Riverside County
Safety Newsletter
Safety Division A Division of Human Resources

JAN 2017

New for 2017

Sacramento - California Department of Motor Vehicles (DMV) wants to inform the public of several new laws or changes to the existing law that, unless otherwise noted—have take effect as of January 1, 2017. The following are summaries of some transportation-related laws taking effect.

Use of Electronic Wireless Devices (AB 1785, Quirk): Driving a motor vehicle while holding and operating a handheld wireless telephone or a wireless electronic communications device will be prohibited, unless the device is mounted on a vehicle's windshield or is mounted/affixed to a vehicle's dashboard or center console in a manner that does not hinder the driver's view of the road. The driver's hand may only be used to activate or deactivate a feature or function on the device with the motion of a single swipe or the tap of the driver's finger, but not while holding it. The law does not apply to manufacturer-installed systems that are embedded in a vehicle.

Motorcycle Lane Splitting (AB 51, Quirk): This law defines "lane splitting" as driving a two-wheeled motorcycle between rows of stopped or moving vehicles in the same lane. The law authorizes the California Highway Patrol (CHP) to develop educational guidelines relating to lane splitting in a manner that would ensure the safety of motorcyclists, drivers, and passengers. In developing these guidelines, the law requires the CHP to consult with specified agencies and organizations that have an interest in road safety and motorcyclist behavior.

Child Safety Seats (AB 53, Garcia): This law requires a parent, legal guardian, or the driver of a motor vehicle to properly secure a child who is younger than 2 years of age in an appropriate rear-facing child passenger restraint system, unless the child weighs 40 or more pounds or is 40 or more inches in height (3 feet, 3 inches).

More info available on the DMV's Site:

https://www.dmv.ca.gov/portal/dmv/detail/pubs/newsrel/newsrel16/2016_36

Lighting Ergonomics - Survey and Solutions

What are some of the most common lighting problems?

Why is lighting important?

- insufficient light - not enough (too little) light for the need
- improper contrast
- glare - too much light for the need
- poorly distributed light
- flicker

Poor lighting can cause several problems such as:

Whether in industrial or office settings, proper lighting makes all work tasks easier. People receive about 85 percent of their information through their sense of sight. Appropriate lighting, without glare or shadows, can reduce eye fatigue and headaches; it can prevent workplace accidents by increasing the visibility of moving machinery and other safety hazards. Good quality lighting also reduces the chance of accidents and injuries from "momentary blindness" (momentary low field vision due to eyes adjusting from brighter to darker, or vice-versa, surroundings).

The ability to "see" at work depends not only on lighting but also on:

- the time to focus on an object
- fast moving objects are hard to see
- the size of an object
- very small objects are hard to see
- brightness
- too much or too little reflected light makes objects hard to see
- contrast between an object and its immediate background.
- too little contrast makes it hard to distinguish an object from the background

How much light is needed for various situations or activities?

The amount of light we need varies and depends on:

- type of task being done (such as demands for speed and accuracy)
- type of surfaces (does it reflect or absorb light)
- general work area
- Individual's vision.

What is the significance of good lighting?

Office work is visually demanding and requires good lighting for maximum comfort and productivity. "Good" lighting means providing enough illumination so that people can see printed, handwritten or displayed documents clearly but are not blinded by excessively high light levels (a cause of glare).

What are signs of poor lighting?

The most common complaints resulting from poor lighting are:

- difficulty seeing document or screen (too much light or glare, or too little light or shadows)
- eyestrain
- eye irritation
- blurred vision
- dry burning eyes, and headaches

Poor lighting affects not only the ocular system but can also contribute to stiff necks and aches in shoulder area. These problems can occur when people adopt poor or awkward postures when trying to read something under poor lighting conditions.

A good visual environment will:

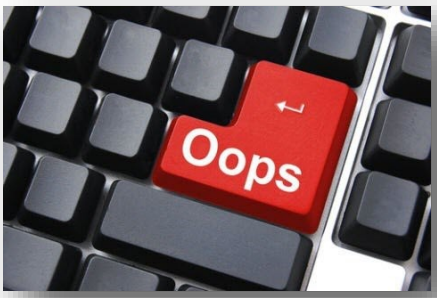
- have sufficient light, coming from the right direction and not cause obscuring shadows
- provide good (but not excessive) contrast between the task and the background
- limit glare and extreme contrasts, and provide the right type of light

What should you know about insufficient light?

Poor lighting can be a safety hazard - misjudgment of the position, shape or speed of an object can lead to accidents and injury.

Poor lighting can affect the quality of work, specifically in situations where precision is required and overall productivity.

Poor lighting can be a health hazard. Too much or too little light strains eyes and may cause eye discomfort (burning, etc.) and headaches.



Why do computers create a challenge for lighting designers?

The monitor itself is a source of light. As such, it does not require additional illumination from other sources. In fact, the screen itself can cause glare if the brightness and contrast controls are not properly adjusted.

What else in the computerized office contributes to the eye discomfort?

Other examples of work-related risk factors that contribute to eye discomfort are:

- maintaining a fixed and close visual distance for a long time,
- glare from the unshaded or un-diffused lighting fixtures,
- poor lighting, involving unchanged (and unchangeable) levels of illumination,
- uncorrected vision problems, and lack of color variety in one's surroundings.

Are there any non-visual effects of poor lighting?

When people are exposed to glare or have uncorrected vision problems, they tend to lean forward or backward in an attempt to compensate. An awkward body position leads to eye strain and accelerates postural fatigue that, in turn, contributes to musculoskeletal injuries (MSI).

How can eye discomfort be reduced?

