

USE OF BEMER THERAPY WITH BACK PAIN

The occurrence of back pain has reached epidemic proportions in industrialized nations and has become a socio-economic problem. According to recent surveys, about 70% of the population in western industrialized countries suffers from acute back pain at least once a year. Next to cold or flu, back pain is the second most prevalent cause of missed work, and workers with sedentary jobs are affected more frequently than those with physical jobs. More than half of the early retirement applications are due to back problems. It is alarming how many children and young people are starting to suffer from back pain caused by bad posture.

The spine provides necessary stability for the body and enables an upright position as well as an astonishing flexibility. Inside the spinal column, from about the 1st cervical vertebra to the 1st lumbar vertebra is the spinal cord, so the spine performs an important protective function. The spinal column consists of 33-34 vertebrae and 24 inter-vertebral discs. A very sophisticated and detailed system of muscles and ligaments permit a wide variety of movements and provide strong stability.

The individual spinal vertebrae are responsible for the support function; the flexibility is made possible by the small inter-vertebral discs. Each inter-vertebral disc forms a cartilaginous joint to allow slight movement of the vertebrae, and acts as a ligament to hold the vertebrae together. The discs also serve as natural elastic buffers for the sometimes powerful forces impacting the spinal column and insure an even weight distribution.

Nucleus pulposus is the jelly-like substance in the middle of the spinal disc and functions to distribute hydraulic pressure in all directions within each disc under compressive loads. It is surrounded by fibrous cartilage that is connected to the spinal column. Since the inter-vertebral discs do not have their own blood supply, their metabolism is dependent on the interchange of application and release of pressure, that means they need to be “squeezed” in order to release waste and released to absorb nutrients.

The causes for back pain are many – the most common ones are muscle tension (physiological or psychological origin) and functional disturbances of the vertebral joints. Additional causes can be lack of exercise, incorrect movement patterns, obesity, differences in leg length, changes or degeneration in bone structure (osteoporosis, scoliosis, fractures), rheumatic diseases, herniated discs, physical illness, tumors and infections.

Functional Disturbances

Functional disturbances are caused by blockages of joints between vertebrae or other connecting joints. They can be caused by faulty movements or when joints are moved against each other through extreme muscle tension, causing a blockage with even the slightest movement. The joints involved “get caught” and create sudden extreme pain.

Structure-related disturbances

These disturbances and resulting pain are caused by unstable or overstressed structures of the musculoskeletal system, especially muscles, ligaments and tendons, through inadequate participation in the body's movement processes. The affected areas

are not challenged enough and become atrophied. Local metabolic processes and circulation decrease. On the other hand, the stress on the affected areas is too high, and the bone structures, discs and muscles are permanently damaged through one-sided stress. This, in turn, causes the muscles to harden, tense up or shrink, thereby irritating nerves and tissues, which brings increasing pain. The symptoms typically progress imperceptibly at first, with pain radiating over a relatively large area.

Radicular pain

This syndrome is characterized by degenerative and/or inflammatory processes in the vertebral discs (bulging, hernia, inflammation). The pain typically results from certain positioning of the body. Coughing, sneezing, laughing and other types of jolting can produce severe pain. In addition, compression, irritation or inflammation of nerves in the effected area can lead to further radiating pain (sciatica).

Pseudo-radicular pain

This condition covers back pain arising from degenerative changes in the spinal column (e.g. stenosis of the spinal canal, osteochondrosis). Pain usually develops slowly and rather unnoticeable, in later stages pain becomes more severe as the day progresses; resting will alleviate the pain.

Chronic back pain is often caused by a combination and interaction of several factors. Habits like bad posture and incorrect movement patterns as well as neglecting acute back pain can turn into a chronic condition. For about 90% of chronic cases no specific cause for back pain can be found. Patients will complain of severe back pain without a specific physiological cause for their pain being diagnosed. On the contrary, at times there is sufficient pathology for pain to be present, without the patient experiencing "appropriate" symptoms.

