

FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION

OF HIGHER PROFESSIONAL EDUCATION

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Protocol

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On the research of the patented product: "Device for correction of the musculoskeletal system, the zone of the sacrum and the skull base" Sacrus " by Koryukalov Yuri Igorevich

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1. In the period from 18.10.2015 to 22.11.2016 at the **Sports Science Center** of the Institute of Sport, Tourism and Service of SUSU the researches of the patented product were carried out: "Device for correcting the musculoskeletal system and unloading the sacrum and skull base" Sacrus "" (hereinafter - Device "Sacrus"), Chelyabinsk.

2. The purpose of the study is to evaluate the possibilities of using the above-mentioned product in the practice of rehabilitation and improvement of the functional state of the spine in persons with different spinal dysfunctions, sciatica (pinch of the sciatic nerve) and back pain.

The following were used for the research: «Device for correcting the musculoskeletal system, the sacrum and the skull base" Sacrus"» in the following versions: device for correction the locomotor system "Sacrus Phisio" with the function of slow vibration and relaxing microcurrents - 4 pcs; Device for correction the musculoskeletal system «Sacrus mag» - with neodymium magnets inside - 5 pcs;

**Product Description:**

The device "Sacrus" (hereinafter referred to as the device) is a patented device that eliminates the fundamental cause of spinal and body dysfunctions - stress and microspiration of the sacrum and the base of the skull. "Sacrus" acts on the basis of a soft, deep autogravitational unloading of the sacrum, diaphragm and skull, relaxing the ligaments and muscles, restoring the necessary balance.

The method of deep autogravitational correction of the body with the Sacrus apparatus removes many strains, eliminates blockages of the vertebrae, pelvic bones, including the coccyx and sacrum, relaxes the occiput. The device restores the health of the spine, increases the energy of the body, self-regulation mechanisms are activated. The device helps to improve the mobility of all the joints of the spinal column. The shape of the device considers the anatomy of the sacrum and coccyx, thoracic spine and skull. In just a few sessions, Sacrus will effectively solve the correction problems associated with dysfunction of the neck and the base of the skull, improve breathing and digestion, relieve the pelvic area and relax the joints of the legs. The device is aimed at improving and correcting the functional state of the spine and joints, can be used both in sports, health centers, and at home.

## Main research results:

"The device for correction of the musculoskeletal system, the zone of the sacrum and the base of the skull" Sacrus "" was used in 19 patients with complaints of pain in the neck, back and sacrum (9 men and 10 women), aged 28 to 64 years.

The selected persons for the studies were informed about the technique of correction of the spine with the help of the device, existing contraindications to the above product, the procedure for correcting the spine was conducted after preliminary conversation and obtaining informed consent for the study. The course of correction of the spine was 1 month.

№№ п/п	Sex, age	Symptoms, Diagnosis	Application and clinical effect
1.	M, 48	Thoracalgia	Reduction of pain syndrome. Increased amplitude of motion of the thoracic region
2	W, 49	Displacement C1-C2, pain in the neck	Disappearance of pain syndrome, restoration of mobility in the neck
3	W, 45	Osteochondrosis of the lumbar spine, with painful radicular syndrome	Reduction of pain syndrome, increased mobility in the lumbar spine
4	M, 36	Pinch of the sciatic nerve	Disappearance of pain syndrome, restoration of the biomechanics of walking
5	M, 53	Intercostal neuralgia	Reduction of pain syndrome, improvement of rotation in the thoracic department
6	M, 41	Pain in the neck, cervical osteochondrosis	Reduction of pain syndrome, a sense of ease in the collar zone
7	W, 43	Spondylosis, with painful radicular lumbar syndrome	Reduction of pain syndrome.
8	M, 47	Piriformis muscle syndrome	Disappearance of pain syndrome. Restoring mobility in the lower back
9	W, 32	Protrusion L4-L5 5mm, Back pain and hip joint	Disappearance of pain in the lower back, reduction of pain in the hip joint. Reduction of protrusion to 2mm.
10	M, 26	Pain in the shoulder, tunnel syndrome	Reduction of pain syndrome, increase in amplitude of motion in the shoulder.
11	W, 28	Pain in the knee and lower back	Disappearing low back pain, reducing pain in the knee.
12	W, 38	Piriformis muscle syndrome	Disappearance of pain syndrome. Restoring mobility in the lower back
13	W, 44	Thoracalgia , Lumbalgia	Reduction of pain syndrome, improvement of sleep
14	M, 54	Scoliosis of II degree	Reduction of pain syndrome in the collar zone, reduction of the angle of curvature from 12 to 9 degrees
15	M, 45	Pain in the legs, knee, sacrum	Decrease of pain in the legs, disappearance of pain in the sacrum.
16	W, 64	Left-sided sacroileitis	Restoration of walking biomechanics, reduction of pain syndrome
17	W, 33	Scoliosis S-shaped	Reducing the angle of curvature, the disappearance of pain in the lower back
18	W, 31	Pinch of the sciatic nerve	Disappearance of pain in the pelvic region and waist, restoration of the biomechanics of walking
19	M, 36	Pain in the back and neck with professional muscular tension	Expressed a relaxing effect, the disappearance of pain in the back and neck.

