

2. Keying ... *essential tips*

- Keep your wrists straight
- Float your hands- *don't plant them*
- Rest your arms- *take the load off*
- Stroke- *don't strike the keys*
- Take frequent rest breaks- *micro breaks*
- Stretch out the stress- *every chance you get*



Keying ... *essential tips*

Before getting started with the essential tips to improve keying postures and habits, it's helpful to develop a model image of what you want to achieve.

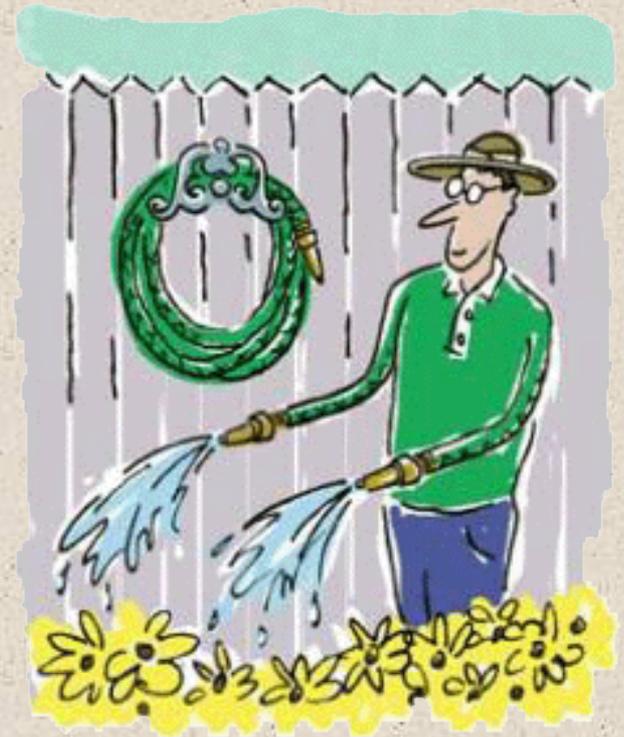
Pretend that your upper limbs are like a GARDEN HOSE...you want to keep your arms open and relaxed, your wrists straight with no kinks or pressure points at your joints.

Like the GARDEN HOSE,

- Blood flow
- Nerve conduction
- Muscle/tendon movement

are enhanced with an open path of travel.

Kinks, pressure points, closed joints or overextended joints can obstruct this flow, causing fatigue and putting stress on sensitive body parts



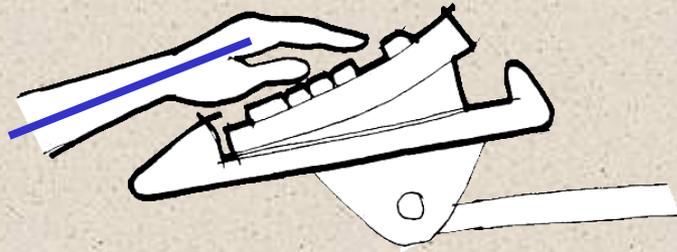
Keying - Keep your wrists straight



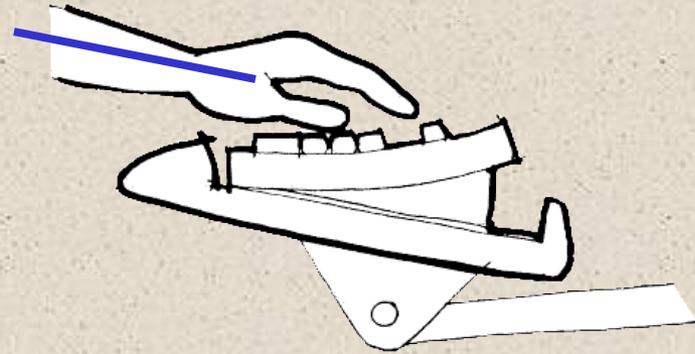
Avoid!

Keying with the keyboard low over your lap and the tray sloped upward... check out the bent wrist angle it produces.

