

NAZIV DISERTACIJE: EFEKAT AKTIVNIH PAUZA NA KLINIČKE MANIFESTACIJE NASTALE PONAVLJAJUĆIM POKRETIMA PRI RADU NA RAČUNARU**Autor:** Amra Mačak Hadžiomerović**Mentor:** Prof. dr. Dijana Avdić**Datum odbrane:** 28.11.2015.**DOI:** : <https://doi.org/10.17532/DD.2015.02>**UVOD**

RSI je skraćenica za Repetitive Strain Injuries (ozljede nastale ponavljajućim pokretima) i predstavlja termin koji obuhvata više zdravstveno-medicinskih problema vezanih uglavnom za mišićno-koštane probleme u području zglobova gornjeg dijela tijela (vrat, rame, lalat i šaka) i rjeđe u donjem dijelu leđa i tijela (kuk, koljeno i stopalo). RSI ozljede nastaju kao rezultat ponavljajućih pokreta, dugotrajnog statičkog opterećenja, djelovanja neprekidne sile, stresa i nepovoljnih ergonomskih uslova na radu. Zbog učestalije primjene računara u mnogim granama ljudskih djelatnosti, a pogotovo u kancelarijama, javlja se i sve veći broj slučajeva RSI-a, koji dovode do narušavanja psihofizičkog zdravlja i negativno utiče na kvalitet rada.

HIPOTEZE

Rad s računarom dovodi do kliničkih manifestacija RSI-a usljed ponavljajućih pokreta i dugotrajnog zadržavanja u nefiziološkom položaju. Česte i kratkotrajne pauze tokom rada za računarom smanjuju kliničke manifestacije nastale ponavljajućim pokretima.

CILJEVI ISTRAŽIVANJA

Utvrđiti učestalost kliničkih manifestacija RSI-a, nastalih po-navljajućim pokretima pri radu s računarom nakon programa kratkotrajnih tjelesnih vježbi. Prijedlog smjernica za donošenje pravilnika o sigurnosti i zaštiti zdravlja pri radu na računar.

MATERIJAL (ISPITANICI) I METODE ISTRAŽIVANJA

Prospektivna studija, u trajanju od godinu dana, obuhvatila je 400 radno aktivnih ispitanika koji obavljaju kancelarijski posao vezan za rad na računar. Ispitanici su podijeljeni u dvije podjednake skupine, ispitivanu i kontrolnu. U računare ispitivane skupine instaliran je RSI-Workrave kompjuterski program koji je upozoravao ispitanike da naprave pauzu i urade program vježbi za vrijeme pauze. Obje skupine su bile anketirane na osnovu anketnog upitnika sačinjenog od 62 pitanja. Anketiranje je bilo provedeno za ispitivanu skupinu na početku istraživanja, nakon 6 i 12 mjeseci, a za kontrolnu skupinu na početku istraživanja i nakon 12 mjeseci.

REZULTATI ISTRAŽIVANJA

Nakon godinu dana istraživanja rezultati su pokazali da su aktivne pauze dovele do statistički značajnog smanjenja bola/nelagoda u vratu za 17.5%, u ramenima i laktovima za 7%, nadlaktici 8%, podlaktici 13%, a najviše u ručnom zglobu 20% i šaci za 18%.

ZAKLJUČAK

Aktivne pauze su imale pozitivan efekat na smanjenje bola/nelagoda u vratu i gornjim ekstremitetima kod ispitanika ispitivane skupine. U uvjetima lošeg ergonomskeg okruženja, aktivne pauze su smanjivale broj ispitanika sa bolom/nelagodama u vratu i gornjim ekstremitetima, ali nisu pozitivno uticale na smanjenje kliničkih manifestacija RSI-a tokom djelovanja loših psihosocijalnih faktora

KLJUČNE RIJEČI: RSI, računar, aktivne pauze

DISSERTATION TITLE:**Author:** Amra Mačak Hadžimerović**Mentor:** Prof. dr. Dijana Avdić**Date of defence:** 28. November 2015.**DOI:** <https://doi.org/10.17532/DD.2015.02>**INTRODUCTION**

RSI stands for A Repetitive Strain Injuries (injuries caused by repetitive strain), it is a term that encompasses several health and medical problems mainly related to musculoskeletal problems in the joints of the upper body area (neck, shoulder, elbow and wrist) and less frequently in lower back and the body (hip, knee and foot). RSI injuries are resulted from repetitive movements, prolonged static load, continuous action of force, stress and unfavorable ergonomic conditions at work. Additionally, there is an evident increasing number of cases of RSI injuries following the disruption of psychophysical health connected to adversely affects of the quality at work.

HYPOTHESIS

Computer based work leads to the clinical manifestations of RSI- a due to repetitive motion and prolonged retention in adverse postures. Excercises in a form of short breaks can reduce the clinical manifestations caused by repetitive movements.

RESEARCH GOALS

To determine the frequency of clinical manifestations of RSI injuries incurred repeating a motion while working computer based work after the program of a short-term physical exercise portion. In further, the aim is to propose a detailed guidance adressed to adoption of health regulation concerning safety at computer based work.

MATERIAL (RESPONDENTS) AND METHODS

This prospective study, taken in one year period, had included 400 employees performing everzday computer based tasks. Participants have been divided into two equal groups, tested and controled. Previously, in the test group computers were installed by RSI- Workrave Computer Program. The Program was used to warn participants to take a break and do an exercise program during breaks. Both groups were surveyed on the basis of a questionnaire composed of 62 questions. The survey was conducted for the study groups at baseline, after 6 and 12 months, and for the control group at baseline and after 12 months.

RESULTS OF RESEARCH

After a year of research results have shown that the active breaks led to a statistically significant reduction of pain/discomfort in the neck for 17.5 %, in the shoulders and elbows to 7 %, 8% of the upper arm, forearm 13 %, and the highest in the wrist 20 % and fist for 18 %

CONCLUSION

Active breaks had a positive effect on the reduction of pain/ discomfort in the neck and upper extremities in patients test groups. In conditions of poor ergonomic environments, active breaks are decreasing the number of patients with pain / discomfort in the neck and upper limbs, but they had a positive effect on reducing the clinical manifestations of RSI during the negative effects of psychosocial factors .

KEY WORDS: : RSI , computer, active break