Computer Ergonomics

How to Protect Yourself from Strain and Pain

Many people spend hours a day in front of a computer without thinking about the impact on their bodies. They physically stress their bodies daily without realising it by extending their wrists, slouching, sitting without foot support and straining to look at poorly placed monitors.

These habits can lead to cumulative trauma disorders or repetitive stress injuries, which create a life-long impact on health. Symptoms may include pain, muscle fatigue, loss of sensation, tingling and reduced performance.

Good Ergonomics will help you to reduce strain, fatigue, and injuries by improving product design and workspace arrangement. The goal is a comfortable, relaxed posture for you.

Arrange Your Workstation

Every time you work, take time to adjust workstations that aren't quite right in order to minimise awkward and frequently performed movements.

Adapt Laptops

Laptop computers are not ergonomically designed for prolonged use. The monitor and keyboard are so close together that they cannot both be in good positions at the same time. For prolonged use, it's best to add a separate monitor and keyboard.

Modify Your Body Mechanics

- Do you wear eyeglasses? Make sure they fit properly to avoid tilting your head.
- Type with light strokes, and try to keep your muscles relaxed.
- Sit "tall," aligning your ears, shoulders and hips. When you sit, think about making yourself an inch taller.
- Switch hands when using a mouse, if you are able.
- Completely rest your wrists during breaks, including taking your hands off the mouse.

Adjust Your Work Patterns

Reduce prolonged computer time whenever possible.

Break work into smaller segments and switch between tasks that use different motions. For example, alternate use of mouse with reading and searching the web.
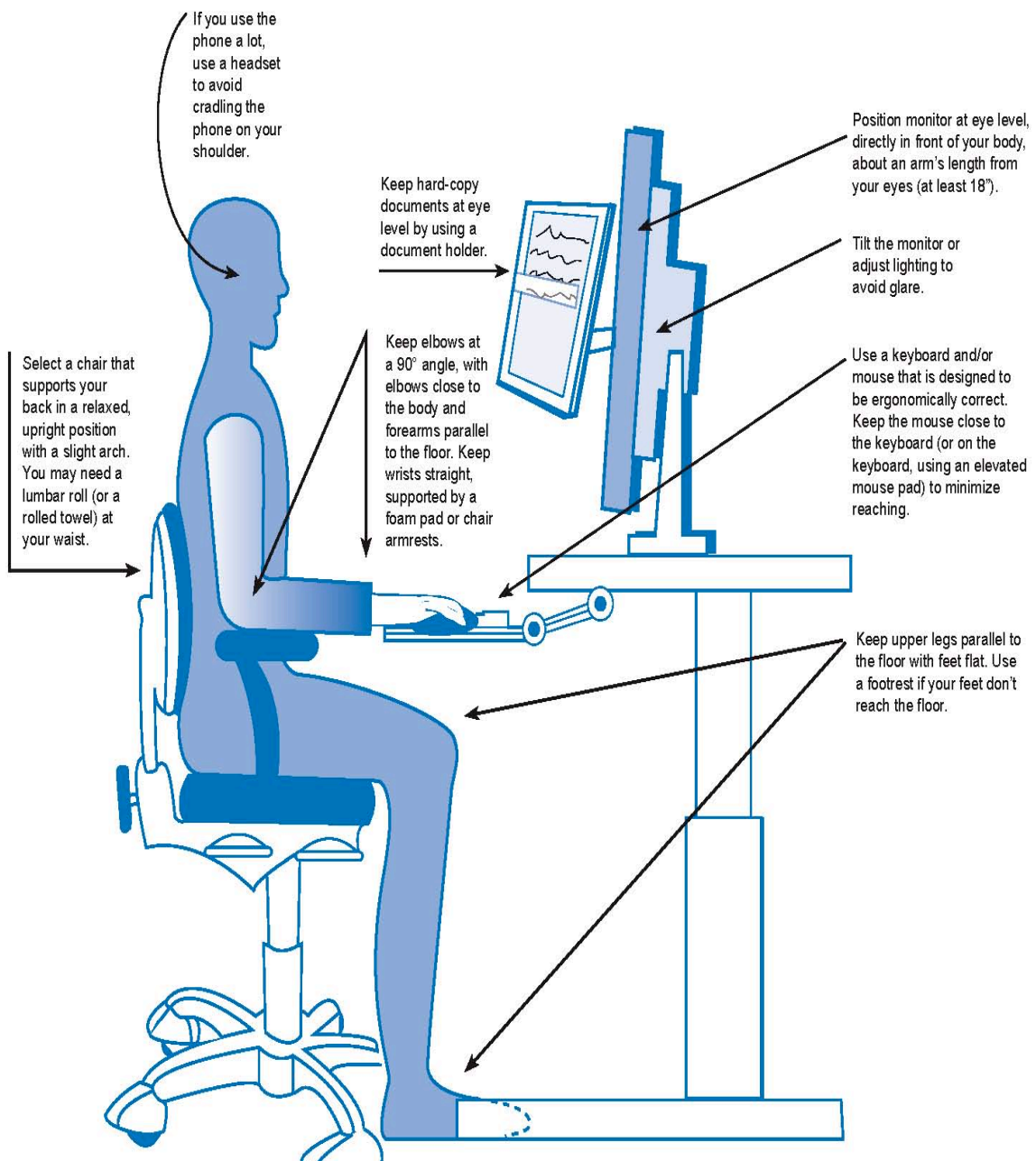
Move!

