



OFFICE ERGONOMICS

DESIGNING A SAFER & HEALTHIER OFFICE ENVIRONMENT



Today's office is often a sedentary environment, which can create health challenges for employees and costs for businesses.

Many of us spend hours sitting at our computer, which can result in musculoskeletal disorders and discomfort. This may be prevented through work station modifications, such as adjusting the office chair, computer and desk positioning, and taking periodic breaks from sitting.

This month we explore some ergonomic principles and posture basics, which can help significantly reduce discomfort and physical stress at the work station. We also outline some simple stretches that can be carried out at the desk to help lessen the impact of prolonged sitting.

ADOPTING A NEUTRAL POSTURE

Incorrect posture while sitting in an office chair for a long period of time is a common cause of back pain, neck pain and general discomfort.

When sitting at our work stations we may begin with good posture, but as time progresses we resort to slouching. We should aim to maintain a **neutral posture**, where the body is aligned and balanced in a position of minimal stress.

Even when sitting in a good posture position, it is crucial to adapt posture frequently by alternating tasks, taking breaks and performing simple stretches.

Neutral Posture is a position:

The body can maintain with ease for a prolonged period of time, with minimal effort

Which reduces stress on the musculoskeletal system

That supports the spine's natural curves and maintains good alignment

That gives your body biomechanical advantages to do your work

Good posture at the work station can be described as:

Head upright and over the shoulders

Eyes looking slightly downward without bending from the neck

Back supported by the backrest of the chair

Shoulders relaxed

Elbows bent at 90 degrees

Feet flat on the floor (or footrest)

Wrist in neutral/straight position when typing

What is ergonomics?

Ergonomics is the science of designing the workplace to fit the needs of an employee. We are all different sizes and shapes, so the goal of office ergonomics is to ensure that the design of an office work station fits the individual who will be working at it, creating a comfortable working environment for maximum productivity and efficiency.



Did you know?

An ergonomically designed office work station helps avoid fatigue and discomfort.

THE OFFICE CHAIR

Sitting is a static posture which increases stress on the back, shoulders, arms, and legs, and places pressure on the back muscles and spinal discs. When sitting for a prolonged period, we will naturally start to slouch in our chair, overstretching the spinal ligaments and straining the discs.

To avoid developing back pain or compounding an existing back problem, it's important to choose an office chair that's ergonomic and that supports your spinal curves, promoting good posture.

Many people sit towards the front of their chair and end up hunching forward to look at their computer screen. The better seated posture is to sit back in the office chair and utilize the chair's lumbar support to keep the head and neck erect.

What to look for in an office chair:

Provides lumbar support	Adjustable height
Appropriate width for the user	Adjustable backrest

Adjust the positioning of your chair so that it meets your requirements:

<h3>Seat height</h3> <p>While standing, adjust the chair height so the highest point of the seat is level with your kneecap. This should allow your feet to rest flat on the floor when seated. If your chair is too high for you to rest your feet flat on the floor, use a footrest.</p>	<h3>Lumbar support</h3> <p>While sitting, adjust the height of the backrest so the lumbar support causes your lower back to arch slightly, reducing the desire to slump forward or slouch down in the chair as you tire over time. The tilt of the backrest should allow you to sit with your upper body slightly reclined.</p>
<h3>Seat width</h3> <p>The seat should be wide enough that thighs do not touch the edges, but, narrow enough that the armrests can be reached with ease.</p>	<h3>Armrests</h3> <p>Using the armrests while sitting takes some of the strain off the upper spine and shoulders and makes slouching forward in the chair less likely. The armrests should be adjusted to slightly raise the shoulders. Armrests should not prevent the chair from being drawn close to the desk. If armrests are of a hard material, gel wraps should be used to prevent contact stresses on elbows.</p>



Did you know?

Backpain is one of the most common office related injuries.

The office desk or work surface

The office chair set up must be in proportion to the desk at which the chair will be placed. Once the chair has been adjusted to suit the user needs, the appropriate height for the desk should be determined.

Ideally the top of the desk should be at elbow height, which can be measured with upper arms hanging relaxed and lower arms bent at 90 degrees. If desk height cannot be adjusted to accommodate elbow height, the chair can be adjusted as outlined above and a footrest used. Always ensure there is adequate clearance for knees and thighs and that the area beneath the desk is clutter free so feet can have ample space.

