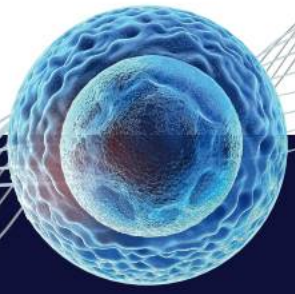
MBST® Magnetic Resonance Therapy

Information for patients



Health starts in the cells



Non-invasive • Drug-free • No known side effects

Scientifically and clinically proven

Could MBST® also help you?



What is MBST® Magnetic Resonance Therapy?

MBST® is a non-invasive treatment option for musculoskeletal conditions that works directly at the cellular level.

MBST® is the only therapy in the world that uses the same physical principle as the diagnostic MRI: magnetic resonance. But it is specifically developed for therapeutic use with the aim of stimulating cells in a targeted manner. This encourages several biophysical processes within the cells which may activate natural repair processes with the aim of promoting tissue regeneration.[1-5]

As an approved medical device by a TUEV-certified manufacturer, medical practices, clinics and centres worldwide use MBST® as part of a broad range of therapies to offer you the best possible treatment for your conditions and complaints.

Why MBST® could be the best solution for you

MBST® offers a targeted, gentle treatment approach for complaints caused by, among others, osteoarthritis, osteoporosis, back pain or sports injuries.

Treatment aims

- Reduce pain and inflammation
- Improve flexibility and mobility
- Support active living with more quality of life

MBST® targets not only the symptoms but also their cause. Basic research and clinical studies confirm a positive influence on, among others, pain and flexibility.[6]

Non-invasive (no surgery or injections)
Drug-free
No known side effects or interactions
Gentle, pain-free treatment with a sustainable, effective treatment approach

