



## Medical EMS-Training for Back Pain



# “I have back problems”

For some years now, electro-muscle-stimulation (EMS) has become a popular whole-body application, mainly made popular through micro studios in the fitness sector. Here one will find educated trainers working in different business environments.

**N**ow medical practitioners at the Ludwig Maximilian University of Munich (LMU) can extend the application from the fitness market into the medical field. PD Dr. Bernd Wegener, Senior Physician at the Clinic and Polyclinic for Orthopaedics, Physical Medicine and Rehabilitation, and his team conducted a study to investigate the effects of WB-EMS on patients with chronic back pain.

“We compared 85 back pain patients with EMS-Treatments to a widespread multi-modal back pain therapy (considered the gold standard), with the main focus of the study being on the aspect of pain. Our key finding: We have been able to bring about significant pain

**Various scientific medical studies suggest that whole-body EMS can successfully reduce chronic back pain. This was confirmed by our own study, as we were able to prove that back pain can be successfully treated with whole-body EMS-Therapy.**

relief in all the patients we cared for.”

“We ran the EMS-Therapy for six months, applying one 20-minute session per patient every week, capturing data before the start of the therapy and three times during the course of the study. The multi-modal therapy program was applied for four weeks, with multiple hours of consultations every day. Overall, we have seen astonishingly positive effects with EMS-Therapy, resulting in a distinct improvement in patient’s quality of life and a notable decline in aspects of the patient’s depression.”

In order to better understand the impact of medical EMS-Training within a therapeutic environment, we asked Dr. Wegener the following questions:



**What would you see as being the greatest advantages of whole-body EMS-Training, with regards to the number one common ailment – back pain?**

**PD Dr. Bernd Wegener:** With whole-body EMS-Training there is the possibility of getting patients to engage in sport activities, who would otherwise either be averse to physical activity or unable to exercise due to health constraints.

Compared to acute pain, a different set of rules applies for chronic back pain. While acute back pain can be mitigated with a treatment consisting of pain and muscle-relaxing medication, non-resistant active measures of physiotherapy and sometimes even some bed rest, none of these measures are effective in the same way for chronic back pain. The root cause of chronic back pain does not necessarily stem from structural changes (such as herniated discs for instance), they can also originate from psychosocial components that can't be influenced by the aforementioned treatment. This is documented and supported in the (German) National Care Guidelines for lower back pain. In these guidelines, patients with chronic back pain are advised to partake in active exercise. This recommendation should be supported by the attending physician and physiotherapist in an encouraging and motivating manner.

However, in practice, this is easier said than done. Many patients affected by chronic back pain, will instantly feel the pain that troubles them when they begin to exercise, which then leads to a completely counterproductive avoidance behaviour. Often, these patients are also affected by other orthopaedic illnesses, such as worn-out joints. Frequently, cardiovascular, lung or metabolic diseases can also play an added role in aggravating this situation. It is exactly these people that can benefit greatly from whole-body EMS. Their muscles can be trained effectively with meaningful contraction intensity but without complex movements, which often cause discomfort or pain.


Nowadays there are various scientific medical

studies available which suggest that whole-body EMS can successfully reduce chronic back pain. This was confirmed by our own study, as we were able to prove that back pain can be successfully treated with whole-body EMS-Therapy.

**What are the benefits of using a medical EMS-System for physiotherapists?**

**PD Dr. Bernd Wegener:** Many diseases limit physical exercise. It requires specific medical knowledge to develop an appropriate, individualised exercise plan.

Physiotherapists are well educated regarding clinical pictures and are therefore able to assess which movement and which degree of physical exertion can be applied to a patient, without causing harm. In addition, electrotherapy is an integral component of their education. In this respect, physiotherapists have specialist skills, which help them to apply whole-body EMS-Training in an effective yet responsible way.

Physiotherapists can provide optimal care for people who, due to their illness, cannot or do not want to exercise in a gym. 

*(Interview Translated from NewSystemEMS - Journal for the EMS-Industry - November 2019)*

**[CLICK HERE for the full scientific study.](#)**



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