Any items which are frequently used while working at the desk such as the phone or stationary should be placed within easy reach. Always stand to reach anything that can't be comfortably reached while sitting, **never overreach.**



Did you know?

Slouching when sitting puts additional pressure on discs and vertebrae of the back.

KEYBOARD AND MOUSE

When using a keyboard and mouse, the upper arms should be relaxed at the side of the body, elbows should be bent at 90 degrees and the wrists should be straight. The mouse should be placed within easy reach and on the same surface as the keyboard.

When using the keyboard and mouse:

A space in front of the keyboard can help rest hands and wrists when not keying	Keep wrists straight
Support the forearm on the desk	Keep a soft touch on the keys and limit overstretching the fingers
Use keyboard shortcuts to reduce extended mouse use	Adjust the mouse sensitivity so it only requires light touch to operate
Don't grip the mouse too tightly	Periodically alternate the hand used to operate the mouse by moving the mouse to the other side of the keyboard

SCREENS AND MONITORS

The monitor should be placed directly in front of the user, approximately an arm's length away, with the top of the screen at or slightly below eye level. It should be positioned to avoid glare, or reflections. This is often easiest if the monitor is not facing windows or bright lights. To test for glare, turn off the monitor, if the screen provides reflections then glare is occurring. Check for the source of the glare and adjust the monitor as required.

When using the monitor:

Ensure individual characters on the screen are sharp, in focus and don't flicker or move.	Adjust screen brightness to suit the conditions of the office environment
Screen surface should be clean	Text should be large enough to read clearly



Did you know?

If a lot of time is spent staring at a screen, periodically focusing on objects in the distance can help rest eyes.

It is important to take regular eye breaks to decrease eye strain. Follow the 20-20-20 rule, taking eyes off the screen every 20 minutes and looking at something approximately 20 feet away for about 20 seconds.



Did you know?

Monitors should be placed approximately an arm's length away.

DESK STRETCHES

Stretching and engaging in physical activity regularly throughout the day helps keep joints, ligaments, muscles, and tendons loose, reducing discomfort and promoting general wellbeing.

Try the stretches outlined below (which can all be conducted from sitting) throughout the day. Be mindful of your breathing when stretching. Controlled breathing, deep breaths in through the nose, and out through the mouth, while holding stretches will help you get the most out of your stretching routine. Exhale slowly through your mouth as you push deeper into a stretch.

Touch your opposite shoulder blade, and then gently grab your elbow and pull it towards the opposite side. Hold for 5 seconds. Repeat with the other arm.

Lift your leg up and hold from the knee. Pull your leg towards your chest and hold for 10 seconds. Repeat with the other leg.

Straighten your legs and reach towards your feet. Hold for 5 seconds.

Keeping your back upright, raise your arm over your head and reach towards the opposite side. Hold for 5 seconds. Repeat with the other arm.

Place both hands behind your back with palms touching, then push your chest forward. Hold for 5 seconds.

Raise both shoulders at the same time. Hold for 5 seconds and release.

Lean your head down and rotate your neck from left to right, slowly for 10 rotations.

Interlock both hands and reach up with palms facing the ceiling, hold for 5 seconds.

Cross your leg with ankle resting on knee, gently push down on the knee of the elevated leg for 5 seconds. Repeat on the other leg.

Shake out your hands for 10 seconds.

To avoid keeping the back in a static position or poor posture for a prolonged period, remember to stand, stretch and walk for at least a minute or two every half hour. Even a quick stretch or walking to the water cooler or toilet will help.


Did you know?
Stretching increases blood flow to muscles.



YOUR INTERNATIONAL HEALTH INSURANCE COVER

We are not designed to sit still. Regardless of how comfortable an office chair maybe, prolonged static posture has a detrimental effect on the back and is a common contributor to musculoskeletal problems.

Stay active throughout the day to help reduce back pain in the office. Alter your posture before you get fatigued or experience discomfort, rather than changing position to recover from cramps or pins and needles.

Dr Ulrike Sucher, Medical Director, Allianz Partners.