"> • Blocked from direct sunlight • Large enough to accommodate the number of workers on rest breaks so they can sit comfortably without touching each other 	




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For Additional Information

Visit the Cal/OSHA Heat Illness Webpage:
<http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

- Fact sheets, guidance documents, FAQs
- Updated Heat Illness Prevention Model Plan
 - Include combined indoor & outdoor plan
- eTools



Contact us by email: heat@dir.ca.gov




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Visit State Fund's Safety Resource Center,
www.SafeAtWorkCA.com,
for additional resources

For other safety questions email:
SafetySupport@scif.com

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