Before any treatment plan for back pain is established, the physician should attempt to determine the underlying cause and rule out any serious illness by taking a detailed medical history and performing a thorough physical examination. In many cases the cause for acute back pain can be quickly determined. Treatment then depends on the respective cause and can include pain medication, physical therapy, massage, etc. The administration of prescription drugs has been debated, and many believe that medication should only be used in extreme cases and then only for a short time. Long-term medications or passive therapies can increase the likelihood for the condition to become chronic.

Orthopedic professionals strongly recommend an active participation of the patient in therapy. That means targeted strengthening of muscle groups, regular exercise and active relaxation measures. One of the most important criteria for back problems is proper posture. Improper posture of feet, legs, hips and back is often developed and ingrained

Over a number of years and will need long-term modification with competent supervision and therapy, as well as patience.

BEMER-therapy can be used to improve the circulation and to give general support to the body's self-regulatory mechanisms. It can be recommended especially for radicular and pseudo-radicular pain. Through the following scientifically proven effects, BEMER therapy can lead to the improvement or stabilization of physical well-being and can contribute significantly to the complementary treatment of back pain:

- § Positive physiological effect on the condition of microcirculation, and increased utilization of oxygen in the capillary tissue
- § Positive effect on the protein biosynthesis (repair proteins)
- § Improved micro-hemodynamic conditions for the first steps of immunological processes, and thereby in indirect strengthening of the body's own defense mechanisms
- § Positive effect on the vegetative nervous system

BEMER therapy is a complex method that optimizes energy production by the individual cells (ATP) through improved circulation and increased oxygen utilization, thereby contributing to the overall regulation of the body's metabolism. It is therefore an important and essential foundation for strengthening the body's self-healing mechanisms, supporting other treatment measures in the environment of a holistic approach, and increases effectiveness of clinical treatment concepts.

User recommendations for BEMER therapy with back pain

Due to the variety of disorders relating to back pain, please consult your physician or medical personnel familiar with the BEMER concept.
The basic plan is always appropriate for general well-being.

User recommendations for sciatica and other spinal disk injuries

Potential results of BEMER therapy depend on the type of injury.

For chronic conditions of bulging discs, spinal disc herniation (slipped disc) the use of the intensive applicator with P4 is recommended along with the basic program on the mat.

In some cases, due to the improvement in conductivity of the nerves, pain may increase initially. In that case, a reduction to P3 for the intensive applicator is recommended (basic program on the mat remains the same).

As a general rule, the intensive applicator should be used with P3 for all conditions involving acute inflammation and with P4 in all other cases.

Important!

If a herniated disc is suspected, your physician should be consulted before any "Home therapy", in order to clarify any presenting symptoms and, if necessary, advise hospital admission.

User recommendations for BEMER therapy with muscle tension

- § Once or twice a day on the mat according to the basic program
- § For problems sleeping, the mat with level 1 at bedtime

