

CORRECT SITTING POSITIONS IN OFFICES

with the aim of preventing back pain

ANGELIKA BRNADA, DIRECTOR OF THE SD&HSE

In collaboration with Assist. Prof. Josipa Nakić, PhD, from the University of Zagreb, Faculty of Kinesiology, as a part of the ZDRAVLJE+ (HEALTH+) project, we have launched the “MOVEMENTS THAT MAKE CHANGES” campaign. Our intention is to inform our employees on the correct performance of movements and correct movement in general, and to create the habit of their everyday application, both at the workplace and in everyday life.

For this campaign, we have selected workplaces where employees work on computers, manually handle different loads or use personal or freight vehicles. An overview of correct and incorrect movements in general has been presented in a collection of five brochures that are the basis for the practical part of trainings for employees and occupational safety specialists under the mentorship of Assist. Prof. Josipa Nakić, PhD. The aforementioned training will be used as a model for further informing the employees by our occupational health and safety experts.

Developing the awareness and competence of INA Group employees for correct performance of movements and correct movement in general, in addition to contributing to health benefits and working capacity, as well as increasing the employee satisfaction at the workplace, is also aimed at reducing the number of work-related injuries, the frequency and duration of sick leave and employee fluctuations.

We invite all INA Group employees to actively engage in this campaign and thereby personally contribute to the creation of **“Healthy Workplaces for All Ages”**.



ASSIST. PROF. JOSIPA NAKIĆ, PHD



Spine problems and back pain have become a global problem today. By inertia, the culprit for our pain are most often activities such as long-term sitting or excessive physical work. However, the real culprit for such health problems is not the activity itself, but the manner of performing certain movements, as well as posture during a certain activity.

Movement mechanics have the most significant effect on spinal health. Incorrect movement mechanics during our performance of everyday activities significantly contribute to the accumulation of mechanical damages, and consequently the onset of pain.

The natural aging process combined with incorrect movement mechanics are elements that strongly affect the progression of mechanical damage to the spine. Natural aging mechanisms can hardly be affected. However, we can always create the habit of personal correction and, with the everyday application of correct movement mechanics, positively affect the health of our spine.

This campaign aims to emphasize the importance of avoiding the basic mechanisms of the occurrence of injuries and the importance of the application of correct movement mechanics, with the aim of preserving the health of the spine both in the workplace and in everyday life.

INTRODUCTION

A large number of us who perform office jobs know very well what back pain during sitting is. Traditionally, long-term static positions such as sitting behind a work desk, computer, in a car or lack of movement are emphasized as the cause of the problem. We can certainly partially agree. Long-term sitting certainly has a negative effect on physical condition or physical aptitude, however, the stance that “our back hurts because we have been sitting for a long time” is entirely incorrect. It would be correct to say that “our back hurts because we have been sitting incorrectly for years”.

