Newsletter

March 2009

The Modern Neck

An increasingly common problem.
www.ishtaspinaltouch.com/Plumbline/Issues/Issue07/ModernNeck.html

Today more and more people, young and old, arrive in my clinic with neck problems and I attribute this to the increased use of computers and console games.

We were never meant to be sitting at a desk within centimetres of a screen for hours at a time. The damage it causes the neck and the complications as a result of it are amazing.

The neck is designed to be constantly moved in all directions, it is not meant to be fixed. Instead of improving the working conditions for people the computer seems to have done the opposite. You, like me, probably see people on a regular basis that will sit for 6 hours or more at a computer and children will sit for almost as long either at a computer or playing at a play station or something similar.

When using a computer to excess you can soon get degeneration of the discs. In fact if you are sitting for more than 3 hours in a day then the body begins to build up scar tissue around the joints, limiting the full range of movement of the joint. Research has shown that for every inch of anterior head carriage the posterior cervical muscles have to work 10 times harder! On top of this the anterior cervical muscles become shortened encouraging the anterior head carriage.

The head is about the shape and weight of a bowling ball, and is subject to the same Laws of Physics as other objects. As the head moves outside its natural stable point, above the centre of the shoulder, gravity takes hold and wants the head to hit the floor. Think of a bowling ball with a cut-off broom handle stuck in one hole. The ball will balance when the broom handle is upright, but tilt the handle slightly forward and the bowling ball will fall to the ground. Gravity never sleeps. This Law of Physics affects the body 24 hours a day.

The above figure shows how the muscles of the whole back come into play in supporting the weight of

the head, apart from the neck area being compromised there is a chronic loading on the vertebrae and discs in the lower back which increases susceptibility to injury, overuse syndromes and fatigue of the muscles.
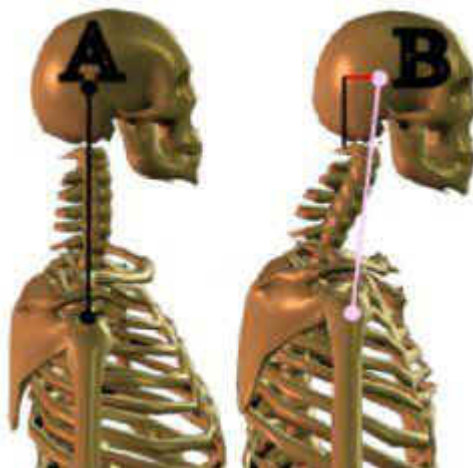
The above figure shows, A, normal head posture and, B, lift at the neck with a forward head posture.

What can we do?

Alter the way we use the computer! Here are some points to consider.

Sitting Posture

Use the chair for support, not the desk - sit well back into your chair; adjust the height of the chair back to fit into the small of your back, low enough to support your pelvis in a forward tilt.

Let the chair take the strain - use the tilt adjustment to recline the back support sufficiently to allow your back and neck muscles to relax, whilst maintaining an upright posture.

Sit tall - with your head balance squarely on your shoulders, keep your shoulders relaxed and elbows tucked close by your sides.

Keying Posture

Raise the height of your chair so your elbows are above the desk level, in line with the middle row of letters on your keyboard.

Use a footrest if your heels are now not touching the floor.

Sit close to the desk, keep your elbows tucked in at your sides when typing or using the mouse. Ensure your upper arms are free to hang vertically down from your shoulders.

If the arms on your chair prevent this, use a chair without arms or see if the arms can be safely removed.

Lift your wrists to type, keeping your hands in alignment with your arms. Only rest your wrists on the edge of the desk when not typing or better still, relax your arms by your sides or do stretching exercises.

Equipment

Ensure you have first adjusted your chair to support an upright but relaxed posture. Then position your display screen equipment to ensure you can maintain that correct posture whilst working.

If you use a laptop for more than an hour at a time, always use an additional keyboard and mouse, which will ensure you can maintain the correct posture for keyboard/screen work.

Keyboard and Mouse

Relax against the chair back, keep your elbows close to your sides and draw your chair close to the desk. Bring your keyboard and mouse close to the desk edge, leaving sufficient space to rest your wrists when not keying.

If you need to look at your fingers to key, avoid dropping your head forward. Instead remain upright, using your chair for support, pull your chin in and lower your eyes (not your head) to view your keyboard.

Lift your wrists to key, keeping them straight, not flexed back. A wrist support should only be used when at rest. Avoid mouse use by using keyboard shortcuts instead. If you must use the mouse be careful to hold it lightly with a relaxed hand when in use. When not operating the mouse, release your hold and relax your arm or do some stretching exercises.

Computer Screen

Position the screen straight in front of you.

Maintain the correct sitting and keying posture described earlier and position your screen so you can view it with relaxed eyes, looking down as you would for comfortable reading. The top of the screen should be no higher than your eyebrows, to reduce visual fatigue and the risk of neck problems.

A comfortable viewing distance is generally 50-60cm (20-24"), but this is determined by your vision and whether spectacles are worn. Single focus lenses are preferable for screen use. Varifocals are not recommended as they can cause neck problems.

Workstation environment

Position you computer workstation away from the window, if at all possible and at right angles to it.

Work smart - take a break!

Frequent short breaks from your screen are better than longer infrequent ones. Plan your day to break up longer spells at your keyboard with other varied tasks.

Do not:

- Sit static at your computer for longer than an hour without changing your posture, or taking some exercise away from your screen.
- Hold on to your mouse unless you are actually using it, but let go and allow your arm/hand to relax between use
- Reach forward to lean your arms on your desk; instead rest back against your chair for support.
- Put up with pain or discomfort, but seek help immediately to identify the posture and work factors putting you at risk.

For some exercises to do at your desk, go to: www.essex.ac.uk/oh/healthinfo/stretches.htm

This shoulder squeeze is also a good one to do.

1. Raise your arms to your sides until they're parallel with the floor. Bend your elbows, keeping them at shoulder height.
2. Push your arms backward and squeeze your shoulder blades together. Hold the position. Slowly return to the starting position. Repeat the procedure.

Children

As far as children are concerned here is a good site for advice about posture for children at the computer. If we can get children sitting correctly at the computer, what a great service we will be providing for

them.
http://ergo.human.cornell.edu/cuweguideline.htm