



City of Stamford

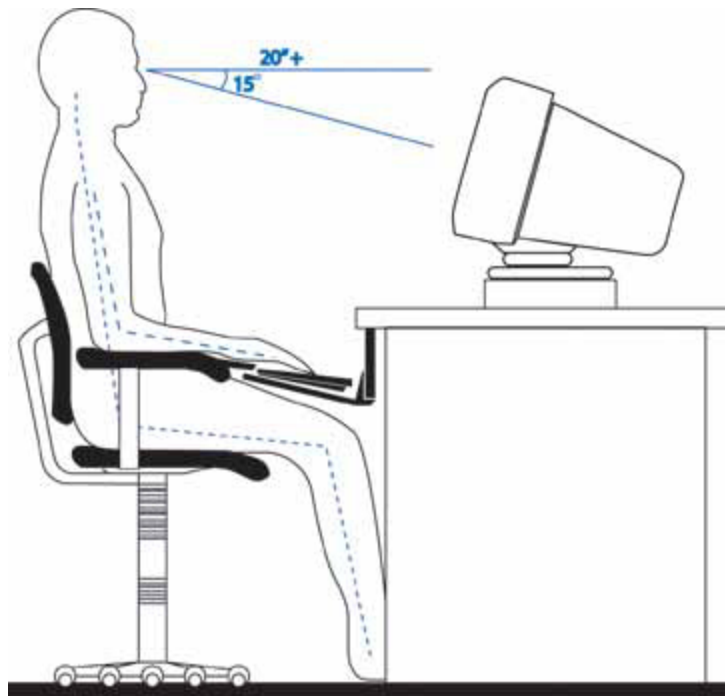
Risk Management Department

Office Ergonomics & Work Station Set-up Program

There are four areas that a computer user interfaces with: the monitor, the keyboard and mouse, the chair, and the lighting of the environment. Setting up the interfaces with these ergonomic guidelines as well as maintaining a good posture will enhance your comfort and efficiency as well as prevent repetitive stress injuries.

The Monitor

- Position the monitor to minimize glare by placing it at a right angle to light sources or windows
- Place the monitor as far away from you as possible while maintaining the ability to read without consciously focusing. Keep a minimum distance of 20 inches.
- Place the center of the screen at a 15 degree down angle from your eyes with your neck only slightly bent holding your head perpendicular to the floor.
- Align the monitor and the keyboard / mouse



Lighting

- The office should be moderately bright (20-50 foot candles or equal to a nice day where sunglasses aren't needed).
 - Do not use task lighting for computer work.
 - A mix of incandescent and fluorescent lights reduces flicker and provides good light color.
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The Keyboard & Mouse

- Position the keyboard / mouse slightly below the elbow and at a negative angle to allow the wrists to remain straight
- Do NOT use a wrist rest while actively typing. It's meant to rest on. Hold your hands and arms off of any supports while typing.
- Place the mouse next to and at the same level as the keyboard.
- Do NOT use the keyboard supports to raise the back up. Do NOT tilt the keyboard tray so that the back of the keyboard is higher than the front. Though design and a lot of prevailing information say you should tilt the keyboard to a positive angle like this, it is wrong. A negative angle that allows the wrists to stay in their natural position is proper. A positive angle is an injury waiting to happen.



