

## USE OF BEMER THERAPY WITH MUSCULAR DYSTROPHY

More than 30 different hereditary diseases of the skeletal muscles fall under the umbrella of muscular dystrophy; they are characterized by a progressive loss of muscle tissue accompanied by resulting symmetrical muscle weakness. Even though the symptoms of muscle atrophy are similar, there is a distinct difference between that and muscular dystrophy.

The different forms of muscular dystrophy are differentiated mainly by their heredity, the age of onset, the affected areas of the body and the progression. The most prevalent type by far is the Duchenne Muscular Dystrophy (DMD), which affects mostly men because it is inherited in an X-linked recessive pattern, meaning that the mutated gene that causes the disorder is located on the X chromosome, one of the two sex chromosomes. In males (who have only one X chromosome), one altered copy of the gene in each cell is sufficient to cause the condition.

Type of muscular dystrophy	Age affected	Area of the body affected	Course of the illness
Duchenne (DMD)	Toddlers	Pelvic and thigh muscles	Progresses quickly
Becker (BMD)	Children of school age	Pelvic and thigh muscles	Slow progression
Facioskapulohumeral MD (FSHD)	Varies, children and teens	Shoulders, upper arms, face	Mostly asymmetric, slow progression
Limb-girdle MD	Varies, 1 <sup>st</sup> - 4 <sup>th</sup> decade of life	Hips and shoulders	Slow progression

The progressive forms of MD are caused by a genetic defect which slows or prevents the formation of a specific protein, which leads to metabolic disturbances in the muscle cells with resulting degeneration and loss of muscle tissue. The destroyed muscle fibers are replaced by fatty and connective tissues. A common characteristic of all forms of MD is that sooner or later the respiratory and cardiac muscles will be affected.

The main symptom of MD is the progressive weakness that spreads to the affected muscle groups. Based to the specific type of MD, the development of "hypertrophies" (increase in size) can be observed in the area of the affected muscles; this, however, is caused by the fatty and connective tissues that are replacing the muscle fibers. Because MD often causes physical disabilities like unusual joint positions or deformation of bones, people tend to assume there is a mental disability or decreased intelligence as well-this is not true, however, in most cases.

To date, there is no cure or causal treatment. Most therapy measures focus on maintaining and improving the quality of life for the patient as much as possible. Some important therapy components for MD patients are specialized physical therapy, orthopedic devices, respiratory therapy and psychological counseling for the patients as well as the caregivers.

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 support of conventional therapies:

- § 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. Based on these facts and the benefits observed in patients with a range of severe physical disabilities we can safely say that BEMER therapy is an important and essential foundation for strengthening the body's self-healing mechanisms, supporting other treatment measures, and decreasing the side effects of prescription medications, and therefore of great value to patients with muscular dystrophy.

User recommendations for BEMER therapy with muscular dystrophy
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- § Once or twice a day on the mat according to the basic program
- § In addition, once a day on the mat with level 10
- § To support lung functioning and stabilize the immune system, use of the intensive applicator with P4 over the breast bone is recommended

Our documentation of patients with MD has been based mainly on individual reports and therefore no scientific conclusions are possible at this time. We do know, however, that patients receiving BEMER therapy attest to an improvement in general well-being, increased immune defense and a higher endurance level during physical therapy. Patients with breathing problems were able to go longer between breaths.

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Literature and studies:

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

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

<http://www.neuropaediatric.com/Studien/Details%20zur%20Teilnahme%20an%20der%20Klinischen%20Studie.pdf>

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.