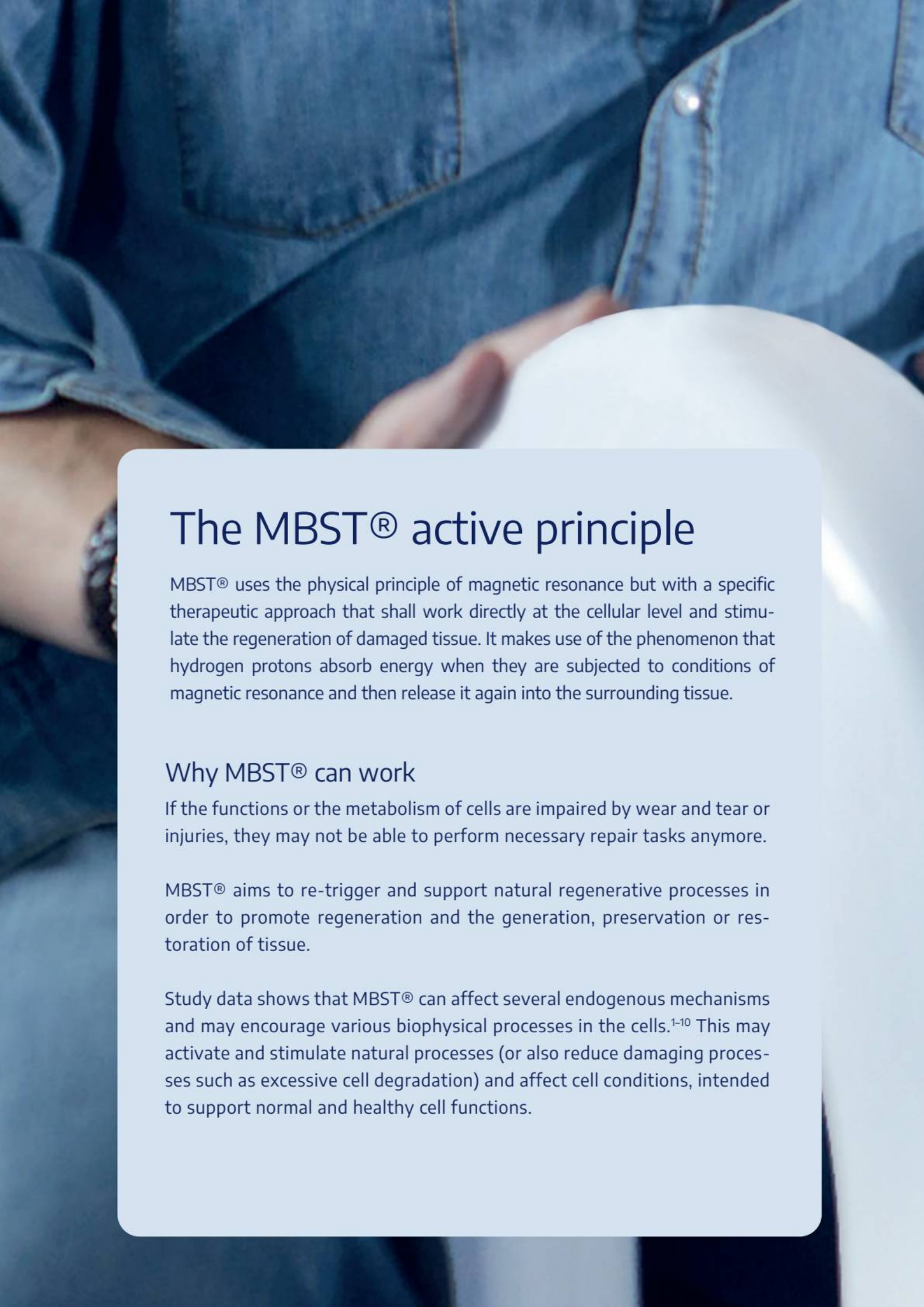


Tissue-specific treatment

MBST® targets the cause of the complaints – the damaged tissue – with a tissue-specific approach. This is possible due to its unique therapeutic use of magnetic resonance, a principle that is widely known from MRI, a goldstandard in diagnostics.

In this way, the therapy can target the specific cells that are affected by a condition or injury. For example: For the treatment of osteoarthritis, therapy sequences are used that directly address the cartilage cells. The treatment of osteoporosis or fractures focuses on the bone cells.

This means for you: Your MBST® therapy always specifically matches your diagnosis.



The MBST® active principle

MBST® uses the physical principle of magnetic resonance but with a specific therapeutic approach that shall work directly at the cellular level and stimulate the regeneration of damaged tissue. It makes use of the phenomenon that hydrogen protons absorb energy when they are subjected to conditions of magnetic resonance and then release it again into the surrounding tissue.

Why MBST® can work

If the functions or the metabolism of cells are impaired by wear and tear or injuries, they may not be able to perform necessary repair tasks anymore.

MBST® aims to re-trigger and support natural regenerative processes in order to promote regeneration and the generation, preservation or restoration of tissue.

Study data shows that MBST® can affect several endogenous mechanisms and may encourage various biophysical processes in the cells.[1–10] This may activate and stimulate natural processes (or also reduce damaging processes such as excessive cell degradation) and affect cell conditions, intended to support normal and healthy cell functions.

