Heat Illness Protection, Housekeeping & Sanitation, Ladders, and Mobile Elevated Platforms

Heat Illness Prevention

Definitions

“Acclimatization” means the temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

“Heat Illness” means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope, and heat stroke.

“Environmental risk factors for heat illness” means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

“Personal risk factors for heat illness” means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

“Preventative recovery period” means a period of time to recover from the heat in order to prevent heat illness.

“Shade” means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. The shade is not adequate when the heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Provision of Water

Employees shall have access to potable drinking water that is clean and maintained through individual dispensers, faucets, or drinking fountains. The water must be fresh, pure, suitably cool, and provided free of charge to employees. Additionally, the water must be located as close as practicable to the areas where employees are working (unless the employer can demonstrate infeasibility).

Where water is not plumbed or otherwise continuously supplied, with properly marked dispensable cups or bottles, it shall be provided in sufficient quantity at the beginning of the work shift to provide a minimum of one quart per employee per hour for drinking for the entire shift.

Employees may begin the shift with smaller quantities of water if they have effective access / procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. Frequent drinking of water is encouraged!

Shade

Employees shall be provided with shade **when the temperature exceeds 80 degrees** and so that it can accommodate the total number of employees on recovery or rest periods.

Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes.

Employees shall be provided enough shade during meal breaks to accommodate the total number of employees that remain outside. In addition, the shaded area is to be located as close as practicable to the areas where employees are working.

Such access to shade shall be permitted at all times. Cooling measures other than shade (e.g., use of misting machines) may be provided in lieu of shade if the employer can demonstrate that these measures are at least as effective as shade in allowing employees to cool.

Preventative Cool-Down Rest Periods

The heat illness regulation requires employers to allow and encourage employees to take a minimum of five minutes for a cool-down rest period if they feel they need to protect themselves from overheating. In addition to allowing and encouraging employees to take cool-down rest periods, the Site Superintendent in charge will monitor and ask employees taking rest periods whether he or she is experiencing symptoms of heat illness.

The Site Superintendent in charge will encourage employees to take a rest period to remain in the shade. The Site Superintendent in charge shall not order employees to work until signs or symptoms of heat illness have been abated.

High-Heat Procedures

The company will implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit.

The Site Superintendent in charge shall ensure that there is effective communication between supervisors and employees and observe employees for alertness and signs or symptoms of heat illness.

The Site Superintendent in charge will assertively monitor employees by instituting: one supervisor to twenty or fewer employee ratio, a mandatory buddy system, regular communication through electronic device routine with each employee, or another effective means of communication.

The Site Superintendent in charge will also designate one or more employees on each worksite as authorized individuals for emergency medical services. If there is no designee on shift, employees are instructed to call for emergency services when required.

Pre-shift meetings must take place before the commencement of work on each shift during high heat conditions.

The shift meetings should:

- Review high heat procedures
- Encourage employees to drink plenty of water with added electrolytes if requested
- Remind employees of their right to take a cool-down rest break when needed.

Acclimatization

The Site Superintendent in charge will assign supervisors to closely observe and monitor employees during a heatwave. A heatwave is defined as temperatures over 80 degrees Fahrenheit or anytime the temperature is ten degrees higher than the average high daily temperature in the preceding five days.

The Site Superintendent in charge will assign a supervisor to closely monitor a new employee for the first 14 days of his or her employment in a high heat area.

Emergency Preparedness Requirements

High-Heat emergency response preparedness requirements now must include:

(1) Effective communication with employees by voice, observation, or electronic means;

(2) Effective response with first aid measures; and
(3) Procedures for contacting emergency responders to help stricken workers.

Training

(1) **Employee training**

Training in the following topics shall be provided to all supervisory and non-supervisory employees.

(A) The environmental and personal risk factors for heat illness;

(B) The employer's procedures for complying with the requirements of this standard;

(C) The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties;

(D) The importance of acclimatization;

(E) The different types of heat illness and the common signs and symptoms of heat illness;

(F) The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms, or signs of heat illness in themselves, or in co-workers;

(G) The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;

(H) The employer's procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;

(I) The employer's procedures for ensuring that, in the event of an emergency, clear and precise directions to the worksite can and will be provided as needed to emergency responders.

(2) **Supervisor training**

Prior to assignment to the supervision of employees working in the heat, training on the following topics shall be provided:

(A) The information required to be provided by section (e)(1) above.

(B) The procedures the supervisor is to follow to implement the applicable provisions in this section.

(C) The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

(3) The employer's procedures required by subsections (e)(1)(B), (G), (H), and (I) shall be in writing and shall be made available to employees and to representatives of the Division upon request.

