

The results of using a hand supporting computer mouse by patients with neck-shoulder disorders

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The computer mouse is an important causative factor in the development of neck and shoulder complaints.

With a questionnaire and diagnostic tests the effects of using a modified computer mouse were evaluated. A previous study had shown that extending the hand and the continuous hovering of the fingers above the buttons of the current computer mice cause an uninterrupted excessive load of the extensors.

A population of thirty employees with complaints of the neck, shoulders, arms and hands, in varying severity, of which 30% did not work full time as a consequence, has voluntarily used the modified mouse for 6 months. With this new concept, the 'Horse', the central fingers adopt a flexed position which relaxes the tendons. Parts of these fingers are in a nearly vertical position, with thumb and little finger supported at a lower level.

Before and after the test period the blood stream velocity was measured in the arteria radialis with echo-Doppler measuring gear. Reflexes in the elbow and wrist were measured, as well as, by way of reference, the tension in the hands and the activity of the deeper neck musculature. The case histories were recorded.

All physical parameters showed a statistical significant improvement after six months.

The population was positive about the shape (84%) and weight (86%) of the modified computer mouse.

It was shown that the extra support of the hand excluded unnecessary muscular tension caused by operating the computer mouse, which can improve a general feeling of well-being.