

An ergonomic work environment

• PENINA HOROWITZ

Look around your work area. Is your chair the right fit? Your table the correct height? Is the distance from your screen suitable for your eyes? Are your hands or wrists straining when you use the keyboard or mouse?

"These are just a few of the issues I check when carrying out an online ergonomic assessment of the comfort or discomfort of a client's home or office," says Alan Wallis, a physiotherapist practicing in Jerusalem for the past 33 years.

Needless to say, things have changed a bit due to COVID-19. Wallis and others have been treating patients online, using scientific evidence-based software to diagnose, treat and help clients from here and abroad. The good thing is that online ergonomic advice can benefit everyone, whether working at home, in an office or in any other place of work.

The word "ergonomic" is derived from two Greek words meaning work and natural laws. Ergonomics is an applied science concerned with designing and arranging things people use. It helps us study human capabilities in relationship to work demands on the body, so that all – we and our work environment – can interact most efficiently and safely.

Ergonomic assessment is of the utmost importance these days when so many work from home and spend many hours of the day in front of our screens.

The many benefits to be gained by working correctly in accordance with ergonomic principles and in suitable, comfortable surroundings, include reduced risk of injury, with fewer musculoskeletal injuries to the body and fewer lost working days as a result of injury and pain, as well as improved staff morale and well-being – all of which lead to much improved work safety, efficiency and productivity, and most likely also, to significant monetary savings for you and your management.

AS PROFESSIONALS in the fields of biomechanics and physical function, physiotherapists are ideally equipped to conduct ergonomic check-ups, their expert knowledge of anatomy and the effects of stress on the body enabling them to prescribe scientifically proven solutions.

"We examine various aspects of the workplace: the physical surroundings, the work itself and the demands on our client. We also appraise the physical characteristics of the worker, taking into account size, shape, fitness and posture, as well as physical stress and strain on muscles, joints and nerves. In addition, psychological factors such as personality, knowledge, mental abilities and experience, all important components of the workplace atmosphere, also need to be taken into consideration," explains Wallis.

Stiff neck and back, sore arms, painful fingers, tense shoulders and even headaches are common computer ailments. These injuries are known as Repetitive Stress Injuries (RSI) or Overuse, and today the term Work-Related Musculoskeletal Disorder (WMSD) is commonly used. These conditions are brought about by overtaxing muscles and tendons in the fingers, hands, arms and shoulders, and the back and neck. The affected areas become inflamed and swollen, causing nagging pain and even muscle weakness, numbness, disability and loss of coordination in simple hand and finger movements.



LOOK AT your chair. Ideally it should be high enough to support not only your entire back but also your neck and head, just like an airline seat. (MS)

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THERE IS much you can do to ensure an optimal work environment. Look at your chair. Ideally, it should be high enough to support not only your entire back but also your neck and head, just like an airline seat. In order to determine the correct height for your chair, stand in front of it and adjust the height of the seat so that it reaches just below your kneecap. Your knees should be bent at an angle of 90° when sitting down and your feet should be firmly placed on the floor. If the chair is too high or you are short, place a book or any other stable, flat object under your feet to keep your legs in the correct position.

Your thighs should be parallel to the floor. If you feel you are slouching, place a rolled-up towel in the region of your lower back. This will help you to sit in an erect position.

Armrests should be adjustable so as not to get in the way when typing, but they can provide support during

phone meetings or while reading. The keyboard should be adjusted to allow a 90° angle at your elbow, with wrists straight to minimize stress on the finger muscles. Make sure to relax your shoulder muscles. Today we recommend placing the keyboard flat on the table and not beneath the screen on a pullout.

Computer mice (or mouses) come in many shapes and sizes. Make sure yours is comfortable to hold and doesn't strain your wrist or fingers. If you intend to buy a new mouse, be sure to check out different mice and sizes before choosing a model with which you feel most comfortable. There are even mice for lefties!

Simple stretches make you feel better and can prevent many computer-related problems before they start. If injury has occurred, stretches can help with rehabilitation. Watch how cats stretch. They are graceful and coordinated, and stretch instinctively to keep muscles toned and joints flexible, and then relax their body and often yawn. There are many benefits to stretching: it reduces muscle tension and improves joint movements and circulation, and also reduces anxiety, stress and fatigue. In addition, it decreases risk of injury and makes you feel better overall.

If you spend time on the phone, you will find a "Madonna" type ear apparatus beneficial in preventing development of a crick in the neck.

Take microbreaks every hour, away from the computer, and take your hand off the mouse every 20 minutes. Note that smokers suffer less from RSI than the rest of the population! The reason is that they take regular breaks, and so should you – but without lighting up!

ANOTHER WAY to help computer workers today at their workstation is through the use of standing work-places. Research has shown that prolonged sitting is unhealthy and can lead to obesity, high blood pressure, high blood sugar and various other ailments.

The postural rules at a standing station are similar to those for sitting, but in a vertical position – eyes leveled toward the top of the screen, elbows at right angles to the keyboard, etc. Standing can provide relief from a sedentary posture and enables you to be more on the move while working.

Eye strain is another common ailment afflicting people who work in front of a screen. Suitable lighting can reduce eye strain and alleviate other eye issues, and will render your work area more user friendly.

When using natural sunlight for working, remember that light behind you or in front of the computer creates shadows and glare. It is important to have sufficient illumination to see the text and the screen. When buying new lights choose low-level and glare-free ambient lighting that hangs from the ceiling. Position your computer screen so that windows are to the side. Today, people wearing glasses can purchase lenses with antireflective (AR) coating, which reduces glare from the screen.

"During the past two months, using scientifically proven software, I have been able to help many clients overcome their pain and disabilities. In opting for online ergonomics, you – are in the driver's seat. You have to take responsibility for your health. The physiotherapist may be sitting next to you, but you are in charge," says Wallis. ■

For further information, including specific stretching exercises you can do at your desk or computer: www.wallis.co.il/2019/07/11/ergonomics/