More from the OSHA Website: Heat Illness Prevention

More from the OSHA Website: Working in Outdoor and Indoor Heat Environments

Housekeeping and Sanitation

Purpose

To provide the basic guidelines necessary for a good housekeeping program which will be a part of the daily routine at each jobsite, with clean-up being a continuous operation.

References

OSHA 29 CFR 1926.25 and 29 CFR 1926.51

Policy

Good housekeeping is an important element of accident prevention and must be a primary concern to all superintendents and foremen. Good housekeeping will be planned at the beginning of a job and will be carefully supervised and followed through to the final clean-up. A clean and orderly workplace will not only contribute greatly to the prevention of accidents and injuries but will also lend itself to the proper utilization of available facility space.

HOUSEKEEPING

Responsibility for good housekeeping shall be assigned to each Supervisor. If the size of the job and working force merit, a crew should be specifically detailed to continuously clean up. In any event, regardless of the size of the work force, housekeeping shall not be left un-done and left to someone else's discretion. Duties shall be assigned to one or more responsible persons.

Storage Areas: All materials stored in tiers will be secured to prevent sliding, falling or collapse. Aisles and walkways shall be kept clear of loose materials and tools. Combustible material shall not be stored under stairways. Stored materials will not obstruct exits.

Work Areas: Clean up loose materials, waste, etc., immediately. This is especially important on scaffolds and in the vicinity of ladders, ramps, stairs and electrical or mechanical equipment. Tools and loose materials shall be removed immediately if a hazard is created.

Areas Used by Personnel: Empty bottles, containers, papers, and discarded equipment shall not be allowed to accumulate where lunches are taken on the jobsite. Trash disposal cans shall be provided with covers and their use enforced.

Oil and Grease: Spills of oil, grease, or other liquids shall be removed immediately or sprinkled with sand or "Oil-Dry".

Disposal of Waste: An effective means of preventing litter is the provision of suitable receptacles for waste, scrap, etc. Combustible waste, such as oily rags, paper, etc., shall be stored in a safe place, such as a covered metal container, and disposed of regularly as a hazardous waste. All containers shall be labeled as to permissible contents.

Note: Common trash, which does not contain any hazardous waste, shall not be stored or disposed of in bags or containers marked for hazardous waste.

Protruding Nails: Protruding nails shall either be removed or bent over in such a way that they no longer present a risk. This shall be done as the hazard develops and not at a later time. Cleaned lumber shall be stacked in orderly piles. Workers performing this task shall wear heavy gloves and hard-soled work shoes.

Lighting: Adequate lighting shall be provided in or around all work areas, passageways, stairs, ladders, and other areas used by personnel.

Minimum Illumination Intensities in Foot-Candles

Foot-Candles	Area of Operation
5	General Construction area lighting
3	General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: warehouse, corridors, hallways, and exit ways.
5	Tunnels, shafts, and general underground work areas: (Exception: Minimum of 10 FC is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mining approved cap lights acceptable for use in the tunnel heading.)
10	General construction plant and shops (e.g. batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts, and active storerooms, mess hall and indoor toilets and workrooms.
30	First aid stations, infirmaries, and offices.

Unobstructed Access: There must be unobstructed access, at all times, to such areas as electrical panels, safety disconnect switches, fire extinguishers, emergency exits, etc.

SANITATION

Contaminated drinking water or lack of proper sanitation at the jobsite could cause typhoid fever, dysentery, and other diseases. It is essential that the provision of adequate sanitary facilities to accommodate the number of workers involved be one of the first operations initiated at the jobsite.

Temporary toilets shall be maintained in accordance with local, state and federal ordinances. Toilets shall be constructed so as to shield the occupants from view and protect against weather and falling objects. They shall be lighted and ventilated, and all windows and vents screened. Adequate tissue shall be provided. All toilet facilities shall be cleaned and emptied when necessary.

DRINKING WATER

An adequate supply of fresh, portable water, from a city water line, if possible, shall be provided at a readily accessible location for drinking purposes. Portable water containers, used to dispense drinking water, must be capable of being tightly closed, sealed, and equipped with both a tap and a paper cup dispenser. Where paper cups are supplied, a receptacle for disposing of the used cups should be provided. The use of pails and dippers or a common drinking cup for dispensing drinking water is prohibited. When city water is not used, periodic testing of the water is required.

Any container used to distribute drinking water must be clearly marked as to the nature of its contents and not used for any other purpose. If for any reason water, which is unfit for human consumption, is provided at the jobsite, it must be identified and labeled to clearly indicate that the water is unsafe for drinking, washing, or cooking purposes. Any worker observed removing the lid of a water container, except for those workers assigned to sanitize and clean such containers, shall be subject to disciplinary action including possible discharge.