Based on the studies carried out the following conclusion was made: Most of the subjects noted the disappearance or significant reduction in pain, increase in efficiency and normalization of sleep (Table 1). The quantitative assessment of the pain syndrome showed a significant reduction in the severity of pain (especially in the neck, waist, sacrum and knee area) or even its disappearance after a corrective course.

Subjects noted improved mobility in the cervical, thoracic and lumbar spine, improved mobility in the upper and lower extremities, in the pelvic region, normalization of the walking pattern, recovery of sleep. The procedure of correction of the sacrum zone facilitated the reduction of compression of the intervertebral discs of the lumbar spine, which contributed to a decrease in protrusion by several mm. The combination of correction of the sacrum and exercises for stretching the pear-shaped muscle made it possible to eliminate pinching of the sciatic nerve for 3-5 sessions and normalize the previous walking pattern.

The hardware effect was that the sacro-like anatomical design of the device with acupuncture spines to affect the ligaments and trigger zones allows effective action on the deep muscles and ligaments of the selected segment of the spine (pelvis, knee, diaphragm area, skull base). Thus, relaxation and correction of key segments of the vertebral column up to the ligaments helps to eliminate tension in these zones (including tunnel syndrome), restore mobility in the joint and improve blood circulation of tissues along the segments of corrective action. Microcurrents of the device Sacrus Phisio, due to slow-frequency modulation contribute to the development of the state of relaxation, What helps to relax and remotely located muscles.

Expert of the laboratory ISTIS:



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Protocol

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On the research of a patented product: "Device for the correction of the spine and paravertebral muscles" CORDUS "(CORDEN)" by Koryukalov Yuri Igorevich

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Scientific leader of LLC "YARA" - a scientific and production enterprise for the development of high-tech equipment in the field of regenerative medicine.

1. In the period from 10.10.2015 to 30.10.2016, the research of the patented product: "Device for the correction of the spine and paravertebral muscles" Cordus "(CORDEN)" (hereinafter referred to as the device " Cordus ") was conducted at the **Sports Science Center** of the Institute of Sport, Tourism and Service of SUSU., Chelyabinsk.

2. The purpose of the study is to evaluate the possibilities of using the above-mentioned product in the practice of rehabilitation and improvement of the functional state of the spine in persons with different spinal dysfunctions and back pain.

The following were used for the research:

- "Device for correction of the spine and paravertebral muscles" Cordus "(Corden)" in the following versions: device for correction of the spine and paravertebral muscles "Cordus Vibro" (Corden Vibro) with the function of slow vibration and the use of relaxing microcurrents - 3 pieces;

Device for correction of the spine and paravertebral muscles "Cordus" (Corden) - with neodymium magnets inside - 3 pcs;

#### **Product Description:**

Device "Cordus" (hereinafter referred to as the device) is intended for correction of posture, removal of joint-muscle pains, relaxation of deep paravertebral (near-vertebral) muscles, correction of the functional state of the spine. The device allows you to achieve unloading and correction alternately cervical, thoracic and lumbosacral spine, which leads to a reduction or elimination of soreness in the back and spine, increased mobility of all parts of the spine, relaxation of the paravertebral muscles, improving blood circulation in tissues and in internal organs administered through Spinal nervous system. In this case, the device allows selective action on any segment of the spinal column, both on the vertebral elements themselves and on the intervertebral discs. Also, the distance between the vertebrae increases, and thus the compression of intervertebral discs and spinal cord nerves is eliminated.

