



# ERGONOMICS & BACK SAFETY

SONOMA COUNTY SHERIFF'S OFFICE  
DETENTION DIVISION



5110 8/2018

# Introduction

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## Learning Objectives:

- Define Ergonomics
- Office Ergonomics and Safety
- Computer Ergonomics
- Proper lifting technique
- Back safety and stretching
- Identify the warning signs of poor ergonomics

# Definition of Ergonomics:

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**Ergonomics**: The scientific study of human work. Ergonomics considers the physical and mental capabilities and limits of the worker as they interact with tools, equipment, work methods, tasks and the working environment.

A goal of ergonomics is to reduce work-related musculoskeletal disorders by adapting the work to fit the person, instead of forcing the person to adapt to the work.

# IN THE OFFICE

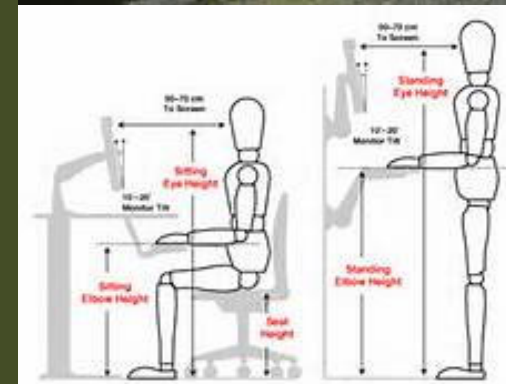
## Seating:

Adjustable chairs should be equipped with:

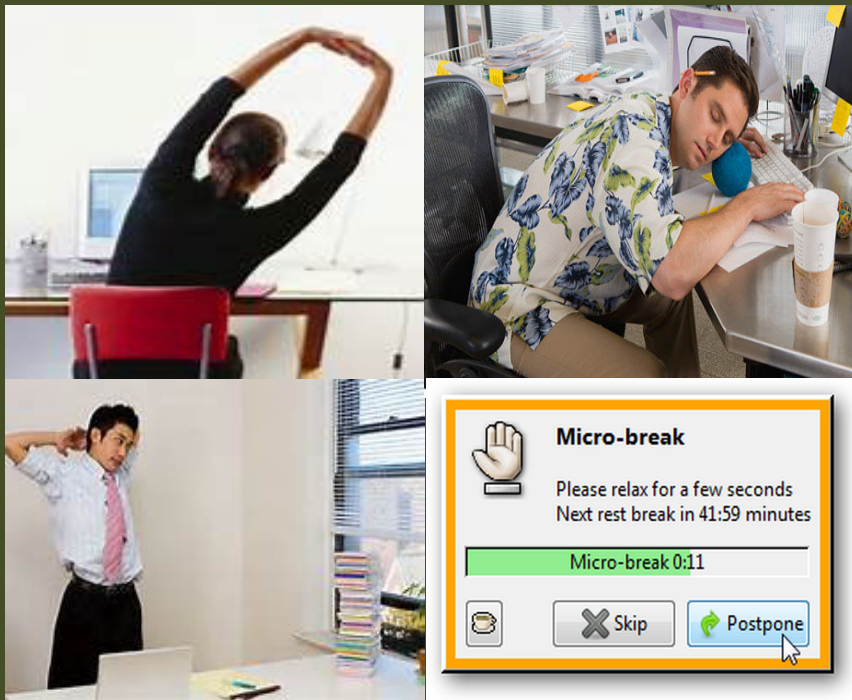
- Pneumatic lifts to allow easy height adjustment.
- Curved (“waterfall”) forward seat pan edges.
- Backrests, which are adjustable in height and angle.
- Minimum five-leg (star) pedestal bases for stability and casters compatible with the floor surface

## Surface:

Dedicated workspaces should incorporate work surfaces at a height that allows the user to maintain a neutral posture.



# AT THE COMPUTER



**Eye breaks** - Every 15 minutes you should briefly look away from the screen for a minute or two to a more distant scene, preferably something more than 20 feet away.

**Micro-breaks** - most typing is done in bursts rather than continuously. Between these bursts of activity you should rest your hands in a relaxed, flat, straight posture.

**Rest breaks** - every 30 to 60 minutes you should take a brief rest break. During this break stand up, move around and do something else.

**Stretch** – Take a few minutes and stretch it out.

# PROPER LIFTING

## **Plan ahead before lifting.**

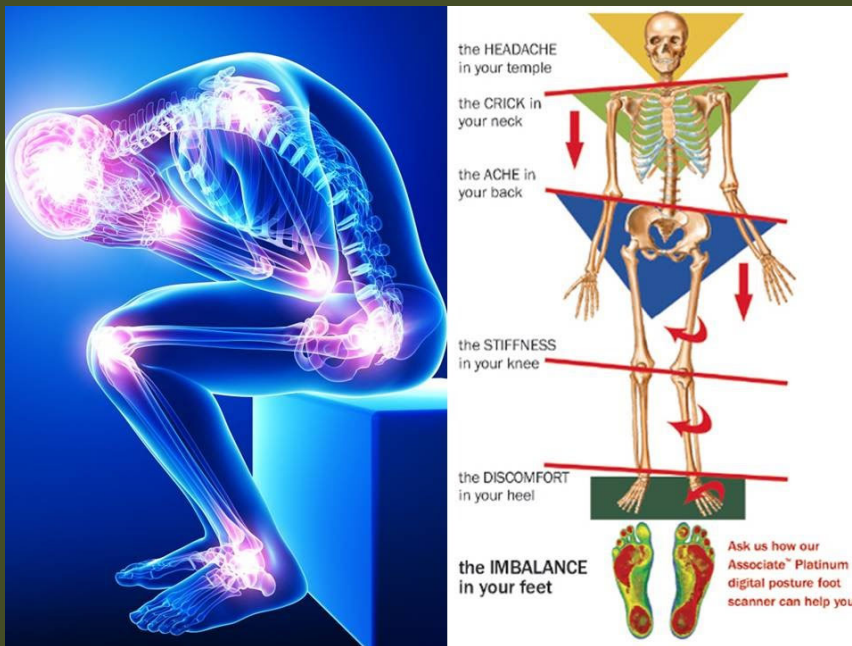
Knowing what you're doing and where you're going will prevent you from making awkward movements while holding something heavy. Clear a path, and if lifting something with another person, make sure both of you agree on the plan.