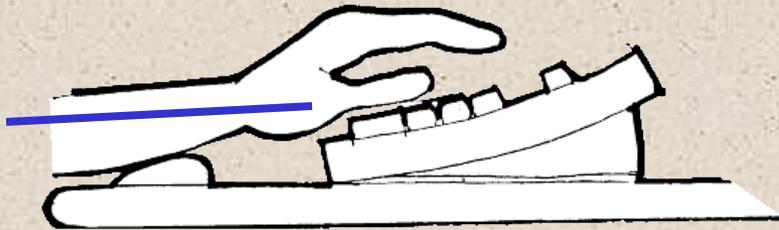
Keying - Keep your wrists straight



Slope keyboard up when you prefer the keyboard above your elbow height with your forearms angled upward



Slope keyboard down when you prefer the keyboard below your elbow height (over your lap) with your forearms angled downward



Level the keyboard when you prefer it at elbow height with
The forearms straight- on a tray or on the surface

Follow your forearm angle!

Keying - Float your hands

... avoid planting your palms

Several major medical studies have found that planting the wrists or palms while you key is a risk factor for developing hand disorders.

This area is very vulnerable to contact pressure since it lies directly over the Carpal Tunnel.

Resting the wrists / palms briefly between episodes of keying is NOT A PROBLEM.

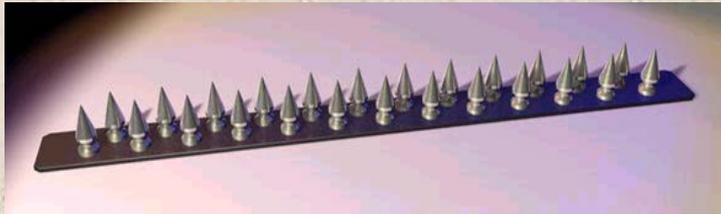
In contrast, the same studies found that floating the hands while using the work surface or chair the armrests to support the forearms acted as a protective factor for avoiding hand disorders.



Planting... Ouch!

Check out the following methods to avoid problems.

Keying ...*tools to help you avoid planting your palms*



The Wristaplarian
*Guaranteed to break your palm
or wrist planting habit or your
money back!*

Keying - Float your hands

...try using the chair armrests

If keying on the work surface or on a keyboard tray, you can try using the chair armrests to support your forearms.

This will allow you to pivot your arms and float your hands above the keyboard.

If your chair armrests don't adjust and you find yourself raising your elbows or shoulders, this won't work! Try the next method.



The chair armrest should support you under your forearm not at the elbow. Make sure the armrest is sufficiently padded to avoid pressure on your elbow.

Keying - Float your hands

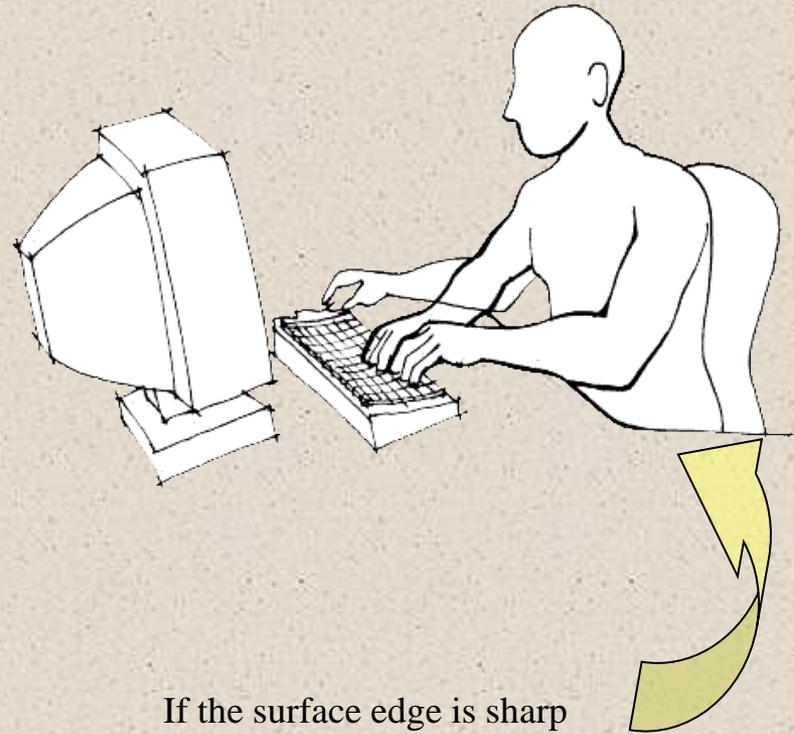
...try using the work surface

If you prefer to key on the work surface, try pushing the keyboard in several inches and resting your forearms on the front of the surface.