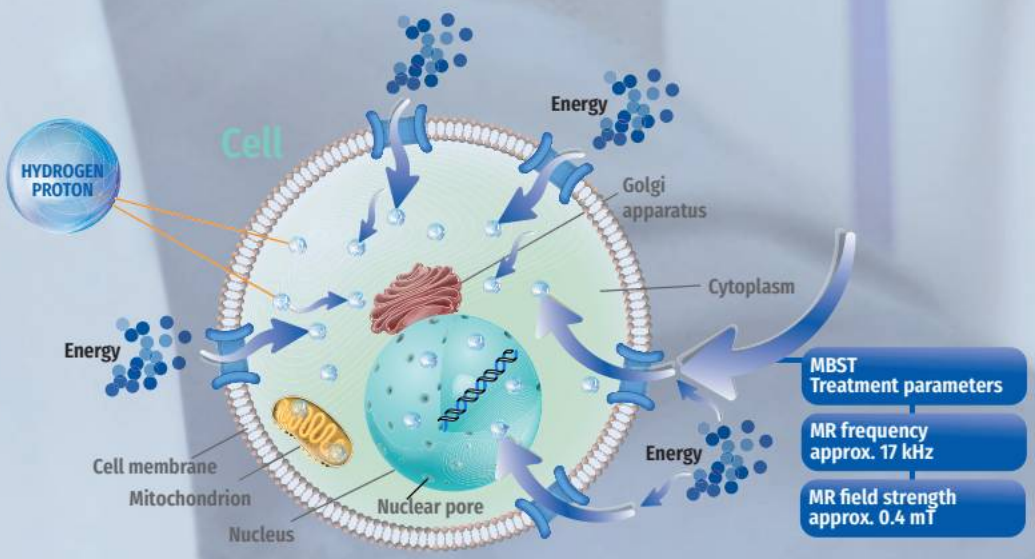
The technology behind MBST® therapy

MBST® uses physical principles to affect biological elements of conditions and injuries. Subtle physiological mechanisms on a molecular level can significantly affect the human body.

The human body is made up of approximately 70% water, so there are huge numbers of hydrogen protons in the tissues. Under magnetic resonance conditions, hydrogen protons in organic tissue are stimulated, absorbing energy and causing measurable changes in their biophysical properties.

In MRI, this data is used to create images of the inside of the body for diagnostic purposes. MBST® on the other hand solely uses the effect that hydrogen protons release absorbed energy again into the surrounding tissue.

The MBST® therapy devices were specifically developed to transfer the highest possible amount of energy into the tissue that is to be treated.



Previously successfully treated conditions and issues



Osteoarthritis



Osteoporosis / bones



Back pain / intervertebral discs

Alleviate pain

As all injuries or conditions affecting the musculoskeletal system eventually cause pain, reducing pain and discomfort is an important treatment aim for the majority of patients. This is especially true for chronic pain – for example caused by osteoarthritis, by pain syndromes, nerve damage or for chronic back issues.

Clinical studies also show an effect on symptoms with patients reporting fewer and less severe pain which enabled them to move more easily and walk for longer times again.[11–14]

Further data also confirms that MBST® can affect pain signalling pathways.[8]

Promote regeneration

Cells need a lot of energy. The inner clock of cells also influences cells' ability to regenerate since many cell processes are subjected to circadian rhythms.

MBST® has been shown in cell studies to markedly increase the production of ATP in the mitochondria[7,9] – the powerhouses of the cells – and cell proliferation rates[15] and can also influence the inner clock of cells.[3, 7–10]

This mode of action suggests that MBST® can be an option in the treatment of degenerative conditions that cause increased tissue degeneration, such as osteoarthritis and osteoporosis and after injuries when damaged tissues require repair.



Sports injuries



Wound healing / Post-surgery



Nerves

Reduce inflammation

Inflammatory reactions in the tissue impair or even prevent healthy cell functions.

Studies confirmed that MBST® has a positive effect on inflammatory reactions.[4,16] This can contribute to creating a healthy cell environment and shall enable cells again to fulfill their task of replicating and forming new tissues

With this mechanism, MBST® may be an adequate support in the treatment of conditions in which inflammatory processes in the tissue make up a part of the issue: such as chronic sports conditions due to overloading, after surgery or in the case of wound healing disorders

Support healthy cell conditions

Healthy cells are able to fulfill their tasks and maintain the body's health and resilience. An active working metabolism, good cell nourishment and healthy tissue can support cell functions.

