

# Computer and laptop tips: Avoiding discomfort, pain and injury



Many of us spend many hours each day working on computers. Over time, that can lead to discomfort, pain or injuries. Here are some easy steps you can take to help reduce the risks of these occurrences.

## Computer equipment



### Using the keyboard

- Keep wrists “neutral.” Hands and forearms must be in line for the wrist to be “neutral”. Wrist rests can be used to help achieve neutrality.
- Keep your shoulders relaxed and elbows at approximately a 90- to 110-degree. Adjust the level of the keyboard so your forearms are horizontal.
- Do not let yourself get tense ...RELAX your shoulders.
- Armrests should not be used to support the weight of your arms during typing. Sit upright with your arms hanging loosely by your sides. Bend your elbows at about a right angle (90 degrees) and adjust the armrest(s) height until they are just under or barely touching the undersides of your elbows.
- Keyboards should not be positioned more than 16 inches from away from the user.



### How you use the mouse can affect your comfort level. Keep these points in mind:

- The mouse should be positioned adjacent to the keyboard at the same distance away from the user and at the same height as the keyboard.
- Avoid gripping the mouse tightly.
- The mouse (and keyboard) should not be located in a manner that will require the user to abandon the proper seated posture described in ‘Using your chair’ below. The normal acceptable distance away from the user is inside of 16 inches.
- Relax your hands often.
- Adjust the mouse responsiveness to suit you.
- Check your mouse software to learn how to do this.
- Move the mouse with a full forearm movement, while keeping your wrist straight.



### Screen

Position the monitor height so the top of the monitor screen is approximately at eye level.

If you wear bifocals, the screen will need to be adjusted 2 to 3 inches lower than eye level.

If you use two monitors, keep the one you use most directly in front and the one used less frequently to the side that aligns with the dominant eye. If glare from light sources is a concern, try some of these possible solutions:

- Add diffusers to lights.
- Reduce intensity of overhead lights (remove bulbs or reduce wattage).
- Position the screen and workstation perpendicular to the light source.
- Change monitor screen angle to reduce glare.
- Vary brightness and contrast.

## Chairs and your body



### Using your chair

Adjust your chair for best fit and support. The vertical height adjust is one of the primary controls to assist you in obtaining neutral wrist postures. There are several common adjustment features available to assist: seat pan height, depth and tilt, back rest angle and depth, arm rest height, width and angulation. Check and adjust each feature to maximize your comfort and ensure proper support.

The ideal seated posture should resemble the following:

- Feet firmly on the floor or on a footrest
- Knees slightly lower than hips to facilitate an open trunk-thigh angle (greater than 90 degrees)
- Torso erect or slightly reclined
- Back in contact with the back rest and lumbar region properly supported
- Head balanced and not bent forward or backwards



### Rest and stretch breaks

While working at your computer workstation, stretch your body and rest your eyes.

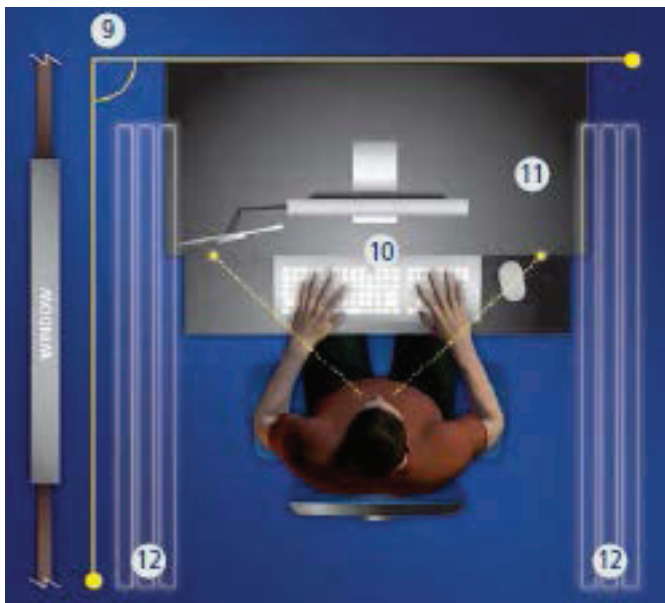
Take a brief break (1-2 minutes) every half hour or as needed and stand up, change your body position, or stretch.

- With your eyes, trace the outline of the room several times to give the eye muscles a change of pace.
- After two hours of seated computer work, a 15- minute break is recommended. During this break, do something different such as phone calls, filing, or other work.