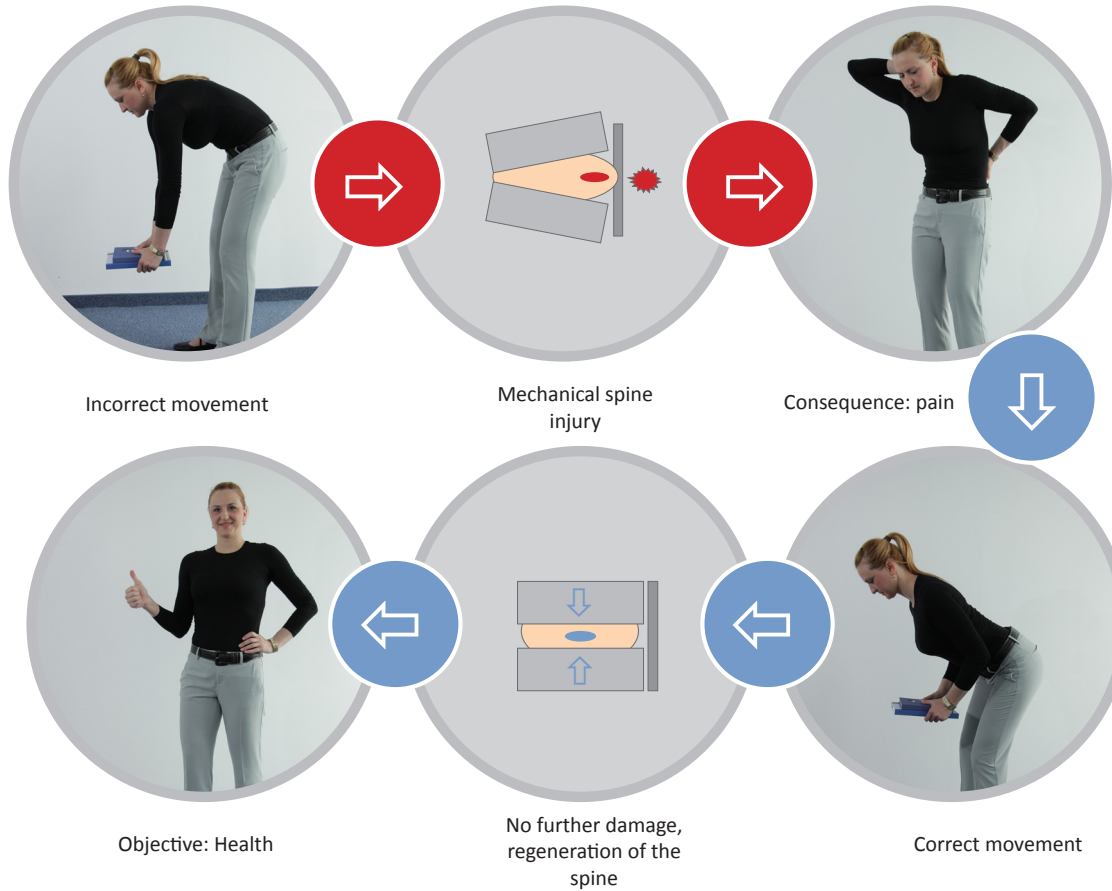
Back pain is nothing else but mechanical damage of our ligaments, joints, tendons and muscles, bones, and even nerve structures. Therefore, the first and foremost thing to do in order to prevent painful states of the spine is to stop the progression of the existing damage and allow our body to regenerate itself.

We will stop the progression of mechanical damage to the spine resulting from incorrect sitting position by sitting correctly from now on.

Sitting correctly is not simple; it requires our continuous engagement until it becomes automate, until it becomes our habits.

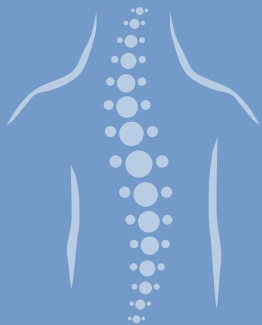
The purpose of this manual is to point out the general rules for sitting in an office, as well as to point out the correct sitting positions in accordance with our postural characteristics, i.e. the characteristics of our body position.

By following these general rules, we will eliminate the causes of mechanical damage, degenerative changes in the spine and the occurrence of pain, and allow our body to regenerate itself.



1.

GENERAL RULES FOR CORRECT SITTING POSITION AT THE OFFICE



1.1. INCORRECT AND CORRECT POSTURE WHEN SITTING DOWN AND GETTING UP FROM A CHAIR



INCORRECT

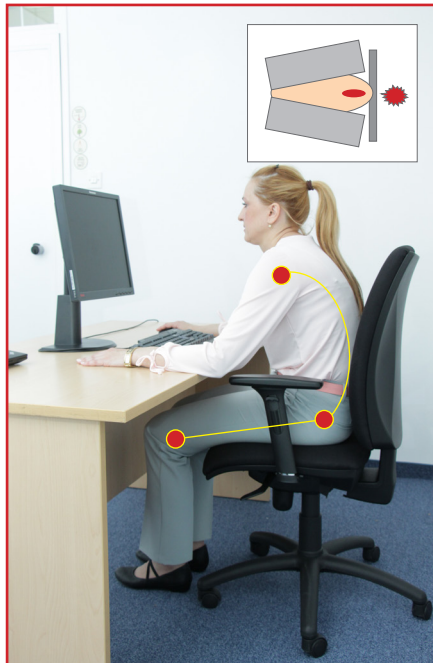
During the day, we sit down and get up many times, and it is extremely important that our back is not bent. Every sitting down and getting up with our back bent represent a new small mechanical damage.