Portable water containers must be cleaned daily.

TEMPORARY FACILITIES:

1. GFCI's or assured grounding program.
2. Site/storage layout for placement of materials, shanties, equipment, etc..
3. Communication system.
4. Water including drinking water, and sanitary facilities.
5. Job site security equipment, fencing, lights, etc..
6. Temporary access and parking facilities.

PAPERWORK REQUIREMENTS:

1. Copy of OSHA 300 and standards.
2. Posting area for employee notices.
3. Emergency phone numbers.
4. OSHA 300A posted during February, March and April
5. Copy of assured grounding program if in use.
6. Maintenance records for equipment; cranes material hoists, etc.
7. Contractor's safety program and rules.
8. Approvals for deep trenches, high scaffolds, demo surveys, shoring, etc..
9. Proof of training and safety instructions for lasers, powder actuated tools, first aid, etc.
10. Written respiratory program, if respirators are used.
11. Required signs (hard hats, no trespassing, danger, caution, etc.
12. Workers comp notice, EEO, minimum wage, U/C posters.
13. Accident and treatment report forms.
14. Written hazard communication program.

EMERGENCY NEEDS:

1. Trained first aid providers.
2. First aid kit (check weekly).
3. Emergency evacuation plans.

PROTECTIVE EQUIPMENT:

1. Hard hats.
2. Safety glasses.
3. Respirators.
4. Ear plugs.
5. Guarding material for scaffolds and floor holes.
6. Safety cans for flammable liquids.
7. Tagged alloy steel chains when used for rigging.
8. Safety belts, lifeline, and lanyards or nets where fall hazards exist.
9. Trench and excavation shoring materials when necessary.
10. Personal protective equipment for visitors.
11. Flashers, signals, barricades, and reflective clothing for traffic control

Ladders

Purpose

To provide guidelines for the selection and design of ladders for the use intended in the construction of job-built ladders, and in the maintenance, inspection and proper use of ladders.

References

OSHA 29 CFR 1926.1053; 29 CFR 1926.951, ANSI Standards

Policy

General Requirements

Ladders present one of the major hazards in construction work, and their improper use is the cause of many serious accidents. An analysis of accidents involving ladders revealed that the five principal causes of such accidents are:

- Ascending or descending improperly
- Failure to secure ladder at top and/or bottom
- Structural failure of the ladder itself
- Carrying objects in hands while ascending or descending ladder
- Employees leaning out from the ladder (overreaching)

LADDER SELECTION

Great care should be taken in the selection of the proper size and design of the ladder for the use intended.

STRAIGHT LADDERS

Ladders must be selected to be of sufficient length to extend not less than thirty-six inches (36") above any platform or landing which they serve and must be secured on top and/or bottom.

All portable straight ladders must be equipped with approved safety shoes.

All metal ladders are electrical conductors. Their use around electrical circuits of any type, or places where they may come in contact with such circuits, is not recommended. Metal ladders should be marked with signs reading **"CAUTION: DO NOT USE AROUND ELECTRICAL EQUIPMENT."**

STEP LADDERS

Step ladders sometimes referred to as "A" frame ladders, must have positive locking spreaders which will be fully spread and locked when the ladder is in use.

Step ladders will not be used as straight ladders. They should be of sufficient height to preclude the necessity of employees using the top two steps of the ladder. Workers will not be allowed to work from the top two steps of a step ladder.

Step ladders shall be firm and well-constructed. Special care shall be taken when setting any ladder on grating. Often the feet of a step ladder can slip through the grating causing the ladder to fall. Step ladders shall be tied off or a worker shall hold the ladder when the user is 6 feet or more above the floor.

LADDER USAGE

The feet of the ladder shall be placed approximately one-quarter of its supported length away from the vertical plane of its top support. Only light, temporary work should be performed from ladders. Workers should be cautioned frequently about the danger of trying to reach too far from a single setting.

Since, in most ladder applications, the weight of the worker is unevenly distributed over an area of approximately 3 inches long by 3 inches wide, any effort which tends to shift the balance of the worker should be discouraged. This includes using the upper torso for activities as pulling, pushing, prying, etc.

Ladders shall not be placed in front of doors which open toward the ladder unless the door is locked or otherwise guarded.

Ladder feet shall be placed on a firm base and the area in the vicinity of the bottom of the ladder shall be kept clear.

When using straight ladders, both the top and bottom of the ladder shall be secured to prevent displacement. Use ladder shoes, stakes, or other means of securing the ladder.

