



Effective Training with Whole-Body Electro Muscle Stimulation (WB-EMS):

Focus on Senior Citizens

According to Professor Dr Wolfgang Kemmler, a German training and sports scientist, the application of Whole-Body Electro Muscle Stimulation (WB-EMS) in physiotherapy is especially beneficial for seniors and these are the reasons why.



LIVE
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“Dear Mr Kemmler, I haven’t done any sports in 50 years and I won’t start now at 70,” commented an elderly lady in one of the briefing sessions for a recent scientific study. This statement perfectly captures the lack of motivation and insight that the majority of seniors have regarding the idea of starting with regular body workouts at their age.

Based on the German population this anti-exercise attitude is present in 50% of all men and women over the age of 70. A similar percentage can be assumed for the South African population. Physical exercise, which is beneficial at any given life stage, is often neglected due to time constraints, embarrassment, sweating, exertion, low fitness levels, joint pain and lack of personalised training.

Positive effects across the board

Whole-Body Electromyostimulation (WB-EMS) is a time-efficient, discreet, joint-friendly and safe option for the less active, older population, plus it has a positive impact on their general well-being. Numerous research

studies focusing on the elderly and the unfit show that WB-EMS training is ideal for this specific group of people. Even scientific critics agree with these findings.

Further analysis of EMS research confirms that positive effects can also be seen regarding various cardiometabolic factors, such as cardiac output, metabolic syndrome and blood pressure, as well as abdominal and total body fat. Notably, with regards to muscle-mass and muscle-functionality the positive results of WB-EMS training equate to the effects of intensive strength-training.

Sarcopenia (the loss of skeletal muscle mass and strength as a result of ageing) goes hand in hand with an elderly person’s decrease in functional ability, loss of independence and an increase in morbidity and mortality. Fractures resulting from a fall and particularly the loss of one’s independence have a devastating impact on the life of an elderly person.

Recent studies which were centred around sarcopenia sufferers clearly indicate that there is an increase in the



Advertorial



functional capacity of elderly people (70+) with regular WB-EMS training.

WB-EMS training also has a considerable positive influence on muscle mass which, in addition to muscle function, also plays an important part in thermoregulation and problems with obesity. The effects of this training can be enhanced by consuming protein in the range of 1.5 – 1.7 g/kg per day.

In addition, studies with elderly people have shown that there are no negative side effects from doing WB-EMS training.

It is important to note that, besides the clinical effectiveness, there is a high acceptance rate of WB-EMS training amongst seniors, especially when conducted in a supportive environment, i.e. in a 1:1 session with a therapist. In this respect, WB-EMS appears to be the ideal tool for health-oriented exercise for the elderly.

Cooperation facilitates access to EMS-Training

There are, however, a few important factors to consider when training with seniors. Safety and getting a sense of a person's resilience are vital when applying WB-EMS training to an often-fragile group of elderly people who may experience a lack of body sensation and misjudge their abilities.

An assessment taking into account the medical contraindications is mandatory when looking into giving seniors the required medical clearance for WB-EMS training. For those who seek medical clearance: Even a GP who is not familiar with WB-EMS training can find relevant information via specific websites (such as <https://www.ems-training.com/magazine>) to facilitate the decision-making process.

When making individualised decisions regarding the patients, cooperation and sharing of knowledge between doctors and the

practices and institutions which provide EMS-Training is crucial. It goes without saying that the application of the Industry **Standards for EMS Training (DIN 33961-5)** is absolutely essential.

The physiotherapist's focus is on personal attention

One of the key elements in following the industry guidelines is close supervision during the session, whereby a maximum of two participants are in the care of one trainer at any given point. Elderly people benefit tremendously from such an individualised interaction. The greater the personal attention, the better a session will be in terms of safety, motivation and efficacy, thereby resulting in higher quality results. The therapist plays an integral part, not only as the physical trainer but also as a source of information regarding physical exercise and nutrition.

Conclusion

When taking into account the benefits and the positive effects which WB-EMS training has for seniors it is astonishing that such a beneficial training method is still largely unknown in the healthcare industry. ✨

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at the Institute of Medical Physics, Friedrich-Alexander- University, Erlangen-Nürnberg, Germany. He is a leading expert on the effects of exercise on osteoporosis and sarcopenia, having carried out extensive research within these areas. Exercise interventions, as part of the research carried out by Professor Kemmler's research group, have included resistance training as well as Whole-Body Electromyostimulation.

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