

e-Compliance Training

Ergonomic Safety - February 2021



THIS TRAINING SESSION IS
RECOMMENDED FOR:

All staff members.

Training Objectives

This training module will ensure that employees understand the importance of ergonomic safety in the workplace, along with the following concepts:

- ergonomic definitions and risks
- neutral body positioning
- ergonomic controls: administrative, work practice and engineering
- personal protective equipment (PPE)
- reporting signs and symptoms of ergonomic injuries

OSHA refers to ergonomics as the science of fitting a job to a person. This involves designing tasks, workspaces, controls, displays, tools, lighting, and equipment to fit employees' physical capabilities and limitations, which ultimately helps to reduce the risk of ergonomic injuries and musculoskeletal disorders (MSDs). Ergonomic injuries and MSDs accounted for 33% of all worker injury and illness cases in 2013 (the most recent year for which data has been summarized).

Ergonomic safety principles work to prevent/reduce soft tissue injuries and MSDs. MSDs are injuries to tendons, muscles and joints that are caused by exposure to excessive force, repetitive motions, awkward postures, vibration, etc. Sources of ergonomic injuries/MSDs include lifting heavy items, bending, reaching overhead, pushing and pulling heavy items. Ergonomic risks in health and dental care include patient lifting/moving, computer/phone work, use of instruments/diagnostic machinery, etc.

Common examples of MSDs include:

- Carpal tunnel syndrome
- Tendinitis
- Rotator cuff injuries (shoulder)

- Epicondylitis (tennis elbow)
- Trigger finger
- Muscle strains and low back injuries

Hierarchy of Controls

Engineering Controls

Engineering controls are the most desired type of control and should be used whenever feasible, because they are most effective at reducing risk. Engineering controls remove or isolate a hazard. Examples of engineering controls that can reduce/remove ergonomic hazards include:

- Using a device to lift and reposition heavy objects to limit force exertion
- Reducing the weight of a load
- Purchasing tools/hand pieces that enable neutral postures
- Using mechanical devices that allow for adjustments in workstations
- Installing glare screens to reduce glare on computer workstations
- Using headsets for prolonged phone work
- Repositioning items to enable neutral postures



Interactive Training Reminder

Compliance Training is an interactive training program in which you can address questions with other staff members or supervisors to obtain clarification for situations in your work setting.

Write down any questions that you have about the training topic and address them with your Training Coordinator or supervisor.

Administrative and Work Practice Controls

Administrative or work practice controls may be appropriate in cases where engineering controls cannot be implemented or when different procedures are needed after implementation of new engineering controls. Common examples of administrative controls are scheduling the work shift to rotate tasks that involve continual exertion, repetitive motion, or awkward postures; proper use of equipment that assists in ergonomic safety, such as lifts; requiring more than one person to lift heavy loads. "Float" staff can help provide breaks to prevent staff from spending too much time on tasks that are ergonomically hazardous.