Ladders leading to landings, walkways, platforms, etc., must extend thirty-six inches above this point and must be securely fastened to prevent moving. Long ladders must be braced at intermediate points as necessary to prevent springing.

When ascending or descending ladders, workers are to face the ladder and use both hands to hold onto the side rails or rungs. If material must be moved from one level to another, a rope, block and tackle, or other means must be used. Materials are not to be hand carried on ladders.

Ladders must never be used in horizontal position as runways or scaffolds.

JOB-BUILT LADDERS

When it is deemed necessary to build a job-built ladder, it must comply with the following:

- All materials must be thoroughly seasoned, straight grained, and free from knots, decay and other defects. All surfaces must be planed and free of splinters, and edges where handrails are used should be beveled. Improper design, inferior materials, and poor workmanship are often the cause of ladder failure or falls from ladders.
- Rung spacing must be uniform and not over 12 inches or less than 10 inches on centers. The wood for the rungs must be clear, straight grained and entirely free of knots. The slope of the grain in the cleats should not be less than 1 in 15 and preferably the cleats should be straight gained. Single cleat ladders must not exceed thirty feet in length.
- Rungs or cleats should be recessed a half-inch into the rails, or filler strips of the same thickness as the cleats should be inserted between the cleats and nailed to the side rails.

LADDER INSPECTION

Wood ladders must be inspected prior to each use and monthly for deterioration and damage. Close visual inspection is recommended in preference to load

testing. Jumping on a ladder which is supported horizontally subjects the ladder to more severe loads that it is intended to carry and may result in damage that can lead to sudden failure while in use.

Metal ladders require frequent inspection. All parts should be checked for wear, corrosion and structural failure.

No employee will be allowed to use for any reason any ladder that has broken, loose, or cracked rungs, side rails or braces. Any ladder found in this condition will be removed from service immediately. All inspections shall be documented.

LADDER MAINTENANCE

Wood ladders should be periodically treated with a clear preservative such as varnish, shellac, or linseed oil. Ladders must not be painted as painting covers up structural defects. All metal fittings on wood ladders should be carefully checked for rusting or corrosion.

Metal ladders should have the rungs cleaned to prevent accumulation of materials that might destroy their non-slipping properties and all metal fittings should be carefully checked for rust and corrosion.

When not in use, all types of ladders shall be stored under suitable cover protected from the weather. Ladders stored horizontally should be supported at both ends and at intermediate points to prevent sagging of the middle section, which tends to loosen the rungs and warp the rails. A rope should be spliced onto one of the top rungs of a ladder to provide a ready method to secure the ladder or the ladder to the support.

Mobile Elevated Work Platforms (MEWPS)

Purpose

To provide guidelines for the protection of personnel engaged in operating and using aerial lifts, vehicle-mounted work platforms, or powered platforms.

References

OSHA 29 CFR 1926.453; 1926.952; 1926.955

Policy

All employees who work with aerial lifts, vehicle-mounted work platforms or powered platforms are responsible for following all safe procedures established by this procedure as well as those established by the manufacture of the equipment being used.

INSPECTION

Inspection of aerial lifts, vehicle-mounted elevated and rotation work platforms or powered platforms will be made in accordance with manufacturer recommendations and company, state and federal inspection requirements and regulations.

Prior to use each day, MEWP's will be inspected and documented on the DAILY EQUIPMENT INSPECTION REPORT.

OPERATION

No employee will be permitted to use or operate lifts or platforms unless he/she has been instructed, trained, and certified by a competent person in the use and operation of such equipment.

Mobile Elevated Work Platforms being utilized near electrical distribution or transmission lines shall comply with standards set forth in OSHA 29 CFR 1926.555.

Equipment will not be moved when the boom is elevated in a working position with workers in the basket or on the platform unless equipment was manufactured to perform these functions.

Manufacturer's specifications and limitations shall be observed.

Safety harnesses will be worn by employees working from the basket, with the lanyard being attached to the designated anchor point inside to the basket. Under no circumstances will the lanyard be attached to a pole, the structure or other equipment. Employees must ALWAYS practice 100% tie-off if exiting the basket while elevated.

Employees, who tamper with controls and/or bypass safety devices, such as dead man switches, etc., are subject to termination.
Avoid using mobile and self-propelled lifts and platforms in outside work activities where exposure to severe wind conditions exists.

Extended boom aerial lifts or work platforms in outside areas are prohibited during electrical storms.

Outriggers must be used for that equipment equipped with same.

OPERATOR CERTIFICATION AND TRAINING

The operator's knowledge of operating and safety procedures and requirements for this equipment must be verified by a manipulative test and written exam.

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