CORRECT

Automated correct ways of everyday sitting down and getting up significantly contribute to the prevention of the occurrence and/or progression of mechanical damage.



1.2. INCORRECT AND CORRECT POSTURE WHILE SITTING



INCORRECT

Bent back is the most frequent incorrect sitting position, and it directly causes mechanical damage.

When sitting with bent back, asymmetrical stress and pressure on the intervertebral discs occurs.

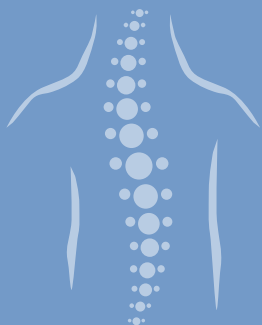
CORRECT

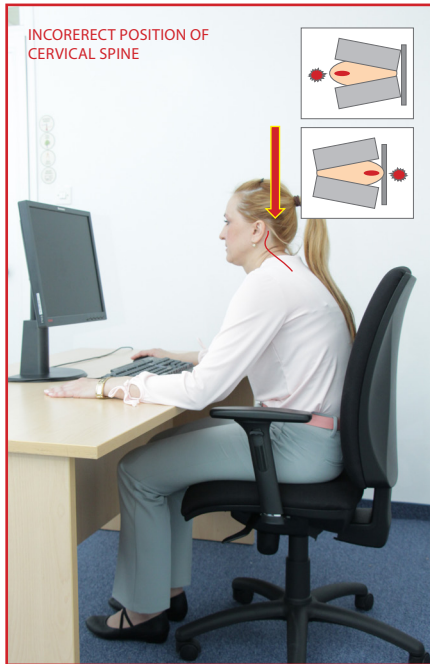
Correct sitting position ensures equal and stable intervertebral space, the pressure forces on intervertebral discs are evenly distributed, unnecessary stretching of back ligaments and muscles is prevented. Correct sitting position helps eliminate the causes of mechanical damage to the spine.



2.

INCORRECT AND CORRECT POSITION OF THE CERVICAL SPINE WHEN SITTING





INCORRECT

Special emphasis is placed on the cervical spine. This is the position due to which we can feel weakness, dizziness, blurred vision and the like due to the disturbance of the normal operation of the circulatory system. This position can lead to straightening of the cervical spine in its lower part and increase of curvature in its upper part.

CORRECT

This is the correct position of the neck and the head. We say that “the head should be pushed backwards, and the chin to the chest”. For easier holding of the correct position of the neck and the head, it is recommended to occasionally lightly massage the muscles connecting the skull with the first and second cervical vertebrae.



3.

CORRECT SITTING POSITIONS ADAPTED TO OUR INDIVIDUAL POSTURAL CHARACTERISTICS

There are several different correct sitting positions. They primarily depend on the postural characteristics of the pelvis.

There are three basic postural characteristics of the pelvis:

- Anterior tilt,
- Posterior tilt,
- Neutral pelvic position.

Different sitting positions are suitable for each of the above three postural characteristics.

Different sitting positions that are recommended depending on the postural characteristics of the pelvis are especially achieved by sitting on a tilted or wedge cushion.

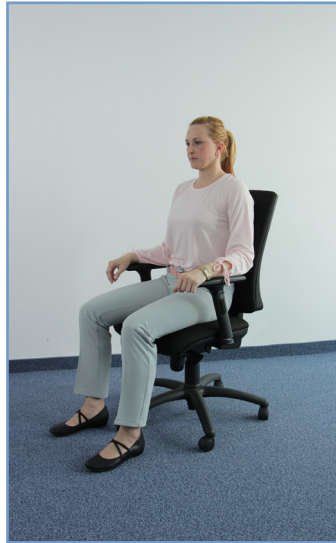
- *A tilted cushion can be purchased at medical or sports equipment shops or in online stores. Recommended cushion dimensions are 50 cm x 37 cm x 6 cm / 1 cm.*
- *Anatomic cushion for lumbar spine can also be purchased in various medical equipment stores.*

