



# What you need to know about ... **Ergonomics**

-PEF OSH Factsheet-



## What is Occupational Ergonomics?

Ergonomics means the science of work. Ergonomics seeks to design work systems, processes, tools, equipment and tasks that take into account variations in size, shape, strength and capabilities of working people- a.k.a. Fitting a job to a person.

## What are the Goals of Occupational Ergonomics?

The goals of an occupational ergonomics program are to improve safety, comfort, work efficiency and work performance (improve quality, reduce errors).

## What are the Risk Factors of Occupational Ergonomics?

Ergonomic exposures to risk factors can lead to Musculoskeletal Disorders (MSDs), otherwise known as ergonomic injuries. Examples of risk factors involved in the office environment/ computer work may include:

- ◆ **Biomechanical-** Awkward postures, Repetitive motions, Compression of soft tissues, Sustained or static muscle loading, Forceful movements
- ◆ **Organizational-** Psychosocial (Interpersonal relationships between staff), Social isolation, Decision control, Insufficient rest and recovery pauses, Deadlines, Fast work pace, Forced overtime, Shift work
- ◆ **Individual-** Gender, Age, History of preexisting injury/ pathology, Systemic disease (e.g., diabetes, thyroid disorders, rheumatoid arthritis), Family and social networks

Prolonged exposure to risk factors, particularly in combination or at high intensity, is likely to cause or contribute to MSDs, or aggravate the severity of pre-existing MSDs.

## How to Learn More

The PEF Health & Safety Program is funded in part by an Occupational Safety and Health Training and Education (OSH T&E) grant from the NYS Department of Labor Hazard Abatement Board to provide training on H&S topics. These topics include our Ergonomics Programs:

- ◆ Office Ergonomics Direct Training (2- 3 hours)
- ◆ Ergonomic Assessor Training (Full Day- 6 hours)
- ◆ Vehicle and Driving Ergonomics for Field Staff (2-3 hours)

Funding from this grant provides for PEF Health & Safety to deliver trainings and for training materials. There is no cost to the Agency, other than providing adequate release time for employees to participate. We usually ask that you have a minimum of 15 people for training classes. Workshops are open to any Agency employee, PEF, CSEA, and M/C staff, as well as any other agencies or partners (County or private sector employees) that may be in the building/facility. The trainings are tailored to meet the relevant needs of the target group in cooperation with labor and management representatives.

To schedule trainings on ergonomics or other health & safety topics please contact the PEF Health & Safety Department at 1-800-342-4306, ext. 254 or at [HealthandSafety@pef.org](mailto:HealthandSafety@pef.org).

# Where Do We Start?

Although we are all different sizes, shapes, strengths and capabilities, the following steps will assist you in achieving a proper ergonomic set-up:

1. Line up: the Chair → Keyboard → Monitor

- Center the Monitor, Keyboard, and Chair
- Place the Mouse directly next to the Keyboard
- See **Figure 1**

2. Begin Setting the Position of your chair (See **Figure 2** for points of reference)

① **Feet:**

- Place your feet flat on the ground, slightly in front of you

② **Knees:**

- Raise the chair to allow your knees to be at an angle greater than 90 degrees

③ **Hips:**

- Recline your seat far enough to allow your hip joint to also be at an angle greater than 90 degrees

④ **Back:**

- Make sure your back is fully supported by the chair. The back rest should support up to the shoulder blade.

⑤ & ⑥ **Arms:**

- The shoulder should remain in a relaxed position. The angle of the elbows should also rest at an angle greater than 90 degrees

⑦ **Wrists/Hands:**

- Hands and wrists should remain straight and in a relaxed position.

⑧ **Head/Neck:**

- Your chin should remain parallel to the floor and desk surface.

⑨ **Eye Sight:**

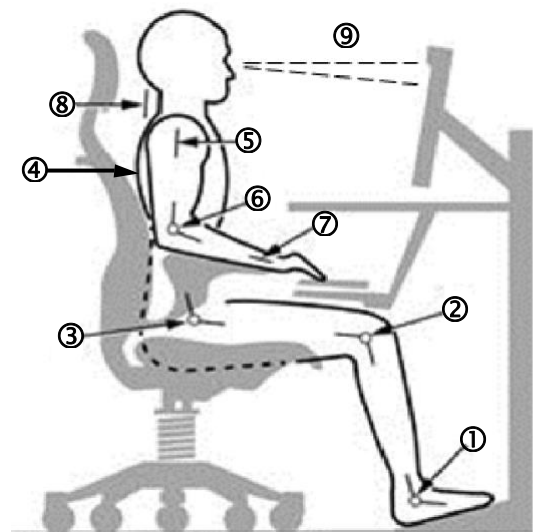
- The line of site should hit the top portion of the screen

3. Near by items: Keep items frequently used near by

- As seen in **Figure 1** items of necessity such as paper, pen/pencil, and telephone are near by.
- The white area should be about the length of your arm, 22"-38".
- The remainder of the space is beyond your reach, this can be used for items used less often.



**Figure 1:** Alignment and Desk Set-up



**Figure 2:** Chair Alignment and Set-up