ERGONOMICS

Protect the bottom line by having your staff's backs

Many companies are unknowingly wasting thousands of rands each year through employee absenteeism or staff turnover. This can be put down to the invisible effects of poor workplace ergonomics.

Literally 'the science of work', ergonomics has the goal of improving workplace design to fit the people who use it. This ensures workers are more comfortable, healthier and productive. According to several studies, the return on investment for implementing a good ergonomics programme with quality products is as much as 17:1.

"But it's not just about getting the right chair or laptop stand," says Formfunc managing director Peter Kowalski. "Ergonomics today uses myriad products as well as artificial intelligence designed to quickly screen any workforce for injury and issues so that ergonomic interventions can be tailored for optimal impact."

World-renowned ergonomics expert Professor Alan Hedge visited Johannesburg and Cape Town in February to share valuable insights into the study of people's efficiency in their work environment. "A proactive ergonomics programme can tell companies what issues need to be addressed by good ergonomic design and training so that interventions can be implemented before injuries and productivity losses occurs," Hedge said.

"Companies that invest in good ergonomics have been proven to see better productivity, fewer musculoskeletal injuries and better recruitment and retention because workers are more satisfied."

There is increasing worldwide evidence that ergonomics programmes generate return on investment for companies. "The presence of an organisational-wide approach to health and wellness has long-term financial implications," Hedge said.

In the United States, the National Business Group on Health has found that employers with health and productivity programmes are able to reduce disability days between 10% and 35%, improve return to work rates by at least 6% and experience an ROI ranging from 3:1 to 15:1.

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Proactive ergonomics is essential

Hedge's research themes include workstation design and carpal tunnel syndrome risk factors for workers, alternative keyboard and input system designs, the performance and health effects of postural strain, and the health and comfort impacts of various environmental stressors. These include the impact of indoor air quality on sick building syndrome complaints among office workers, and the effects of office lighting on eyestrain problems among computer workers.

Kowalski said many companies practiced 'reactive ergonomics' where injuries were the trigger for ergonomic interventions. "We hope that by educating the market about ergonomic solutions we will encourage companies to proactively transform their productivity."

Acknowledged as a leader in the field of human factors and ergonomics with more than 30 years of ergonomics design and usability consulting experience, Hedge directs the Human Factors and Ergonomics teaching and research programmes at the Department of Design and Environmental Analysis at Cornell University. Hedge was hosted by Humanscale, a designer and manufacturer of ergonomic products, and its South African distributor Formfunc.

Source: Formfunc, the South African distributor of Humanscale ergonomic products

References for the ergonomics tips below are as follows:

1 Kroemer A.D, Kroemer K.H.E. (2017) Second Edition. Office Ergonomics: Ease and Efficiency at Work. Taylor and Francis Group.

2 Bridger R.S. (2003) Second Edition. Introduction to Ergonomics. Taylor and Francis Group.

3 Parsons J.J. and Oja D. (2010) Seventh Edition. Computer Concepts.

4 Stack T., Ostrom L.T. and Wilhelmsen C.A. (2016) Occupational Ergonomics: a practical approach. John Wiley & Sons, Inc.

Ergonomics tips

A KEYBOARD DISTANCE
Your keyboard should be placed close to the edge of the desk. Remove or flatten the feet on the keyboard as this will reduce wrist extension and it will create a neutral wrist posture. The keyboard should be placed directly in front of you at arms reach.[1]

B MONITOR DISTANCE (including laptop)
Place the monitor at least an arm's length away while reclining.[3]

C CENTRE KEYBOARD in line with the body and close to the edge of the desk, within arms reach.[1]

D MOUSE DISTANCE
Your mouse should be placed as close to the keyboard as possible to reduce your required reach.[1]

E MORE MONITORS
Angle the monitors inwards and close together to reduce the amount of neck/head movement.[3]

F MONITOR HEIGHT (including laptop)
Align the top of the monitor at, or slightly below, eye level.[4]

G DOCUMENT POSITION
Your documents can either be positioned between (and in line with) the monitor and keyboard or close to the side of the monitor in a document holder. This will reduce twisting to the side to view documents which will cause discomfort.[1]

K LUMBAR SUPPORT
The Diffrient World chair's tri-panel backrest hugs the body to provide tailor-made lumbar support. Lumbar support needs to be contoured to support the back/spine.[2]

J SEAT HEIGHT
Seat height should be knee height. Adjust the seat height so that your feet are flat on the ground and your hips are higher than your knees. A footrest is needed if your feet are not firmly on the floor.[2]

I SEAT LENGTH
Seat length should be adjustable to ensure there is a slight gap (2 inches) between the seat edge and the back of your knees as this will reduce under thigh pressure.[2]

H ARMREST HEIGHT
Position the armrests such that they are no higher than seated elbow height, when the elbows are at 90 degrees. When the arms are supported then there is less muscle activity in the neck and upper back and less pressure placed on the lumber spine.[2]

TELEPHONE POSITION
Your telephone should be placed on the opposite side of your non dominant hand as this reduces the risk of nerve impingement in the neck. If you are constantly using your telephone, it should also be placed within arms reach.[1]