Overhead lighting

- Use filters to diffuse overhead lighting.
- Dim overhead lights.
- Keep in mind that recommended level of light in offices 300 - 500 lux **is not a must.** It applies in the situation where there is no task lamp in use.

Windows and walls

- Cover windows with adjustable blinds.
- Use matte finishes on walls, floors and furniture.

Monitor

- Adjust the brightness and contrast according to your preference.
- Use a light color for the background.
- Place the monitor parallel (not directly below) with overhead lights.
- Angle the monitor away from lights and windows.
- Make sure that the task lamp illuminates the document and not the monitor.

Should anti-glare screens be used?

In general, anything between the operator and screen compromises the quality of the image. It is far better to control glare by proper lighting design and placement of the monitor than by use of an anti-glare screen. Many monitors currently available are already equipped with low reflective screens.

If further assistance is needed
Contact the Safety Division
951-955-3520

Electrical Power Tools and Safety

Employees using electrical power tools must be aware of several dangers. Among the most serious hazards are electrical burns and shocks. Electrical shocks, which can lead to injuries such as heart failure and burns, are among the major hazards associated with electric powered tools. Under certain conditions, even a small amount of electric current can result in fibrillation of the heart and death. An electric shock also can cause the user to fall off a ladder or other elevated work surface and be injured due to the fall.

To protect employees from shock and burns, electric tools must have a three-wire cord with a ground and be plugged into a grounded receptacle or be double insulated. Three-wire cords contain two current-carrying conductors and a grounding conductor. Any time an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong must never be removed from the plug. Double-insulated tools are available that provide protection against electrical shock without third-wire grounding. On double-insulated tools, an internal layer of protective insulation completely isolates the external housing of the tool.

Employees must be trained in the proper use of electrical tools and be able to recognize the electrical hazards and the safety precautions necessary to protect them. The following basic safety rules can help prevent hazards associated with the use of electrical power tools.

1. Store electric tools in a dry place when not in use. Examine each tool for damage before use and do not use damaged tools. Check power tools and cords daily for cracks, exposed wiring, and breaks in the insulation. Tools that are old, damaged, or misused may have damaged insulation inside. Remove all damaged portable electric tools from use and tag them "Do Not Use" and turn in to supervision. Only qualified electricians should attempt to repair damaged electrical tools.
2. Keep all tools in good condition with regular maintenance. Make sure tools have guards in place and never remove, tie guards back or modify guards. Disconnect electrical tools when not in use, before servicing or cleaning and when changing accessories such as blades, bits, and cutters.
3. Select and use the right tool for the job. Operate tools according to the manufacturers' instructions and use recommended personal protective equipment. (PPE)

The following safe work practices should be followed when using electric tools.

- Never use electric tools in damp or wet locations unless they are approved for that purpose.
- Keep work areas well lighted when operating electric tools.
- Ensure that cords from electric tools do not present a tripping hazard.
- Never carry a tool by the cord or yank the cord to disconnect it from the receptacle.
- Keep cords away from heat, oil, and sharp edges.
- Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged -in tool.
- If a tool buzzes, report it immediately and have an electrician check it out. Either the wiring or the tool itself may be defective.
- Don't use ordinary household extension cords instead use heavy duty cords. Don't run cords through or near water, other liquids, or metal which can carry current.

Knowing the basics about electrical tool hazards and working safely with electrical tools will prevent serious injury. Employees must inspect tools prior to use, wear required protective equipment and always follow safe work practices.

Portable electrical space heaters

Portable electrical space heaters must be equipped with auto shut -off switch that turns unit off if tipped over. Ref: 2013 California Fire Code 605.10 and Board of Supervisors Policy H-4

Ideally, heaters should have a timer or thermostat and the capacity should be only to warm the desired area(s). These features will be listed in the product specifications sheet.

In addition,

- Use of space heaters should not be allowed unless supervisor or management approval is provided prior to use.
- Units that have been listed or labeled by a nationally recognized testing laboratory such as UL (Underwriters Laboratories), CSA (Canadian Standards Association) or ETL (Intertek) should be the only space heaters permitted for use.
- Keep at least 36 inches of clearance around every space heater and only use them in areas free of flammable liquids and easily ignited or combustible materials.
- Proper placement of the space heater is important. Be sure it is not in a high-traffic area or in any area where it may become a tripping hazard.
- If using an electric space heater, make sure electrical cords and plugs are not frayed or damaged. Always plug the heater directly into the wall outlet, and be sure the power cord is not crossing a walkway. Never use extension cords or power strips, as these could overheat and lead to a fire.
- Be sure space heaters are never left unattended. They should be turned off when the employee leaves the room or area of the heater, and they should be unplugged at the end of the day.

605.10 Portable, electric space heaters. Where not prohibited by other sections of this code, portable, electric space heaters shall be permitted to be used in all occupancies other than Group 1-2 and in accordance with Sections 605.10.1 through 605.10.4.

Exception: The use of portable, electric space heaters in which the heating element cannot exceed a temperature of 212°F (100°C) shall be permitted in nonsleeping staff and employee areas in Group 1-2 occupancies.

605.10.1 Listed and labeled. Only listed and labeled portable, electric space heaters shall be used.

605.10.2 Power supply. Portable, electric space heaters shall be plugged directly into an approved receptacle.

605.10.3 Extension cords. Portable, electric space heaters shall not be plugged into extension cords.

605.10.4 Prohibited areas. Portable, electric space heaters shall not be operated within 3 feet (914 mm) of any combustible materials. Portable, electric space heaters shall be operated only in locations for which they are listed.