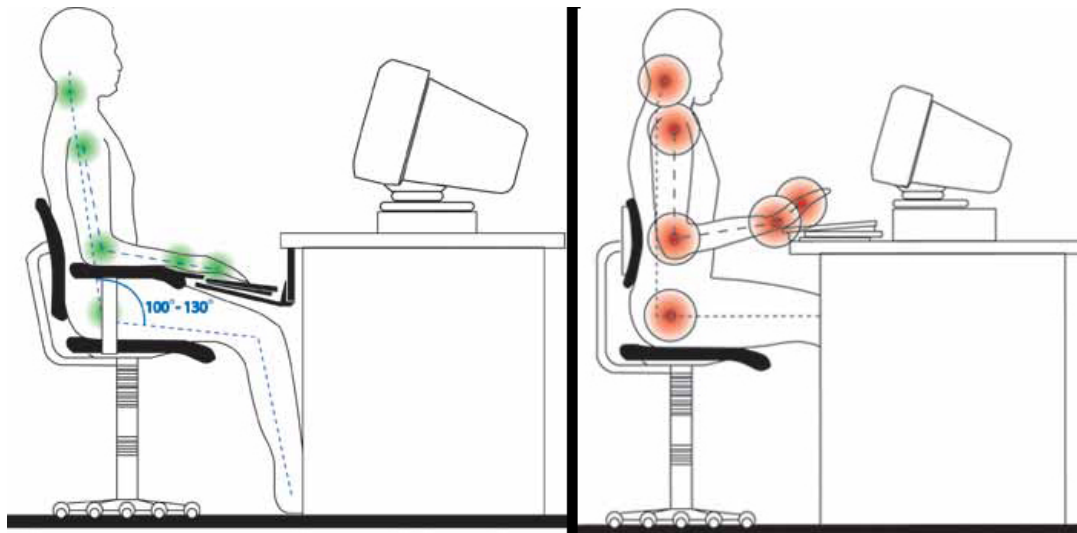
The Chair

- Place the lumbar support slightly below the waist line (it should sit in the small of your back).
- Adjust the height of the chair so your feet can rest flat on the floor and your knees are at a 90-degree angle.
- Allow 1-3 inches between the edge of the seat and the back of your knees.

- Use a high back chair that supports your shoulder blades if at all possible
 - Do not use arm rests while typing.
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Posture

- Position your hips so that they are slightly higher than your knees while your feet are flat on the floor.
- Don't keep your feet flat on the floor. Move them around often. Use a foot rest if you have one, but only part of the time.
- Lean back slightly. Leaning the trunk back to somewhere between 100-130 degrees from parallel to the floor will open up the hips and ease pressure on the pelvis. I like 104 degrees myself. Make sure your chair back will support your shoulders at this angle while still providing good lumbar support.
- Hold your head slightly up so that it is roughly perpendicular to the floor.
- Let your upper arms hang naturally from your shoulders.
- Keep your wrists straight.
- Take frequent breaks. 10 minutes for every hour of work and 30 second micro-breaks every 10 minutes is a good schedule.
- Stretch during those breaks.
- Change your position frequently. Move your feet, lift your arms, adjust your hips, and just make sure to subtly alter your posture continuously throughout the work day.



OFFICE WORKERS

DO'S AND DON'TS FOR SAFE WORK PRACTICES

DO...

- Report any concerns to your supervisor early.
- Maintain neutral postures for different body parts as much as possible
- While performing deskwork or computer work, be conscious of your sitting posture, your chair position, and how your arms are aligned with your work surface.
- Position the keyboard at or below elbow height.
- Adjust your chair as your tasks change through the day. Use forward tilt for desk work; recline while on the telephone conversing, maintain lumbar support.
- Use a headset for telephone work.
- Keep your work area well organized. Avoid cluttering the area around your legs and feet.
- Keep commonly used items within near reach (14" to 24") and arranged in a half circle around you.
- Monitor how hard you are gripping your hand tools or keying and lighten up.
- Float your hands and wrists over the keyboard. Lift from the elbow to reach the mouse.
- Move from the shoulders when typing and using the mouse to activate large muscle groups.
- Change your position often (every 30 minutes to hourly).
- Alternate your work tasks throughout your workday.
- Make adjustments to your workstation to suit your position.
- Recognize early signs of muscle fatigue, and stretch or change your task.
- Rest your eye muscles.
- Maintain good flexibility and strength. Stretch while at work and walk around the department. Stretch every 30 minutes for up to 5 minutes during a repetitive task. (see stretching below)
- Ice an area if it is aching during or after work for at least 20 minutes/day.

DON'T...

- Sit in the same position for more than 60 minutes.
- Wait until you feel pain or discomfort to stop an activity.
- Sit with slouched posture over your desk.
- Do a repetitive task all at once.
- Pinch or grip excessively or pound your keyboard.
- Cradle the phone between your neck and shoulder.
- Keep your body, arms or legs in an awkward position for any length of time.
- Poise in extension or lean your hands or forearms on a hard edge, surface or wrist rest.
- Hold onto your mouse or leave your hands at the keyboard if you are not actively using the tools.
- Over reach with your fingers, arms or back.

OFFICE ERGONOMICS

Your Safety, Health, & Comfort

POSTURE GOALS:

- Spine and body parts aligned between these two recommended set-ups.
- Sit all the way back in the chair for proper spine support.
- Back and neck should be comfortable and straight-ahead to work tasks.
- Knees should be no higher than, or slightly lower than hips.
- Fingers and wrists either level with or slightly lower than elbow height for keyboard match.
- Mouse should be adjacent to and at the same level as the keyboard.
- Feet should rest either on the floor or be supported by a footrest.