3.1. CORRECT SITTING POSITIONS OF PERSONS WITH ANTERIOR PELVIC TILT

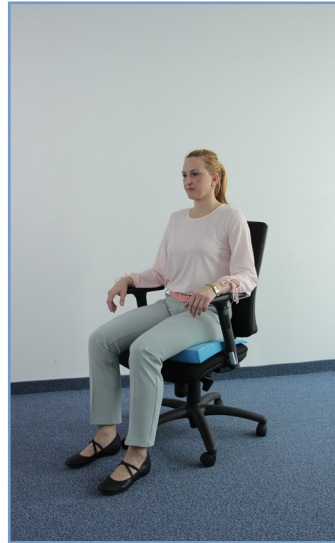
If our pelvis tilts anteriorly, the following sitting positions are ideal:



ANTERIOR PELVIC TILT



Classic 90° - 90° sitting, legs in the width of the hips.



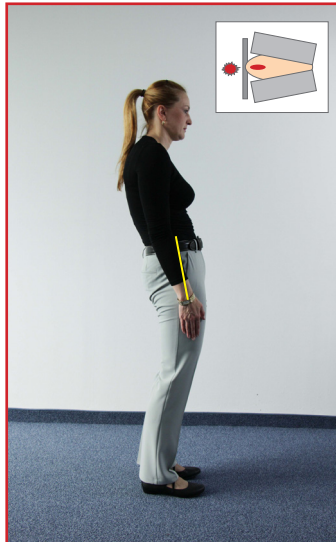
Sitting on a tilted cushion as shown in the picture.



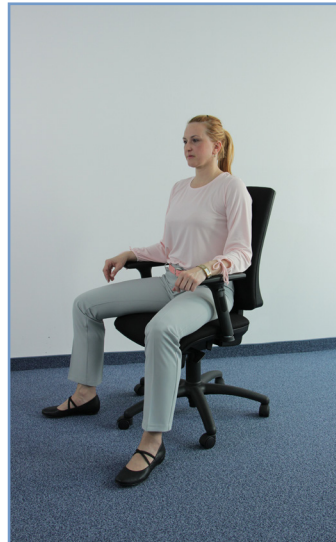
Tilted cushion + cushion for lumbar spine.

3.2. CORRECT SITTING POSITIONS OF PERSONS WITH POSTERIOR PELVIC TILT

If our pelvis tilts posteriorly, the following sitting positions are ideal:



POSTERIOR PELVIC TILT



Classic 90° - 90° sitting with legs spread apart.



Sitting on a tilted cushion as shown in the picture.



Sitting on a tilted cushion + cushion for lumbar spine.

3.3. CORRECT SITTING POSITIONS OF PERSONS WITH NEUTRAL PELVIC POSITION

Persons with a normal neutral pelvic position can sit in all of the above positions.



NORMAL PELVIC POSITION

“It is said that the best sitting position is the next one.”

In other words, regardless of what sitting position we choose, it is important we change it frequently.

If we pay attention to our sitting in our ergonomic office chairs during an 8-hour working day, we will notice that we have changed the sitting position many times because every position becomes uncomfortable very quickly. This is because we wish to change the pressure forces on certain body parts.

However, there is one rule for all seating positions. In all sitting positions the pelvis and spine must be in a neutral position.

4.

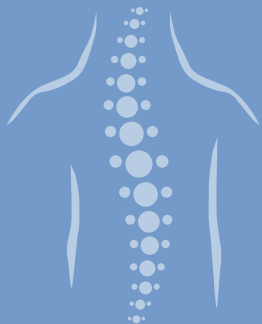
CONCLUSION

Eight hours a day, five days a week, for the entire working life: a lot of time is spent sitting at the office. If we sit incorrectly, it is clear that over time, we will not be able to avoid mechanical damage to the spine, i.e. degenerative changes, and thus back pain.

Message from the author:

Now is the ideal opportunity to stop the progression of mechanical damage and allow our body to regenerate itself.

Take advantage of this incentive for the health of your spine!





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Photos: Ferdo Buva, INA, d.d.

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