This will allow you to pivot your arms and float your hands above the keyboard.

If your surface is too high and you find yourself raising your shoulders...

- have the surface adjusted
 - raise chair and use a footrest
- Or, try the next method.



If the surface edge is sharp or uncomfortable, try using a padded rest under your forearms.

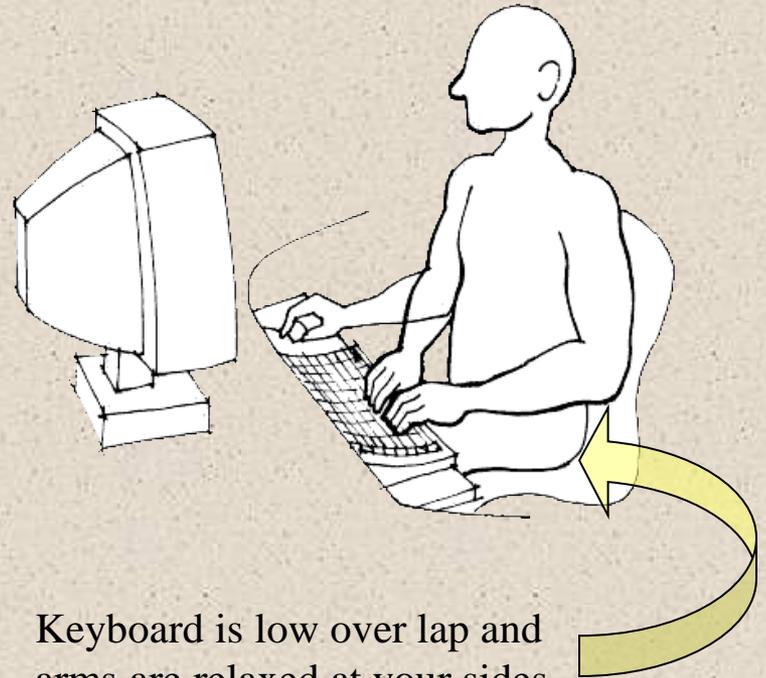
Keying - Float your hands

...try keying low over your lap on a tray

If supporting your arms on the work surface or on chair armrests is not an option for you, try using a keyboard tray set low over your lap.

This will also allow you to float your hands while keying and relax them at your sides when idle.

Although your arms are not supported in this posture, the low height of the keyboard will reduce fatigue on your shoulders.



Keyboard is low over lap and arms are relaxed at your sides. Make sure the tray angle is adjusted downward to produce a straight wrist.

Keying - Rest your arms *...take the load off*

These days, computer work tends to involve less Repetitive Motion and more Static Exertion. Instead of continuously typing, most people key in the blanks on a form or spreadsheet, respond to email messages, select with the mouse and follow that little cursor and read a lot of screen information over the day.

Since the hands and arms are idle a lot of the time, they are either planted on the keyboard palm rest or hovering in the air. Both of these conditions tend to increase loads on the neck, shoulder and upper back muscles. Since the body is often held fixed, there is little blood circulating to nourish the muscles. This static loading leads to fatigue, stiffness and can result in WMSDs.

One way to avoid this is to get support for your arms. Since this also helps minimize palm planting, you get 2 health benefits from the one solution.



Keyboard on surface with arm support from the chair



Keyboard on adjustable tray with arm support from the chair



Keyboard pushed in on surface with arms supported on the surface

Keying- Rest your arms

...when you're not getting arm support

If you're not getting arm support because...

- your chair armrests don't adjust
- your work surface is too high
- you don't like arm support

the best thing to do is to use an adjustable keyboard tray set low over your lap with a little downward slope.

If this information sounds a lot like the earlier "Float Your Hands" advice, it is and it's well worth repeating.



Using your keyboard on a tray set low over your lap reduces the load on your neck and shoulders. Some downward slope of the keyboard helps keep your wrists straight.

Avoid this method if you need to look at the keys a lot when you type
- it can be a real pain in the neck!

Keying - Floating hands & resting arms

some examples...