MATCHING YOUR WORKSTATION TO YOU

Chair/Backrest

Adjustable for posture variations. Backrest provides lower back support. Adjustable vertical and horizontal controls.

Telephone/Head Position

Do not cradle the phone between your shoulder and head. Use a headset or speakerphone, especially if hand and/or keyboard work is done while on the phone. Locate the phone within arm's reach.

Arms/Fingers/Keyboard/Mouse

Fingers and wrists should be no higher than elbow height when using a keyboard or mouse.

Elbows

Elbows should be close to the sides when using the keyboard. Adjustable height armrests provide support for shoulder and upper arm muscles.

Monitor/Screen

- Screen should be slightly lower than eye height. If user wears bi or trifocal lens, screen height may need to be 4"-5" lower than eyeball height.
- Avoid placing the monitor directly in front of a window; or use window shades/screening to screen out excess light.
- To enhance screen readability, try these user control tips:
 - » Use larger size fonts – 12 or above
 - » Use sharp contrast – black letters on light gray or white background. Avoid muted colors.
 - » Adjust screen resolution. Guidelines include:
 - 17" CRT – 1024x768
 - 19" CRT – 1280x1024
 - 15" LCD – 1024x768
 - 17" LCD – 1280x1024
 - 19" LCD – 1280x1024 or 1600x1280
 - » For bifocal, trifocal, progressive lens: Increase horizontal distance from eye to screen; and/or lower screen height and/or raise chair height for visual enhancement

Document Holder

Position at same height and distance from user as monitor is; or position between the screen and keyboard.

Desk

Allow adequate desktop space to not crowd work tasks or compromise good postures. Area under desk should be clear of debris and/or storage to allow for leg room and posture adjustments.

Work Comfort and You:

- Incorporate "mini" stretches throughout the workday. Hold each stretch 20 seconds. Repeat 3-5 times.
- For every 45 minutes of desk/computer work, take a posture break, and do a different work task for 5 minutes.

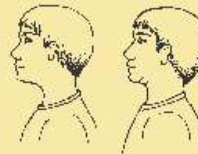
EASE EYE STRAIN

20/20/20 Eye Relaxation

- For every 20 minutes of screen/computer use, look 20 feet away, and relax the eyes for 20 seconds.

Eye Health

- Blink often
- Obtain regular eye examinations
- Work with eye care provider to select appropriate reading/computer corrective lens
- Protect your eyes from sun exposure
- Keep monitor free of dust

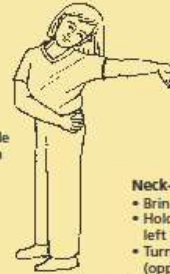


Chin Tucks

- Pull chin slightly down
- Pull ear back to line up with shoulder
- Hold
- Repeat off & on during the day

Chest-Arm Stretch

- Place right hand on left hip
- Turn head to left side
- Extend left arm horizontally to side
- Keep left elbow straight and palm turned up
- Drop left fingers downward
- Hold
- Repeat to other side



Neck-Shoulder Stretch

- Bring both hands behind the back
- Hold the right hand down using the left hand
- Turn the head toward the left side (opposite hand being held)
- Switch arm holds, repeat other side



Forearm-Wrist Extension Stretch

- Press palms together in front of chest
- Lift elbows slightly up
- Keep shoulders relaxed and down while holding stretch
- Hold abdominals tight

Forearm-Wrist Flexion Stretch

- Bring arms straight in front of body, keeping elbows as straight as possible
- Bring backs of hands together
- Pull fingers up toward elbows
- Keep shoulders down and relaxed

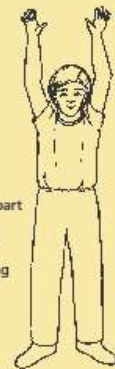
Back Extension

- Place hands on back of hips
- Gently arch upper body back
- Do not overstretch the neck in a backwards direction
- Knees can be slightly bent
- Push back up with hands



Warm-up Trunk

- Stand relaxed, feet slightly apart
- Maintain tight abdominals
- Reach overhead with fingers reaching up
- Can interlock thumbs – pulling thumbs "apart"



Arm Pulls

- Gently pull left elbow across chest
- Use right hand to gently push left arm toward right shoulder
- Repeat other side

