



VERSION 1

APR 25, 2023

OPEN ACCESS

DOI:

[dx.doi.org/10.17504/protocols.io.n2bvj8mebgk5/v1](https://dx.doi.org/10.17504/protocols.io.n2bvj8mebgk5/v1)

**Protocol Citation:** Krasimira KZ Zlatkova, Yuliyana Zlatkova 2023. Exercises on a balance cushion to influence of lumbar vertebral syndrome.

protocols.io

<https://dx.doi.org/10.17504/protocols.io.n2bvj8mebgk5/v1>

Version created by Krasimira KZ Zlatkova

**MANUSCRIPT CITATION:**

Zlatkova, Krasimira; Zlatkov, Yuliyana (2023), Exercises on a balance cushion to influence of lumbar vertebral syndrome, Dryad, [Dataset], <https://doi.org/10.5061/dryad.b8gtht7hh>

**License:** This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

**Protocol status:** Working  
We use this protocol and it's working

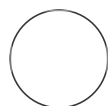
# Exercises on a balance cushion to influence of lumbar vertebral syndrome V.1

Krasimira KZ

Zlatkova<sup>1</sup>,

Yuliyana Zlatkov<sup>1</sup>

<sup>1</sup>SWU Neofit Rilski



Krasimira KZ Zlatkova

SWU NEOFIT RILSKI

## ABSTRACT

**Background:** The pain in the lumbar region is common. One of the causes of low back pain is lumbar vertebral syndrome. There is a wide range of options for treating low back pain. The purpose of the study is to describe exercises on a balance cushion to influence the pain in lumbar vertebral syndrome and to track the effect of their application.

**Methods:** We studied 20 participants with low back pain. We applied the following tests to the patients: visual analogue scale, Schober test, measurement of lateral flexion and Straight leg raise test. The methodology includes exercises on a balance cushion. We performed manual manipulation techniques on each patient by treating trigger points in the lower back and buttocks once a week.

**Results:** We achieved an improvement in the studied indicators after the applied therapy, which was expressed in a reduction of pain and restoration of normal mobility in the lumbar region.

**Conclusions:** The application of exercises on a balance cushion allows in a short time to affect the pain and mobility in the lumbar spine to fully perform their work and professional activities.

## GUIDELINES

Exercises on a balance cushion are done every day several times a day for 10 minutes. Those who work for a long time in a sitting position are recommended to sit on a balance cushion

## MATERIALS

In this study we use a balance cushion

Circular movements with the pelvis.docx

Elevation of the pelvis to the left and right.docx

Increase the inclination of the pelvis.docx

**Created:** Apr 08, 2023

## BEFORE START INSTRUCTIONS

**Last Modified:** Apr 25, 2023

Before starting the study, we familiarized the patients with the nature of the study. After approval by the ethics committee and obtaining written informed consent from the patients, we proceeded to perform the study.

**PROTOCOL integer ID:**  
80198

**Keywords:** exercises;  
balance cushion; low back  
pain, lumbar vertebral  
syndrome

### Research

- 1 We evaluate the condition of each patient by examining the degree of pain (according to the VAS), the mobility of lumbar spine (Schober test and lateral slope) and the presence of neurological symptoms (with Straight leg raise test).
- 2 Each patient performs exercises on a balance cushion for a period of one month. The exercises are: inclination and declination on a balance cushion, elevation of the pelvis to the left and to the right and circular movement of the pelvis on a balance cushion.
- 3 Once a week we perform a manipulative massage and treatment of trigger points of the lumbar spine, buttocks and thighs.
- 4 After one month we applied the same test as at the beginning (VAS, Schober test, lateral slopes and Straight leg raise test).  
VAS- a 10-point pain scale which the patient determines the pain they feel.  
Schober test- reflect mobility in the lumbar spine. From L4 measure 10 cm cranially, it is noted. The patient leans over and the distance traveled is measured. Normally is 3-4 cm.  
Lateral slopes- Slopes to the left and right are measured. The subject is bent to the side and the distance from the tip of middle finger to the floor is measured.  
Straight leg raise test- The leg is raised with the knee extended. If pain occurs between 30-70 degree, the pain is neurological.  
We evaluated the dynamics of the studied indicators- before and after the therapy.
- 5 Exercises on a balance cushion to influence of lumbar vertebral syndrome