Personal Protective Equipment

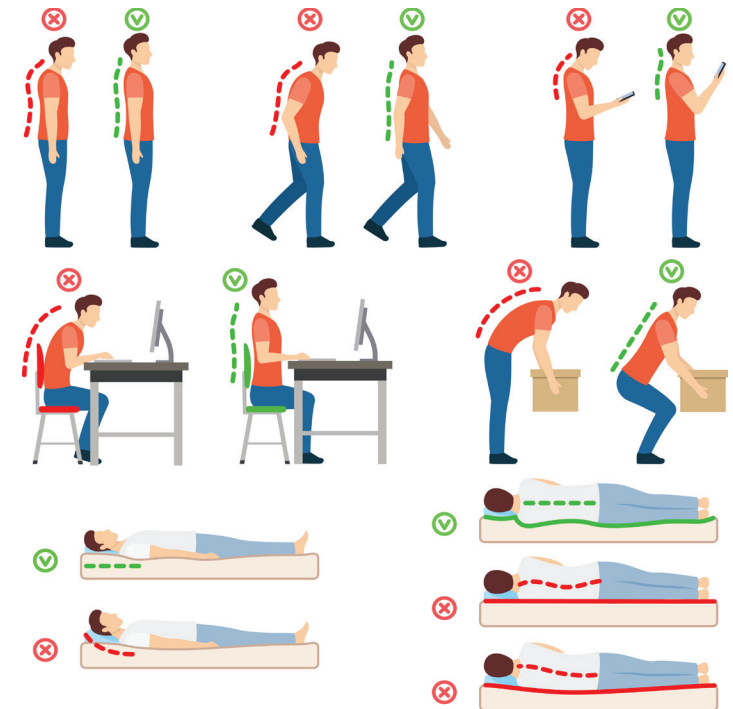
Personal protective equipment (PPE) is the least desirable line of controls, because it has only limited effectiveness when dealing with ergonomic hazards. Padding reduces direct contact with hard, sharp or vibrating surfaces. Wrist rests help with keyboard and mouse work. Stabilizers/braces may help reduce awkward postures in certain situations.

Neutral Body Positioning

Good posture will help to limit injuries caused by stress (on muscles and joints) and fatigue. However, no matter how good your posture, if you hold the same posture for long lengths of time (known as static posture), your risk of injury increases.

Maintaining good posture involves keeping each part of the body in alignment with the neighboring parts, because proper posture keeps all parts balanced and

supported. With appropriate posture (when standing) it should be possible to draw a nearly straight line from the earlobe, through the shoulder, hip, knee, and into the middle of the ankle. Neutral body positioning is having a comfortable working posture in which your joints are aligned so they reduce stress and strain on your muscles, tendons, and skeletal system. See the graphic below:



Keep the following goals in mind when sitting:

- Feet are resting comfortably on the floor or on a foot-rest, and knees are slightly lower than your hips.
- Keep a 2- 4-inch gap between the back of knees and the front edge of the chair when back is against the chair.
- The curve of the chair back fits into the deepest part of the curve in your lower back.



- The back of the chair is upright or tilted back for comfort.
- Armrests are adjusted so that they are just slightly below your elbows when your shoulders are relaxed.
- Armrests do not interfere with access to keying, mousing, or writing surfaces.

Work on these goals when typing/keying/using a mouse:

- Shoulders are relaxed, and elbows are close to your body.
- Elbows are bent to 90 degrees or slightly greater (inner angle).
- The tops of the “home row” keys are at the same height as your elbows, or slightly lower than elbows.
- Wrists are straight (not bent).
- The pointing device is close to the keyboard.

Action goals when organizing workspaces:

- Reaches performed frequently are within the “near” workspace (your elbows remain at your sides).
- Reaches performed occasionally are within the “near” or “mid” workspace (no more than an arm’s length away).
- You are not reaching across your body to work.

Goals to work toward when viewing the monitor:

- It is in front of you and the top line of print is at or just below your eye level or even lower if you wear bifocal, trifocal, or progressive lenses; AND you are able to scan the screen from top to bottom by using only eye movements, not head movements.
- You can sit against the back of the chair and read the

- monitor screen from a comfortable distance, without experiencing eye fatigue, blurred vision or headaches.
- The monitor screen is free of glare.

Action goals when reading a document:

- The document is in your line of vision (not flat on a desk). Consider an upright document holder that is directly next to the monitor or between the monitor and the keyboard.
- The document is at the same distance as, or closer than the monitor.
- You can look at the document and the monitor by moving only your eyes, not your head.

Work toward these goals when standing:

- Stand with weight mostly on the balls of the feet, not with weight on the heels;
- Keep feet about shoulder-width apart, and let arms hang naturally;
- Avoid locking the knees;
- Stand straight and tall, with shoulders upright; and
- If standing for long periods, shift weight from one foot to the other, or rock from heels to toes.

