

USE OF BEMER THERAPY WITH OSTEOPOROSIS

Osteoporosis is a loss of bone density that exceeds the normal age-related physiological degree. Since all bones are subject to a life-long process of bone formation and bone resorption, the condition can be caused by an abnormal slowdown of bone formation as well as an abnormal increase in bone resorption.

We differentiate between primary and secondary osteoporosis, with the primary form occurring much more frequently, like post-menopausal and senile osteoporosis. For women, the decline in estrogen after menopause seems to play a significant role. Other factors can be a lack of calcium or vitamin D, as well as well as a lack of exercise and being underweight.

Secondary osteoporosis occurs because of metabolic disorders like diabetes, over-active thyroid, and other illnesses.

Very often there are virtually no symptoms in the earlier stages, so the disease is not detected until it has progressed. Some of the first symptoms often are dull or pulling bone pain, especially in the spine. Due to the thinning of the bones' micro-structure which gives them their stability, the vertebrae become increasingly porous and fractures of the vertebrae can result. The visible results are shrinking of height (up to 4 inches) together with a bowing of the back (kyphosis), and myogelosis, a condition in which the muscles of the back harden through bulging and knotting. In order to keep the pain at bay, affected patients adapt to a pain-relieving posture over time.

Another adverse effect is the steadily increasing risk of bone fractures. The loss of bone substance diminishes the weight-bearing capacity to such an extent that even the smallest force on the bone can lead to a fracture (broken ribs when coughing, broken hip when stumbling, etc.). Since part of the normal treatment for a fracture is immobilization of the affected area, the resulting period of forced immobility and lack of exercise is detrimental especially to the elderly. Physical activity, however, is an essential variable for the regulation of metabolic activity in the cells as well as the entire body. Therefore, if there is serious limitation of physical activity due to injury, some of the important regulatory mechanism may cease. Weak metabolic conditions in the elderly combined with forced inactivity may lead to illnesses or infections that become a serious danger to their health.

It is extremely important to detect osteoporosis in its early stages, in order to avoid more advanced stages along with the accompanying complications. A number of diagnostic tools are available to the health practitioner. X-rays normally do not show a loss of bone mass unless it has reached about 30%; therefore, if osteoporosis is suspected, the more common diagnostic tools are computed tomography, digital radiography, bone density scans, and in extreme cases bone biopsies. A new method being tested is the use of ultrasound, in the hope of finding a method without damaging rays for early diagnosis.

Therapy usually includes a change in diet with a sufficient amount of calcium being added and possibly vitamin D supplements, restriction of alcohol consumption and calcium scavengers like meat and sweets. Additionally, outdoor activities, and exercises like swimming or physical therapy are recommended to strengthen the muscles in order to prevent fractures through stumbling, falling, etc. Cigarette smoking should be stopped as well, since the loss of bone substance increases by up to 50% in smokers.

Prescription medications focus on substances that curb bone resorption (calcitonin, biphosphonate) or encourage bone growth (natriumfluoride). Prescribing hormone therapy to women has been controversial recently, since there can be an increased risk of breast cancer, especially in the presence of family history.

For fractured vertebrae a semi-elastic corset tends to be used; its main purpose is to improve mobility and reduce pain. Additionally, therapies like massages or heat treatments can be beneficial.

BEMER-therapy can be used to improve the circulation and to give general support to the body's self-regulatory mechanisms. 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 osteoporosis:

- § 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

Some other potential effects with regard to bone metabolism are:

- § Induction of small electric voltages (similar to the piezoelectric effect) that control the growth of bones and their structure
- § Regulation of mineral metabolism in the body, especially calcium; this is of utmost importance to build bone structure and assure proper muscle functioning
- § Stimulation of callus-forming cells

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.

In addition to the already mentioned measures like a diet rich in calcium and lots of outdoor activities the following advice should be considered based on the individual's situation:

Recent findings have raised the suspicion that calcium found in cow's milk and its products is not easily absorbed into the bone structure because of its specific structure. The increased need of calcium (1200mg daily), phosphorus and fluoride may need to be provided in the form of mineral supplements if diet proves insufficient. Pain that affects mobility can be treated with acupuncture or homeopathic remedies.

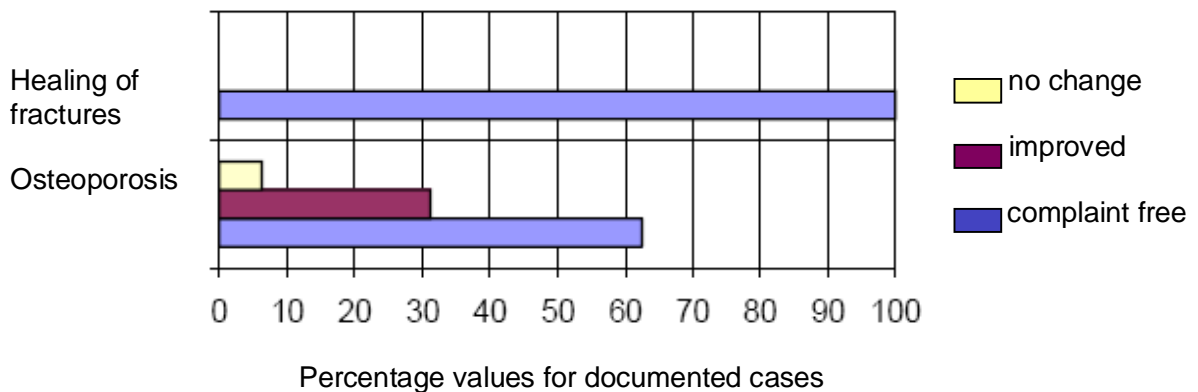
Treatment for secondary osteoporosis should address the underlying illnesses.

User recommendations for BEMER therapy with osteoporosis

- Twice a day (morning and evening) on the mat according to the basic program
- Once a day (midday) on the mat with level 10
- For localized pain or fractures, also use the intensive applicator or coil cushion once or twice a day with P4 over the affected areas

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. A therapy span of 6 weeks and observation of 52 subjects (see excerpt below) showed the following results:

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



Literature and studies:

Härtling, H.: *Behandlung verschiedener orthopädischer Krankheitsbilder mit dem BEMER 3000* (2002)

Klopp, R.: *Magnetfeldtherapie: Komplementär-therapeutisch sinnvoll oder Unsinn?* Institut für Mikrozirkulation Berlin (2005)

Michaelis, H.: *Ärztliche Anwenderstudie 09/03*. Akademie für Bioenergetik (2003)

Michels-Wakili, S., Kafka W.A.: *BEMER 3000-typisch gepulste elektromagnetische Felder niedriger Energie reduzieren Zahnarztangst* (2003)

Schütze, N., Walther, M., Kafka, W.A.: *Einsatz extrem niederfrequent (BEMER-typisch) gepulster schwacher elektromagnetischer Felder im Bereich der Orthopädie*. Orthopädische Praxis 41, 1 (2005)

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.