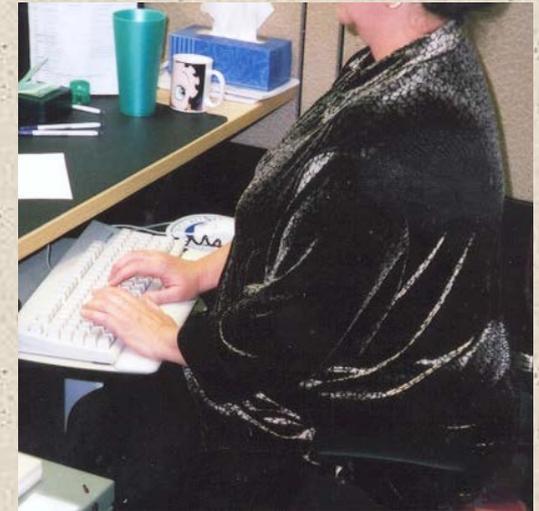
Support from Surface

- wrists straight
- hands can float over keys
- forearms supported



Support from Armrest

- wrists straight
- hands can float over keys
- forearms supported



Low Over Lap / Arms at Sides

- wrists straight
- hands can float over keys
- arms relaxed at sides

Keying

... making adjustments to view the keys

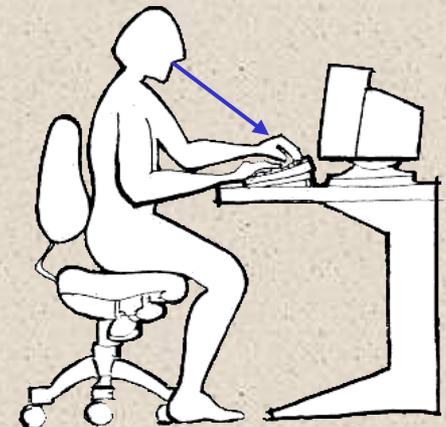
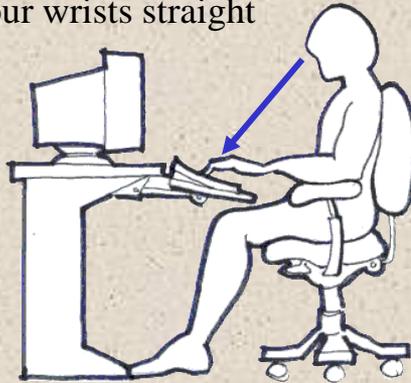
Not a Touch-Typist?

If you find yourself frequently bending your head/neck forward to view the keys, you might want to adjust your keyboard height, distance and angle to make viewing it easier on your body.



Keyboard Tray

Raise your keyboard tray and angle it up toward your eyes- just make sure you can keep your wrists straight



Work Surface

Push your keyboard in on surface and angle it up by raising the rear legs on the underside or insert a pad under the rear. Make sure you can keep your wrists straight.

You might also consider learning to TOUCH-TYPE.

Keying - Stroke, *don't strike the keys*

If you find yourself pounding away on the keyboard and you think you might be using too much force, check with a neighbor a few workstations away.

If they can hear your “clacking”, you probably are. Try typing softly. It requires a little practice but you’ll catch on eventually.

Give it a week and check in with your neighbor to see if your “clacking” has toned down a few notches.

Paw, don’t claw the keys.

Try typing with the fingers slightly open rather than cocked in a claw position. This also helps to reduce forces and puts less stress on the finger tendons and joints.



Stroke don't strike

Ergo Fun Facts

Research shows that most people use 20% more force than is necessary to activate the keys and that Carpal Tunnel sufferers have consistently been shown to use excessive keying forces.

Keying - Take frequent rest breaks

Short rest breaks of about 3 to 5 minutes taken every twenty minutes or so can help to break up the routine of repetitive keying and provide your muscles and tendons with needed recovery time ...relax, deep breath, stretch or just change what you're doing for a few minutes.

We call these “micro-breaks”.

Think of your body as a 20-minute hour glass ...it needs 3 short breaks per hour to nourish and refresh your musculoskeletal and visual systems.