## **Lift close to your body.**

You will be a stronger, and more stable lifter if the object is held close to your body rather than at the end of your reach. Make sure you have a firm hold on the object you are lifting, and keep it balanced close to your body.



# PROPER LIFTING CONT.:



### 3. Feet shoulder width apart.

A solid base of support is important while lifting. Holding your feet too close together

will be unstable, too far apart will hinder movement. Keep the feet about shoulder width

apart and take short steps.

### 4. Bend your knees and keep your back straight.

Practice the lifting motion before you lift the object, and think about your motion before you lift. Focus on keeping your spine straight--raise and lower to the ground by bending your knees.

### 5. Tighten your stomach muscles.

Tightening your abdominal muscles will hold your back in a good lifting position and will help prevent excessive force on the spine.

# More Lifting Tips

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## **6.Lift with your legs.**

Your legs are many times stronger than your back muscles--let your strength work in your favor. Again, lower to the ground by bending your knees, not your back. Keeping your eyes focused upwards helps to keep your back straight.

## **7.If you're straining, get help.**

If an object is too heavy, or awkward in shape, make sure you have someone around who can help you lift.



# BACK STRETCHES

Sit on an armless chair or a stool. Cross your right leg over your left leg. Bracing your left elbow against the outside of your right knee, twist and stretch to the side. Hold for 10 seconds. Repeat on the opposite side.

Sit on an armless chair or a stool (A). While maintaining good posture, pull your shoulder blades together (B). Hold for five seconds and then relax.



# Warning Signs of Poor Ergonomics

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Backache, headaches from eye and neck strain, shoulder, arm, elbow or wrist pain are all common physical symptoms revealing a lack of office ergonomics. Productivity may suffer due to worker fatigue and time away from work for treatment or recovery from injuries.

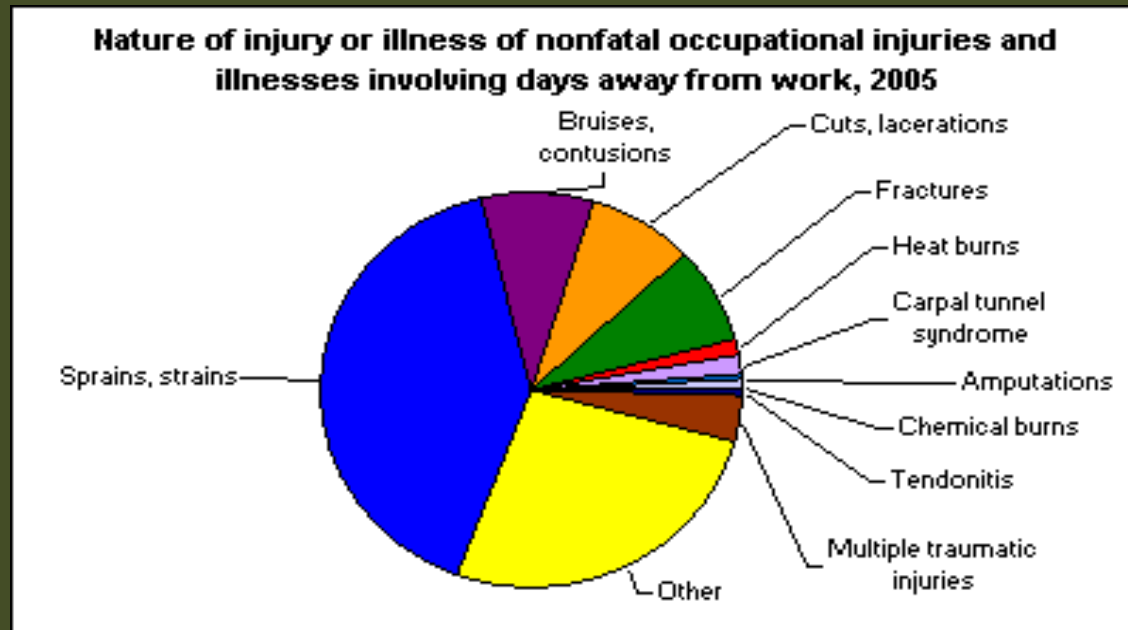


Strain, fatigue and injury due to poor office ergonomics is often caused by using furniture that does not adjust to support good posture, doing work in an awkward position such as twisting or leaning to type on a keyboard, or overusing certain muscles while doing a repetitive task like clicking a mouse. Eye strain and headaches can be caused by bad posture or squinting due to glare, improper lighting or eye strain from the computer screen being positioned too near or too far.

Musculoskeletal disorders (MSDs) affect the muscles, nerves and tendons. Work related MSDs (including those of the neck, upper extremities and low back) are one of the leading causes of lost workday injury and illness.

# STATISTICS

According to Bureau of Labor Statistics (BLS), the 387,820 of Musculoskeletal Disorders cases accounted for 33% of all worker injury and illness cases in 2011.





QUESTIONS?

THANK YOU!