Several cell studies have confirmed that MBST® influences inflammatory reactions, cell proliferation circadian rhythms and the energy metabolism of cells.[4, 7–10]

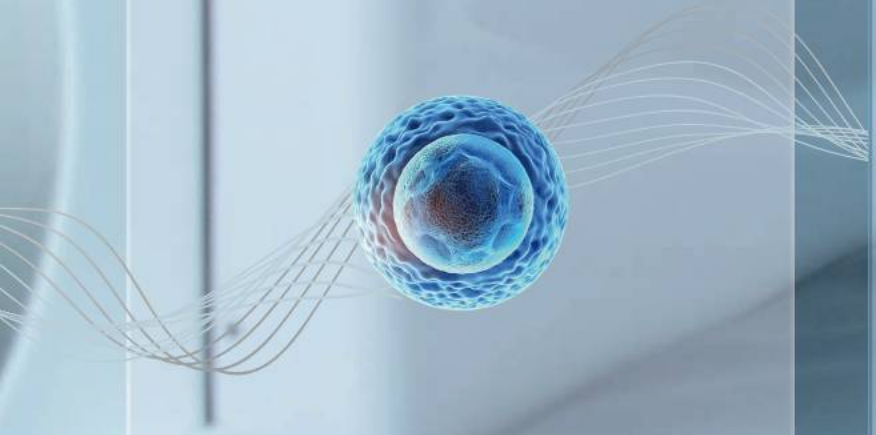
Other degeneration-promoting factors such as free radicals (ROS) could also be balanced.[9]

Your MBST® treatment broken down

PRE-TREATMENT

Diagnosis

An accurate diagnosis is essential for a successful treatment. This is why MBST® – as certified medical device – is only used after a medical diagnosis and by medical professionals. The MBST® therapy is tissue-specific, meaning that the therapy card with the optimized treatment frequencies for a tissue resp. condition is selected according to your condition.



Staying hydrated

As the MBST® treatment approach uses the hydrogen protons within the tissue, it is advisable to drink plenty or water before your treatment session.

DURING TREATMENT

Session duration

MBST sessions last for 60 minutes. Meanwhile, you can read, relax with music or nap on the silent, comfortable therapy device.

Number of sessions

A typical course for initial treatment includes 7 to 10 sessions. Depending on the type and severity of the condition, more may be needed.

Relaxed and pain-free

You will remain clothed and be comfortably positioned on the therapy device. The treated body part needs to remain in the active treatment field for the entire session but it is not necessary to keep still. You can move freely within the field.

3 Phases

Each session includes 3 treatment phases: one pain reduction phase and two for activation and regeneration.



POST-TREATMENT

Regeneration takes time

The goal of the MBST® therapy is to support the body's natural physiological processes. However, regeneration takes time and doesn't happen overnight.

Experiencing results

Many patients notice improvements in pain after a few sessions or report that they can climb the stairs to the medical centre fast than before.[11–14] For degenerative conditions like osteoarthritis with severely damaged tissue, it is common to take several weeks or even up to three months to make you feel the result of stimulated repair processes.

Support your outcome

Even if you experience fast relief, avoid straining the treated area. Your healthcare professional will advice you on how to support the best possible and lasting treatment result.

GOING ON

Rates of progress

Study data shows that 80–85% of treated patients reported reduced pain and improved flexibility.[11,12,14] Sometimes, the effects were even noticeable several years after treatment.

Refreshing treatment

How long the effect lasts in the case of degenerative diseases varies widely from person to person. Refreshing treatments with a reduced number of therapy sessions to consolidate the therapy result is possible. Your MBST treatment centre will advise you on this option for you.



Frequently asked questions

F What are the side effects of MBST® therapy?

A There have been no reported side effects of MBST® therapy or interactions with drugs or other treatments in more than 25 years of application and about 2 million hours of treatment. MBST® is often combined with other treatment methods.

F Will I immediately feel better after treatment?

A MBST® therapy cannot reverse long-term damage overnight. If you don't feel an immediate effect, it doesn't mean the treatment hasn't worked. Many patients report rapid improvements in mobility and pain relief.[6]

F How many treatment sessions are necessary?

