

# Musculoskeletal symptoms in workers of a Telecom Company

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**Abstract.** Millions of people work with computers every day. Human work provides a means of comfort and ease to perform the tasks, favoring incorrect postures. Among the employees of a telecom company, it appears that all make use of computer, remaining in a seated position leading in musculoskeletal symptoms. Method: This is a quantitative study, conducted in a telecom company in the city of Curitiba. Were interviewed 27 analysts who work in engineering department, who agreed to participate and receive guidelines regarding sitting posture. This study, consisted of a structured questionnaire and the Nordic Musculoskeletal Questionnaire with musculoskeletal symptoms indicators. After answering the questionnaire, the subjects were guided through the folder on correct posture and positioning front the computer. Results and final considerations: Of employees 74% were male, and 100% of the employees are the computer's user, remaining in the sitting posture during working day. Concerning the break time, 74% reported that they frequently do it. Been the average working day is 8 hours. Regarding the frequency of musculoskeletal symptoms, 70% of employees reported some symptoms during the last 12 months but only one came to be sick leave. It is necessary to an analysis of the work situation, evaluating and correcting inadequacies of securities and the risks inherent in function, making prevention.

Keywords: symptoms, musculoskeletal, prevention, work with computer.

## 1. Introduction

Millions of people work with computers every day. Human work provides a means of comfort and ease to perform the tasks, favoring incorrect postures. Among the employees of a telecom company, it appears that all make use of computer, remaining in a seated position leading in musculoskeletal symptoms.

Static posture, sitting, and put the body in constant contraction and alert the brain to the muscles remain in an unnatural position for a long time, generates a high stimulus by the computer that blocks or ignores these signals<sup>[1]</sup>. This work involves a static muscle contraction continued without interruption, which can led an overhead and the recovery time is not enough,

there is probability of occurrence of Musculoskeletal disorders (MSDs)<sup>[2]</sup>.

The main causes of MSDs are related with fixed posture, repetitive motion and psychological stress of being constantly present at day-by-day computer's users<sup>[1]</sup>.

To achieve the health levels of prevention is necessary an early action and certainly the ergonomic analysis of work could be considered one primary interventionist action.

The stimulus to which man is subjected, including physical, chemical, biological, environmental or social, generate organic reactions, followed by signs and symptoms<sup>[2]</sup>.

In this context the present study analyzes employees of a telephone company who remain a long peri-

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ods and subjected to the factors above-mentioned positions all of them are computer's users, remaining in a seated position giving the appearance of musculoskeletal symptoms. The MSDs not a mere mechanical disorder. The human being is more than one set of bones, muscles, sensations, rather than "work force." The group of individual suffering from these disorders are growing considering there are signs asking for collective diagnosis in order to have the prevention<sup>[2]</sup>.

## 2. Method

This is a quantitative study, conducted in a telecom company located in Curitiba city the capital of the State Paraná at Southern of Brazil. Were interviewed 27 analysts who work in engineering department, they agreed to participate and receive guidelines regarding sitting posture. This study consisted of a structured questionnaire and the Nordic Musculoskeletal Questionnaire with musculoskeletal symptoms indicators. After answering the questionnaire, the subjects were guided through the folder on correct posture and positioning in front of the computer.

## 3. Results and Discussion

Of employees 74% were male, and 100% of the employees are the computer's user, remaining in the sitting posture during working day. Concerning the break time, 74% reported that they frequently do it. Been the average working day is 8 hours. Regarding the frequency of musculoskeletal symptoms, 70% of employees reported some symptoms during the last 12 months but only one came to be sick leave.

During the use of computer, the body assumes a unnatural and contracted position, the head remains still and depending how the monitor is positioned can cause biomechanical changes such as flexion or extension excessive of the neck in order to see the screen clearly<sup>[1]</sup>.

In addition to this region through which the peripheral nerves, which relate to the upper limbs are subjected to constant tensions hands, fingers and trunk trying to fit in less favorable positions. It is important to remember that there are furniture and equipment that do not fit the diversity dimensional (height, length of body segments) of different users.

However, the users have the upper tension along the neck, shoulders and upper body increased, possibly by eye strain, concentration, demand, production,

adaptation to the mental pressure and position. Muscle tension and prolonged static posture produce fatigue and muscle aches.

At the beginning when you start to use the computer's the pain relives after leaving the computer. However, if you spend long period regularly, the pain and biomechanical changes such as shortening, contractures and nerve and vascular compression will become permanent.

According RIGOTTO (1992)<sup>[3]</sup>, the wonderful scientific and technological development, especially in recent years - the utopia of modernity - has opened possibilities for profound changes in the work process. For some researchers of occupational diseases the main phenomenon to the emergence of diseases is the modernization of work, whether in mechanization and automation of tasks in the computerization of the service areas, determining an increase in jobs, especially in upper limbs, shoulders and region cervical<sup>[4]</sup>.

Jensen (2003)<sup>[5]</sup> identified the risk factors for musculoskeletal symptoms in the neck and hand-wrist regions among employees using computers at work.

Postures that are assumed by the worker to perform the operations of the duty cycle when the post is unsuitable also enter the group of risk factors.

Other risk factors for musculoskeletal symptoms are: mechanical pressure that usually affects the soft tissues and repeatability that are present in the activities of computer users<sup>[2]</sup>.

Nevertheless, prolonged maintenance of the posture sitting position causes the adoption of postures and overloads Inadequate skeletal muscle structures, which may lead to pain and spine injuries. Marques et al. (2010)<sup>[6]</sup> suggest that ergonomic intervention aiming at preventing of musculoskeletal symptoms.

We can observe in the literature, the practice of ergonomic interventions and this study: the absence of preventive management practices generate the primary trigger diseases, we need these jobs evaluated behaviors related to immediate functional performance to prevent progression and worsening of symptoms where it appears as the pathologic process and reason for sick leaves.

## Final Considerations

It is necessary to an analysis of the work situation, evaluating and correcting inadequacies of securities and the risks inherent in function, making prevention.

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