Work on the following when lifting:

- Always bend at the knees, not the waist;
- Use the large leg and stomach muscles for lifting, not the lower back;
- When carrying a heavy or large object, keep it close to the body;
- If carrying something with one arm, switch arms frequently;



- Obtain assistance from another person instead of trying to lift or move extremely heavy items;
- Do not attempt to lift an item that is too heavy, or on which you are unable to get an appropriate grip.

When working with dental handpieces and other diagnostic equipment (e.g., ultrasound transducers, etc.), keep these tips in mind:

- Work with your wrist in a neutral position--the wrist held straight, or in a slight extension.
- Use a more relaxed grip, when possible. The distal finger joint (fingertip) is slightly flexed in a relaxed grip.
- Exercise your hands by stretching your wrists and fingers, especially the area between the thumb and index finger.
- Stabilize your hand when performing precise hand tasks. This can be accomplished by resting your fourth and/or fifth digits on the cross arch or opposite arch; or by resting an elbow on the chair back or arm.
- Use larger diameter instruments. Find one that feels comfortable for you.
- Use instruments that reduce the time spent on a procedure, such as an ultrasonic scaler, with variable and rapid speeds.
- Wear gloves that fit properly and do not restrict hand movement.
- Reduce the force on hands and fingers, and the torque on hands by using instruments and tools that are lighter in weight, balanced, and well sharpened.
- Move the patient closer to you, or adjust the examination chair/table up or down to reduce arms/wrists being pulled away from your body at an awkward angle.

- Adjust chair heights and position yourself so that you are working with your elbow placed lower than your shoulder, and your wrist placed even with, or lower than your elbow.
- Ensure that all cords and hoses are long enough, so that excess finger force is not required to pull or support such hoses and cords.

Micro-breaks

Take short breaks in your work area to stretch, move, change positions. If you sit most of the day, take a moment to stand up and stretch out. If your job has you on your feet, take a seat occasionally. Even a few moments per hour of a short break, stretch or change of position can be effective. A study from Cornell University suggests looking away from the computer for twenty seconds every 20 minutes. A work pattern of 2 minutes of stretching or moving, 8 minutes of standing and 20 minutes of sitting every half hour is also recommended.

Reporting

Promptly report any musculoskeletal symptoms to your supervisor or Safety Officer, so that work practices and your workstation can be adjusted/evaluated to prevent further injury. A medical evaluation may be provided if it is determined that you have already sustained an ergonomic injury or are developing an MSD. ●



e-Compliance Training Test

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NAME: _____

DATE: _____

SIGNATURE: _____

STAFF POSITION: _____

Return your test to your supervisor or Compliance Coordinator upon completion. Individual tests will be maintained to document participation and understanding of the information. Review the training information to find the correct answers to any questions that may have been missed.

1 You should stabilize your hand (rest it on an object) when performing precise hand tasks.

Select One **T** **F**

2 In order to be effective, workers need to stretch out for 15 minutes of every hour on the job.

Select One **T** **F**

3 You should try to keep a 2- 4-inch gap between the back of knees and the front edge of the chair when back is against the chair.

Select One **T** **F**

4 Personal protective equipment (PPE) is the most desirable line of controls, because it has the greatest effectiveness at limiting ergonomic hazards.

Select One **T** **F**

5 Maintaining good posture involves keeping each part of the body in alignment with the neighboring parts, because proper posture keeps all parts balanced and supported.

Select One **T** **F**

6 Engineering controls work by removing or isolating a hazard.

Select One **T** **F**

7 To reduce eye strain, you should move your head instead of your eyes to scan or read a document.

Select One **T** **F**

8 When lifting, bending at the knees (not the waist) is safest.

Select One **T** **F**

9 At a workstation, shoulders should be relaxed, and elbows close to your body.

Select One **T** **F**

10 When standing, it is important to keep your weight mostly on the balls of the feet, not on the heels.

Select One **T** **F**