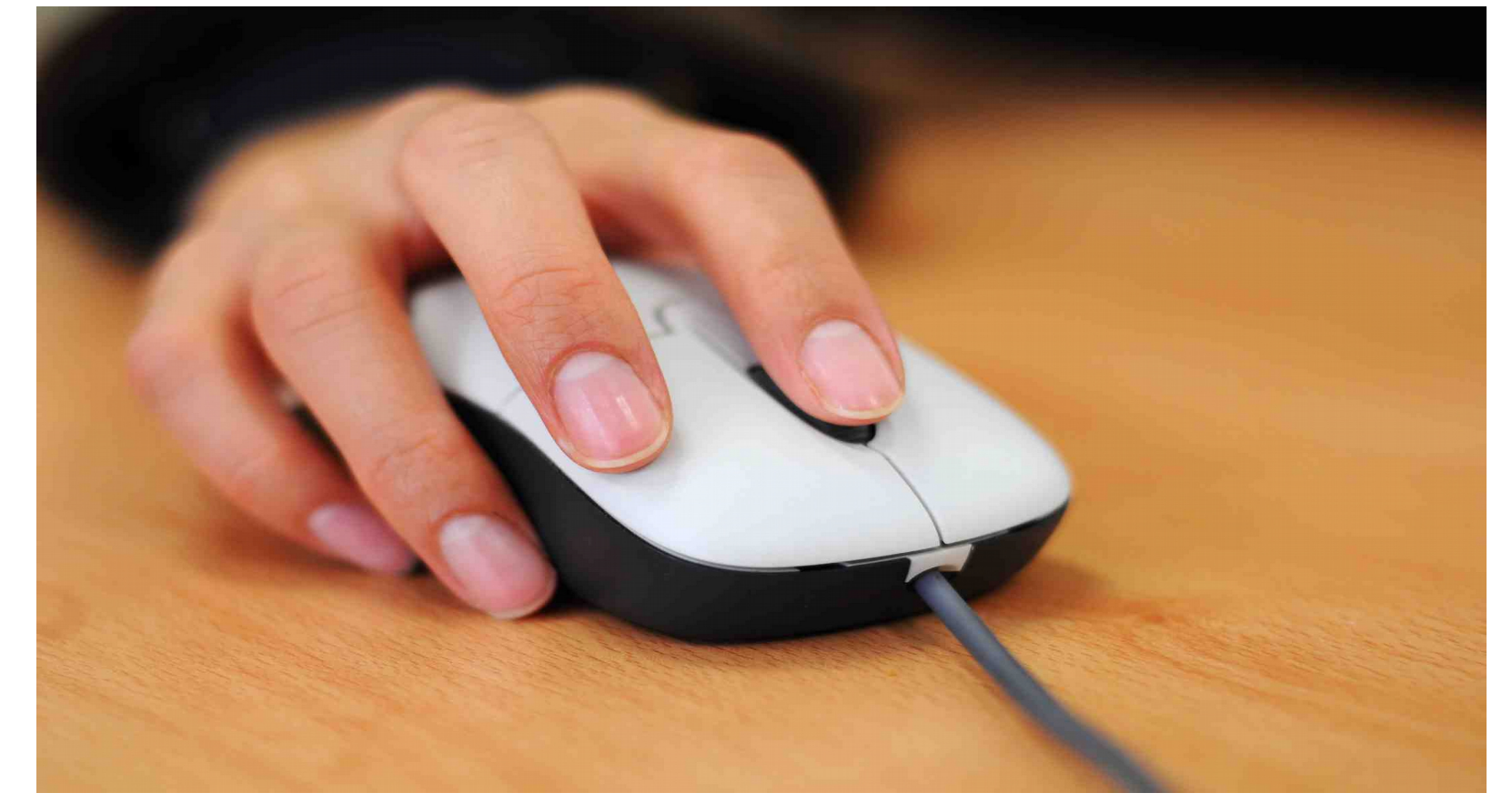




Computer Pain

How to get it, How to lose it



The transition from jungle to cube is something we were not built for. If you want to enjoy a long career, take preventative steps now to avoid RSI (repetitive strain injury). Once you start exhibiting symptoms, healing can be a long and painful process.

But do **not** jump to conclusions! Doctors are too quick to diagnose pain in the finders/wrists/forearms as carpal tunnel syndrome or other inflammatory conditions. These are extremely rare among keyboarders.

The pain may be most intense in your fingers/wrist/forearms, but the source is actually higher up in your shoulders/neck/chest/forearms.

Keyboard Work = Static Muscle Contraction

Static Contraction = Muscle Tightness

Chronically Tight Muscles = Pain

Holding a muscle in contraction causes small amounts of damage. Damage accumulates slowly as fibrous connective tissue. So muscles become short, hard, and painful.

To heal – decrease the damage rate, increase the repair rate.

Lower damage rate:

- 1.) Frequency
- 2.) Intensity
- 3.) Duration

Handle frequency by computing less...yeah right. So let's address intensity and duration.

Intensity – Mechanical and ergonomic.

Duration – Most important. Hours in a day does *not* matter. Minutes in contraction does.

Interruptions are key.

Every 5 – 10 minutes, drop your hands to your sides and shake for 5 seconds.

Every 15 – 20 minutes, drop your head back and side-to-side. Pull your shoulders forwards and back.

That's it. These “micro-breaks” should take 15 seconds total.

RSI is a damage/repair imbalance. Repair depends on metabolism. Dehydration, vitamin deficiencies, and a sedentary lifestyle weaken your metabolism.

Impaired metabolism is the *problem*. Aerobic exercise is the *solution*.