## Working at a workstation



1. Top of monitor screen should be just at or just below the horizontal line of sight.
2. Document holder should be at same height as screen.
3. Adjust keyboard height and tilt so wrists are straight.
4. Arm rests should not support arms; keep elbows at a 90- to 100-degree angle.
5. Back rest should support the lumbar curve of spine.
6. Adjust seat so that thighs are slightly lower than the hips, and feet are firmly on the floor or footrest.
7. Front of seat cushion should be rounded off.
8. The backrest of the chair should be adjustable and should allow both upright and slightly reclined support.
9. Monitor screen should be at a right angle to a window.
10. Monitor screen, keyboard and document holder should be kept in front of operator.
11. Maintain sufficient desk space for work.
12. Keep overhead lights to side of operator.
13. Make certain the chair casters are appropriate for the floor type.



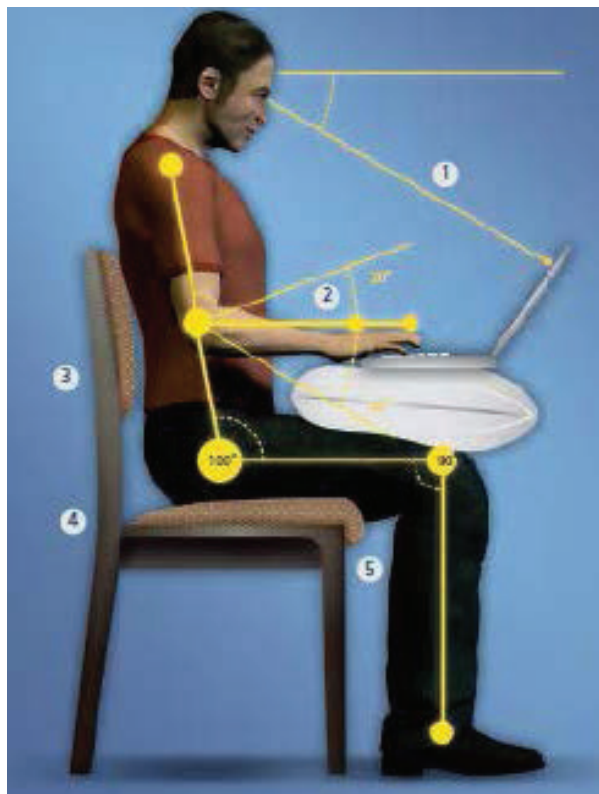
### Other actions to consider

Don't use more force than necessary to depress the keys.

- Don't rest elbows or wrists on squared edges of table or workstation. Use padding if necessary.
- Do have someone else check your arrangement and posture.
- Ask a colleague to observe you.
- Our eyes change as we get older. Imperfect vision can contribute to discomfort and create awkward postures. Consider getting your vision checked regularly.
- Clear unnecessary clutter from your desk.
- Use document holder to position source documents alongside the monitor.

## Working with a laptop

Frequent use of a laptop computer can create specific conditions that may also result in discomfort, pain or injury to the user.



1. The monitor screen should be at about a 90-degree angle to the line of sight.
2. Adjust keyboard height and tilt so wrists are straight.
3. Seat back should support inward curve of spine.
4. Adjust the seat, if possible, so that thighs are parallel to the floor and feet are firmly on the floor or footrest.
5. Front of seat cushion rounded off.
6. Avoid working in this posture for extended periods of time by taking frequent rest breaks.

### At home

- When possible, use a laptop computer in conjunction with a docking station that provides a full-size monitor, keyboard, and mouse device.
- You should not set the laptop on a kitchen or dining room table unless it is possible to work with relaxed shoulders and elbows at about 90 degrees.
- Slightly recline the chair to reduce the stress on your lower spine.
- If possible, employees should try to use a desk where they have knee and leg clearance, but where their elbows and shoulders are not elevated.
- Employees who work with a laptop from a work-at-home office should be issued equipment that will allow them to follow proper ergonomic design guidelines.

### “Hoteling” employees (workers with unassigned regular seating)

- Provide full-sized adjustable height monitors for employees who use laptop computers at office locations.
- Provide docking stations with full-sized keyboard and mouse, as well as articulating keyboard and mouse trays.
- Provide footrests at each workstation to accommodate smaller stature employees.

### Considerations when travelling

- Carry laptops in lightweight rolling bags or in padded backpacks (where both shoulder straps are used).
- Consider packing a portable laptop stand or use a cushion and a mobile keyboard. This will allow you to place your device on your tray and type with the keyboard on your lap, guiding your hands, wrists, joints and even your neck and back into a more ideal position.
- In a hotel room, if placing the laptop on the lap, employees may need to prop up their laptops.
- Employees should be aware of their surroundings and the need for extra awareness regarding potential privacy and corporate security issues.

## Zurich

### Risk Engineering

1299 Zurich Way, Schaumburg, IL 60196-1056  
800 982 5964 [www.zurichna.com](http://www.zurichna.com)

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