Rest & Recovery

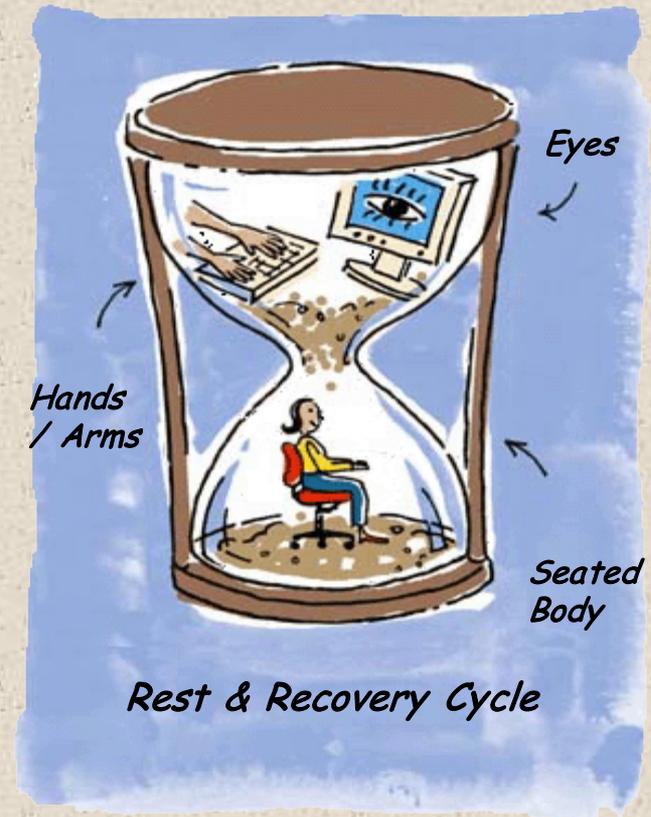
Ergo Fun Facts

The National Institute of Occupational Health (NIOSH) actually found that workers who take lots of short rest breaks get as much work done in a day as those who just take the standard twice-daily 15-minute breaks. And they experience less end of day fatigue.

Keying - Stretch out the stress

As part of your micro-break, it's great to include some minor stretches to offset the stress. Consider...

- Your Eyes are held fixed viewing near-point images all day so they need a little focal distance change.
- Your Fingers & Hands are flexed most of the day as you key, grip and click the mouse and grasp paperwork and they need some extending in the opposite direction.
- Your Wrists / Forearms are rotated inward (flat) all the time you're using the keyboard and mouse and need to return to neutral periodically.
- Your Neck, Arms and Shoulders are held statically over the day to view, reach or use your input devices and they need some periodic limbering up.
- Your Seated Body (spine) is fighting the forces of gravity and your your butt & thighs are exposed to constant pressure so you need to get up and move about regularly.



Keying - Stretch out the stress

Your Eyes

Every 20 minutes or so look off into the distance of at least 20 feet for 20 seconds and then focus on a near-point image at 2 feet or less for a few seconds-repeat several times.

It also helps to periodically close your eyes for a few seconds to reduce evaporation and keep the eyes moist.



Distance Viewing

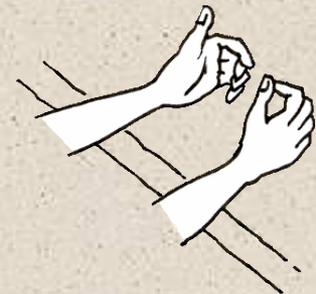
Your Fingers and Hands

Every 20 minutes or so stretch your hands by doing finger fans. Spread your fingers wide, while keeping your wrists straight. Hold for a few seconds-relax- repeat several times.

Or, just relax your hands by resting them on your lap or on your worktop with wrists resting in a thumbs up position. You can twiddle your thumbs a bit to work out the stiffness or just rest them on your fingers.



Finger Fans



Relax Hands in
"thumbs up" Position

Keying - Stretch out the stress

Your Neck, Arms and Shoulders

Every 20 minutes or so clasp your hands behind your head, press your head into your hands and then gently stretch your elbows backward. Hold this position for a few seconds-relax-and repeat several times. Or, just stretch your hands towards the sky and hold for 20 second-relax-and repeat.

Your Seated Body

Every 20 minutes or so get up and move about taking at least 20 footsteps. This could include going to the copier, picking up your mail, a face to face conversation with a co-worker versus a phone call or email.

Or, just get up from your chair and shake it out!



Pectoral Stretch



Getting out of Chair and Moving About