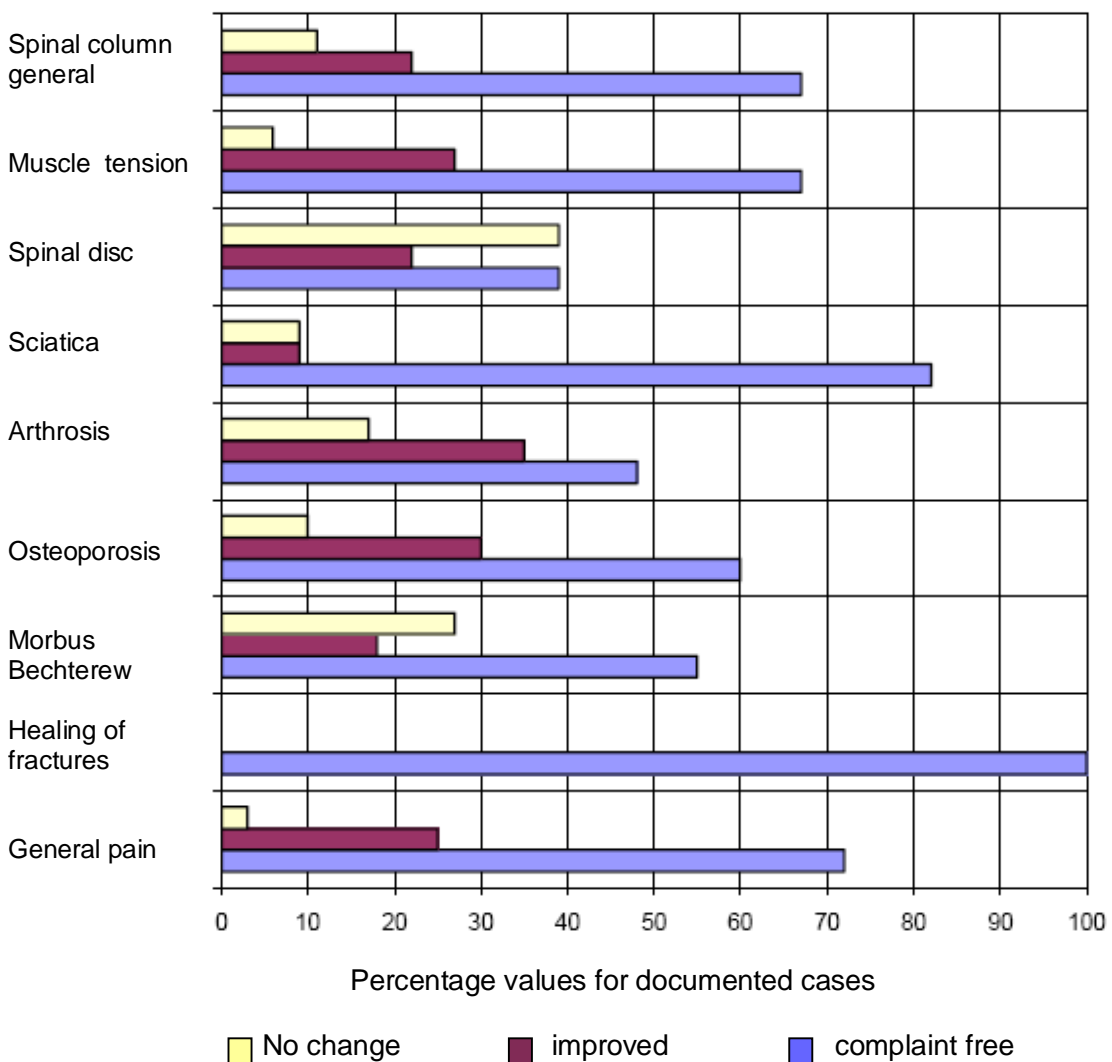
§ For localized treatment of muscle tension the intensive applicator or coil cushion is recommended

- P3 for muscles close to the skin
- P4 for deeper lying muscles

If blankets, pillows, etc. are being used to support the body, they need to be placed under the mat.

A European physician's user study under the direction of the AFB documented the effects of the electromagnetic field of the BEMER 3000 therapy system. A total of 1116 patient protocols were captured. Since several patients presented with more than one clinical condition, 2031 cases of illness were documented. An average therapy span of 4 weeks for sciatica, 5 weeks for fractures, general pain and muscle tension, 6 weeks for arthrosis, osteoporosis, spinal disc injuries, 7 weeks for Morbus Bechterew, and observation of 701 subjects (see excerpt below) showed the following results:

Excerpt from the physician's user study with the BEMER 3000 therapy system



Literature and studies:

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- Michels-Wakili, S., Kafka W.A.: *BEMER 3000-typisch gepulste elektromagnetische Felder niedriger Energie reduzieren Zahnarztangst* (2003)
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Please note: Broad acceptance of medical products generally takes several years. We are committed by law to advise you that the effectiveness of electromagnetic fields is still being discussed controversially and has not been commonly accepted.