## NeutralPosture<sup>®</sup> Series Chairs: Ergonomic Office Chairs Are a Necessity Not a Luxury

In these days of cut backs and credit crunch, many employers understandably seek to minimize costs wherever they can. Skimping on the provision of adequate office seating however is a false economy, as this will impact employee health, productivity and welfare. Investing in the very best ergonomic chairs and seating for staff will pay off in the medium and short run.

Ergonomics, or human factors as it's sometimes known, was invented in the early 1950s by scientists and engineers interested in the interaction of man and machine. The word itself is derived from the Greek "ergon" (work) and "nomos" (natural laws).

Originally, ergonomics seemed to most directly apply to factory workers and similar users of heavy equipment, or in specialised circumstances like the military interacting with control panels, flight decks etc. However, it soon became evident that office workers too could benefit from the science of ergonomics, as they increasingly have contact with typewriters, telephones, dictating equipment, photocopiers and computer terminals during the course of their working day. Indeed, office staff probably have more contact with different styles and types of machine on a regular basis than factory employees.

Most of that interaction by office staff is carried out from a seated position, so the role of ergonomics in the office is to combine the principles of biomechanics, physiology, even sociology and psychology, to design both the task and the equipment to best suit the human operator and minimise the factors that influence bad posture.

Bad posture is the root cause of most industrial or work-related injuries and illnesses and is essentially defined as any imposed position that exerts undue strain on the musculoskeleton.

Factors that influence bad posture can include the design of the equipment used, the nature of the task itself and the frequency or repetition of the task. Asking a five foot tall man to place a heavy object on a high shelf repetitively for a long time is going to result in a bad posture. Asking a person to sit in a chair that is too small for them is going to result in poor posture. When it comes to posture, ideally you should be performing tasks with the minimum effort. When the body is relaxed, with all the muscles and tendons in a resting state, you've achieved a good or a neutral posture.

However, whether you're involved in hard physical labour or just sitting at a computer, your muscles are always working, even if you are not moving. It's this 'work' that exerts force and strain on your musculo-



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skeleton, and the extent of that strain that determines the effects on the body. You can improve your posture, your health and productivity by following some simple guidelines that cover the type of office seating used and your workstation setup.

Your Chair: height should be adjusted so that the forearms are parallel or slightly sloping down towards the keyboard, your shoulders are relaxed and your knees are slightly lower than the hips. Your feet should be in contact with the floor (if not then a footrest should be used) and the seat should tilt forwards to rotate the top of the pelvis so that the spine is in its natural 'S' shape.

The small of the back (Lumbar) should be supported to help preserve the natural curve of the spine and you should be able to sit right back into the chair without putting pressure on the back of your calves. You should it back in an upright posture, slightly relaxed into the backrest with the head over the shoulders and in line with the buttocks. Try not to sit bolt upright or perch on the edge of your chair as this will encourage you to slouch.

Your Workstation: the PC screen should be placed directly in front of you to prevent you from twisting to see it and should be approximately arms length away. Touch typists may prefer to have the screen raised higher than a copy typist as they do not have to 'drop' the head to see the keyboard. Place all things that you must operate with your hands, such as the keyboard and mouse, directly in front of you and with the elbows at 90 degrees by your side.

This will reduce the need to overreach, causing the body to move away from the back support and encouraging you to slouch. If you have to look at documents when you type, consider using a document holder so that you don't have to look down to the documents and then up to the screen which can cause neck strain. This is best placed directly in front of the monitor to avoid twisting the neck.

If you regularly use a telephone whilst typing, try using a headset to allow you to type freely with both hands. Make sure the space under your desk is free from clutter and that your legs are free to move from side to side and avoid static postures by changing tasks and taking regular breaks away from the workstation.

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