The device can be used both in preventive institutions and at home.

### Main research results:

"Device for correction of the spine and paravertebral muscles" Cordus "" was used in 22 individuals with complaints of pain in the neck and back (10 men and 12 women), aged 21 to 63 years.

The selected persons for the studies were informed about the technique of correction of the spine with the help of the device, existing contraindications to the above product, the procedure for correcting the spine was conducted after preliminary conversation and obtaining informed consent for the study. The rate of correction of the spine was 1 month.

№№ п/п	Sex, age	Symptoms, Diagnosis	Application and clinical effect
1.	M, 52	Lumbalia	Reducing pain, improving sleep
2	W,49	Scoliosis of the 2nd degree	Reduction of pain syndrome in the collar zone, reduction of the angle of curvature from 16 to 12 degrees
3	W,43	Pleiraptocular periarthritits	Reduction of pain syndrome, improvement of mobility in the joint
4	M,32	Protrusion in L3-L4 5mm	Disappearance of pain syndrome, reduction of protrusion to 3mm
5	M,51	Intercostal neuralgia	Reduction of pain syndrome, improvement of rotation in the thoracic department
6	W, 43	Pain in the neck, cervical osteochondrosis	Reduction of pain syndrome, improvement of sleep quality
7	W,38	Protrusion L4-L5 4mm, Pain in lower back and knee	The disappearance of pain in the lower back, a reduction in pain in the knee. Reduction of protrusion to 3 mm.
8	M,49	Kifoscoliosis, thoracology	Reduction of pain syndrome, decrease in kyphosis, increase in growth by 2 cm
9	W,34	Spondylosis, with painful radicular lumbar syndrome	Reduction of pain syndrome.
10	M,26	Piriformis muscle syndrome	Disappearance of pain syndrome.
11	W,28	Kifoscoliosis, pain in the neck	Reduction of pain syndrome, reduction of the angle of curvature by 3 degrees
12	W,36	Pain in the shoulder, tunnel syndrome	Reduction of pain syndrome, increase in amplitude of motion in the shoulder.
13	W,44	Thoracalgia	Reduction of pain syndrome.
14	M,54	Protrusion in C4-C5 3mm, pain in hand	Reduction of pain syndrome, restoration of mobility in the shoulder
15	W,45	Osteochondrosis of the lumbar spine, with painful radicular syndrome	Reduction of pain syndrome, increased mobility in the lumbar spine
16	M, 45	Intercostal neuralgia	Reduction of pain syndrome.
18	W,63	Pleiraptocular periarthritits	Improvement of limb mobility, reduction of pain syndrome
19	M,23	Pain in the back and neck with professional muscular tension	Expressed relaxing effect, improvement of well-being
20	W,33	Scoliosis S-shaped	Reducing the angle of curvature, the disappearance of pain in the lower back

21	W,31	Asthenic syndrome	Improvement of well-being.
22	M, 29	Pain in the back and neck with professional muscular tension	The pronounced relaxing effect, the disappearance of pain in the back and neck.

Based on the studies carried out the following conclusion was made:

Almost all subjects noted the normalization of sleep, increased efficiency and a significant reduction in pain (Table 1). A quantitative assessment of the pain syndrome showed a significant reduction in the severity of pain or even its disappearance after a corrective course.

Subjects noted decreased stiffness in the cervical, thoracic and lumbar spine, improved mobility in the upper and lower extremities, normalization of cardiac activity, sleep, appetite. In this case, the disappearance of headaches was noted, the amplitude of movements in the joints increased; And the normalization of muscle tone in the back and epigastric region contributed to better posture. The procedure for correction of the zone of spasmodic muscles promoted a reduction in the compression of the intervertebral disc, which contributed to a decrease in protrusion by several mm.

The hardware effect was that the cone-shaped protuberances of the device, putting under the weight of the subject himself, the pressure on the group of muscles of the vertebral-motor segment located between the transverse processes of the vertebrae, led to such a relaxation that local traction between the two vertebrae appeared. This in turn contributed to the extension of the ligamentous apparatus in the vertebral-motor segment, and the microcurrents of Cordus vibro (Corden vibro) due to slow-frequency modulation contribute to the development of the state of relaxation.

Expert of the laboratory ISTIS:

The research was conducted by



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