PREVENTING COMPUTER INJURY

THE HAND BOOK

The Powerful, Hands-On Guide to Safe Computer Use

How to Avoid the Hand Positions and Motions Which May Lead to Injury
How to Feel Comfortable, Fluid and Relaxed at Your Keyboard
Massages, Warmups and Stretches to Protect Your Hands
Adjusting Your Workstation to Fit Your Body

STEPHANIE BROWN
Chapter One

THE NATURAL LINE
AND THE DANGEROUS ANGLE

When we do something in a particular way for a long time, we get used to it, even if it’s wrong. That’s why bad habits can be hard to break. Your muscles signal to your brain, “Yes, this is right. This is familiar.” But what is familiar may not always be right.

Many people sit down to work at their computers and start by putting their hands in this position:

Illustration No. 1

The Dangerous Angle - No

This is one of the biggest mistakes you can make. Although aligning your fingers with the keys in this way may look and feel right to you (and may even be the way you were taught), by doing this you are actually unaligning your hands with your arms. You are creating a dangerous angle in your wrist. Your hands may seem to be in line with your keyboard but they are actually out of line with your body.
Sitting too low in relation to your keyboard will cause you to bend and strain your wrists.

In this position, you are forcing your wrists to hold up not only themselves and your fingers but the whole weight of your arm as well. Your arm is heavy. Hold the weight of one with the other and you’ll see. Your wrists are not meant to be supporting that kind of weight for any length of time. You are also then creating another dangerous wrist position. This one I call the Cobra Position — bending your hand up at the wrist.

This is just as harmful as the Dangerous Angle we discussed in Chapter One. To try it out for yourself, just bend your hands up at the wrists and hold them that way for a minute or two. You’ll start getting very tired underneath your wrists. Try to wiggle your fingers in the Cobra Position. It won’t feel good. How can you prevent this?
If your arms are parallel to the floor, there is no need for your wrists to angle up. Also, the device that enables you to increase the tilt of the back of your keyboard must be used cautiously. Too high a tilt will create the Cobra Position. You want to maintain a gentle, fluid and approximately level line:

Yes

Find the position that feels comfortable to you — if you prefer, one with a very slight bend in your wrist is also safe. You don't ever want to feel that you're "holding up" your arms with your wrists. You don't want to feel even the slightest strain in your wrists. They don't want to be contorted either way: angled, as in Chapter One, or bent up as in the illustrations on the opposite page. Your guide will always be how it feels. Angled and bent positions simply don't feel good. Notice when you're getting yourself into one, and learn to keep your wrists completely free and relaxed.

EXERCISE No. 3
"The Floating Wrist"

Sit somewhere and drop your hands down at your sides. Slowly angle your wrists up, then let them slowly drop and relax, so they're just hanging from your arms. Do this a few times. Learn to distinguish the difference between the strained feeling of holding your wrists up and the easy feeling of just letting them hang from your shoulders.
Chapter Twelve

THINK HANDS, NOT FINGERS

Once your fingers can easily rest at Home, and you’ve found your most comfortable finger-stride, how can you reach for the hard keys — the number row and the keys to the extreme right and left of the keyboard — without straining your hands?

This chapter is half of what you need to know. "Travelling Safely", the next chapter, is the other half.

Many people type as if ...

... their fingers started here: They don't.
They start here:

Illustration No. 38

Half of your fingers are inside of your hand. Your fingers are actually twice as long as what you see and normally think of as "fingers". When you reach, learn to use the whole finger — not just the half you can see.

The traditional way to reach for the hard keys is to anchor your fingers on Home and protrude a lone finger.
This is one of the most dangerous things you can do at your keyboard.

Reaching in this way collapses the natural arch of your hand and effectively cuts your finger in half at the bridge, breaking its natural, strong curve:

**Protruding - No**

**Preserving the Curve - Yes**
Stretch No. 1
The Teepee
Stretches the Finger Flexors

In a teepee shape, with your fingertips touching, gently use the fingers of one hand to push away the fingers of the other. You’ll feel a good stretch all along the inside of your fingers. Remember, a stretch doesn’t have to be extreme — a little goes a long way.

You can do this with all your fingers at once, or one at a time. Don’t forget your thumbs.

If you prefer, and if it’s comfortable, you can also do this stretch on your desk or table by placing your fingertips on the edge and gently pressing down.

Illustrations Nos. 51 and 52
Stretch No. 2
The Curl
Stretches the Finger Extensors

Rest one hand on your table. Keeping it relaxed, gently push one finger at a time back towards your palm. Go only as far as is completely comfortable. You'll feel this stretch along the outside of your fingers and hand.

Then stretch your thumb by pressing it towards your palm:
Stretch No. 3
The Press
Stretches the Forearm Flexors

Put your hands down in front of you, fingers of one hand resting on the palm of the other.

*Lightly* press down with your top hand while straightening your elbow — only as far as is comfortable.

You'll feel it along the inside of your wrist and forearm.
Stretch No. 4
The Tuck
Stretches the Forearm Extensors

Keeping your hands dropped in front of you, cup the fingers of one hand in the opposite hand.

Gently, press down with your top hand while straightening your elbow.

You'll feel this stretch along the outside of your wrist and forearm.

*Illustration No. 56*

After a week or so of doing these stretches, your hands and fingers will start having a wonderful, supple feeling.
Adjusting Your Workstation