30 minutes of continuous movement (walking, running, swimming, biking, etc.) 3 – 4 times per week is the minimum requirement for a normal metabolism.

Combined with good water intake (1 – 2 liters per day), a varied diet, and a multivitamin you will improve your muscle repair rate.

Add in an ergonomic battle-station and good work habits (frequent interruptions of the static contraction in your shoulders/neck/chest) you will easily overcome any damage done daily.

Reversing previously accumulated muscle shortness and stopping pain in your finders/wrists/forearms is easy...stretch! We simply pull the muscle to its longest length and hold it there for at least 30 seconds. Do this frequently enough (**2 – 4 times per day**) and any previously accumulated muscle shortness can be reversed.

Stretching should be done slowly and gently. Again, 30 seconds is the minimum. For techies, muscles in the neck, shoulders, chest, and forearms are the most important. Stretches are best learned from an instructor (trainer, yoga instructor, therapist, etc.). Following diagrams is fine, but be careful. Mild discomfort is acceptable as long as it is felt in the relevant muscles/surrounding muscles.

Sharp or focused pain, especially in a joint, should be **completely** avoided. The following stretches can help heal pain and prevent future problems.



Trapezius: Hold the side of a chair, lean head sideways. Feel it in side of neck.



Scalenes: Hold chair with one arm, lean head away and back over shoulder. Feel it in front/side neck.



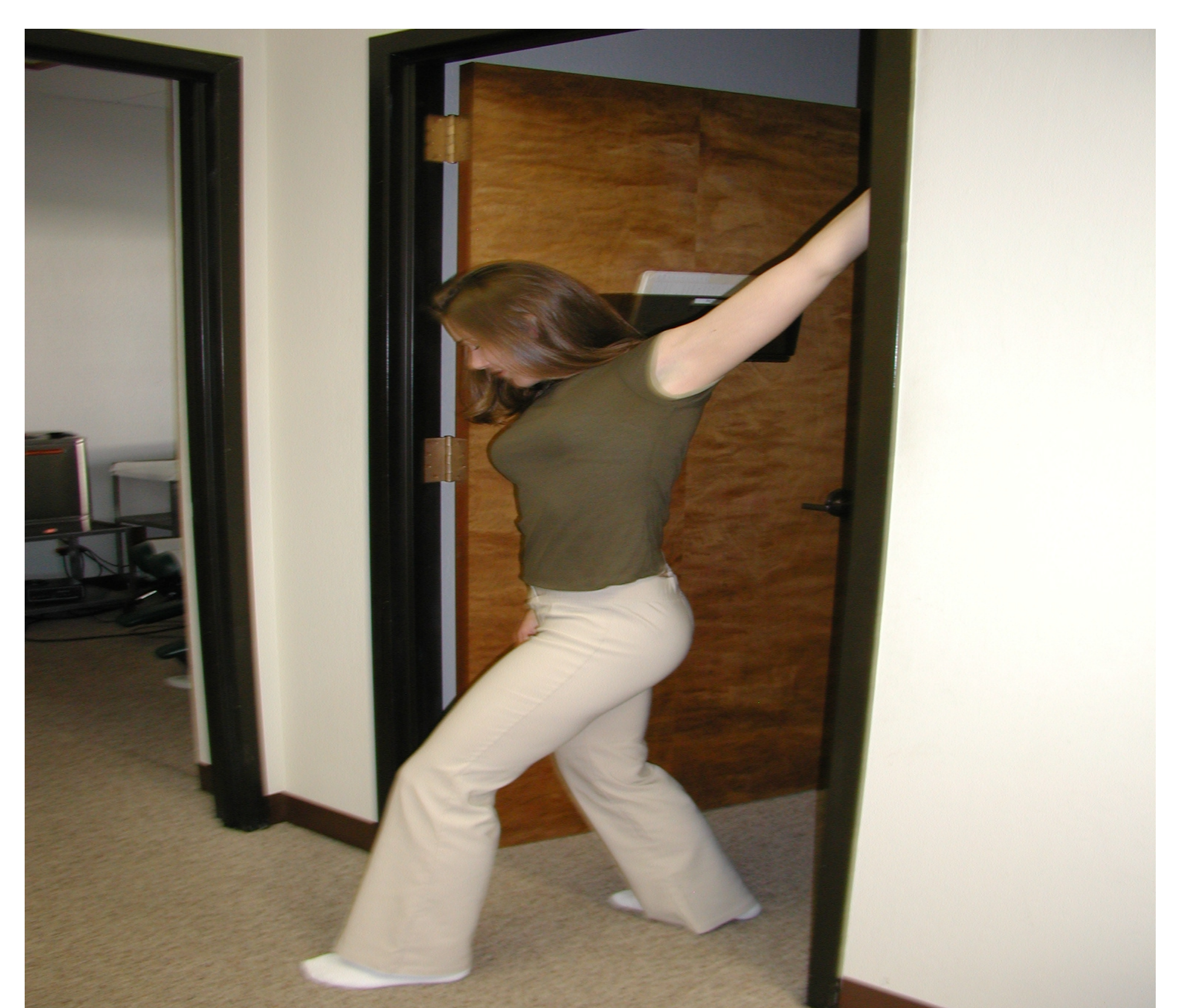
Posterior Cervicals: Hands locked, pull head down and forward into chest. Feel it behind neck/shoulders.



Extensors: One arm facing up, the other down, line up fingers, curve into fist and pull up. Feel it in forearms.



Flexors: Extend one arm, pull fingers/hand outward and down. Feel it in forearms.



Pectoralis Minor: One arm up, rest on doorframe, lean forward. Feel it in chest/underarm.