Movement has many benefits: it relaxes tissues, lubricates joints and prevents stiffness, improves circulation, reduces fatigue, and builds stamina. One study showed that heavy computer users who successfully avoided computer-related pain moved every 7 minutes.

At least every 10 minutes, take a short (10-20 second) break. Take your hands off the keyboard and move!

Every 30-60 minutes, take a brief (2-5 minute) break to stretch and/or walk around.

Arrange Your Workstation

Every time you work, take time to adjust workstations that aren't quite right in order to minimize awkward and frequently performed movements.

If you use the phone a lot, use a headset to avoid cradling the phone on your shoulder.

Keep hard-copy documents at eye level by using a document holder.

Position monitor at eye level, directly in front of your body, about an arm's length from your eyes (at least 18").

Tilt the monitor or adjust lighting to avoid glare.

Select a chair that supports your back in a relaxed, upright position with a slight arch. You may need a lumbar roll (or a rolled towel) at your waist.

Keep elbows at a 90° angle, with elbows close to the body and forearms parallel to the floor. Keep wrists straight, supported by a foam pad or chair armrests.

Use a keyboard and/or mouse that is designed to be ergonomically correct. Keep the mouse close to the keyboard (or on the keyboard, using an elevated mouse pad) to minimize reaching.

Keep upper legs parallel to the floor with feet flat. Use a footrest if your feet don't reach the floor.

Exercise at Your Computer

Neck/Shoulders

Neck Rotation: Slowly rotate your head as far as comfortable to the right, then left.

Shoulder Rotation: Circle your shoulders, then reverse directions.

Head Side to Side: Bend your neck so left ear approaches left shoulder, then repeat for right. Add a little resistance by pressing your hand against the side of your head.

Chin Tuck: Slide your chin inward, without bending your neck up or down. This is easiest to practice initially against a wall. Tuck chin in, attempting to touch back of neck to the wall while also maintaining head contact. Don't jam your chin down to your chest.

Shoulder Blade Retraction: Pull your shoulders down and back.

Shrug: Slowly raise your shoulders toward ears and hold for a few seconds. Gradually bring shoulders down and relax.

Back

Shoulder Squeeze: Raise your arms in *front* of body, with elbows bent and thumbs up. Pull elbows back, squeezing shoulder blades together. Hold for a few seconds then release.

Stretch Up: Sit up straight and imagine a cable attached to the top of your head. Gradually stretch to be as tall as possible, hold for a few seconds, then relax.

Arms

Arm Relaxation: Drop your arms and hands to your sides. Gently shake them for a few seconds.

Arm Rotation: Raise your arms in front of your body. Rotate arms so palms face up, then rotate so backs of hands face each other.

Hands/Wrists

Wrist Flex: With your elbows on desk, gently use left hand to bend right hand back toward forearm. Hold for a few seconds, then relax. Repeat on other side.

Finger Fan: Spread your fingers as far apart as possible, hold, then clench fists, then release.

Feet

Toe Curl: Flex toes up, then curl toes under. Release.

Foot Rotation: Circle foot slowly from the ankle, then reverse.

Eyes

Eye Rolls: Roll your eyes clockwise then counter-clockwise briefly.

Palm Eyes: Without touching your eyes, cup hands lightly over eyes for 30 seconds to rest them from light.

Look Away: Exercise your eyes by periodically looking away from your computer to focus on distant objects.

Keep Fit

Physical fitness can help you avoid and treat problems related to computer use. Build your stamina with exercises for strength, flexibility, and cardiovascular health.

Computer & Desk Stretches
Approximately 4 Minutes

Sitting at a computer for long periods often causes neck and shoulder stiffness and occasionally lower back pain. Do these stretches every hour or so throughout the day, or whenever you feel stiff. Photocopy this and keep it in a drawer. Also, be sure to get up and walk around the office whenever you think of it. You'll feel better!
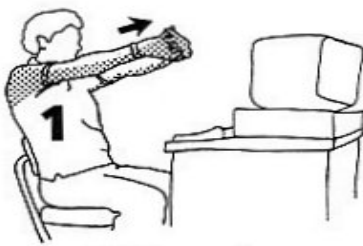
1 — 10–20 seconds / 2 times

2 — 10–15 seconds

3 — 8–10 seconds each side

4 — 15–20 seconds

5 — 3–5 seconds / 3 times

6 — 10–12 seconds each arm

7 — 10 seconds

8 — 10 seconds

9 — 8–10 seconds each side

10 — 8–10 seconds each side

11 — 10–15 seconds / 2 times

12 — Shake out hands / 8–10 seconds