A The number of sessions depends on the type and severity of the condition. An initial treatment series usually includes 7–10 treatment sessions. For refreshing treatments, 5 sessions may be sufficient. Your treating medical professional will tell you how many sessions are required. If possible, sessions should be on consecutive days (with a break at the weekend).

F Why is MBST® treatment always done as a series?

A The recommended number of treatment sessions and the schedule are based on study results, scientific research and the experiences in practical application. A single treatment sessions is not sufficient to stimulate physiological processes in the tissue sustainably. The best treatment results were shown with continuous reactivation in a short period of time.

F Are there contraindications to an MBST® therapy?

A Contraindications include for example pace makers that are not suitable for MRI or other technical implants or active tumours in an area that comes into the treatment field. Treatment with MBST may be possible if a distance of 40cm to the applicator is observed. Your treating medical professional will advise you about contraindications before the start of treatment.

F How long does the effect of the MBST® therapy last?

A Possible improvements after MBST® therapy are individual and vary depending on the indication. If necessary, MBST® therapy can be repeated. Refreshing treatments with a reduced number of sessions may be possible. Ask your treating medical professional if a refreshing treatment is an option for you.

OSTEOARTHRITIS



“80% of the [111] patients felt that knees pain was significantly reduced and they can walk and stand with more confidences after using MBST for treating their knee osteo-arthritis pain.”

Lim Ee Hua/Yoon Kam Hon 2020, Korean Congress of Rheumatism

“In all investigated areas, the intensity and frequency of the pain and the Lequesne index, a general overview of the study shows a shift of all levels to lower values and thus an improvement of the condition of health. [...] Overall, the study pointed out a sustained improvement in the patients’ local health-status with a significant pain-relief even after four years.”

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Froboese 2000, Orthopaedische Praxis 36, 8/2000, 510–515 • Fagerer/Kullich 2007, Arzt & Praxis, 927, 180–182 • Kullich/Ausserwinkler 2008, Orthop Praxis 44, 6/2008, 287–290 [13] • Brockamp 2009, Arch Orthop Trauma Surg 131(6), 863-868) • van Laack et al. 2011, Orthop Praxis 47, 11/2011, 536–543 [12] • Kullich/Overbeck 2013, SCHMERZnachrichten 4a [11] • Kullich et al. 2013, Journal of Back and Musculoskeletal Rehabilitation, 26, 93–104, DOI 10.3233/BMR-2012-00362 • Kitaev 2017, Moderne Medizin, 2(6) / Juni 2017 • Lim Ee Hua/Yoon Kam Hon 2020, Korean Congress of Rheumatism [14] • Stephan 2024, Intermediate analysis, Dresden (ongoing)



OSTEOPOROSIS

“MBST® Magnetic Resonance Therapy is a treatment procedure, that is not associated with any side effects, and that will stabilise and increase bone density, reduce symptoms, and increase the overall well-being of patients [...]”

Handschuh/Melzer 2008, Orthodoc, 5/2008

“We can see that there were no fractures among [450] patients during the period between three months and one year after [MBST], which is assumed as the period of maximum effect of [MBST], and only two between one year and two years after [MBST].”

Krpan 2017, Clin. Cases in Mineral and Bone Metabolism, 14(2), 235–238

Handschuh/Melzer 2008, Orthodoc, 5/2008 • Krpan et al. 2015, Periodicum Biologorum, 117/1, 161–165 • Kullich et al. 2016, Ber. naturwiss.-med. V. Salzburg, 18, 7–17 • Krpan 2017, Clin. Cases in Mineral and Bone Metabolism, 14(2), 235–238

WOUND HEALING



“[...] the application of the MBST therapy device improved the size of over 50 % of the wounds in terms of size. 83.33% of all wounds showed an improved exudate status. Wound condition even improved for 91.67% of the intervention group patients.”

Observation study regarding MBST magnetic resonance therapy in the application on wound healing of different kinds of wounds, Wound Healing Centre Boppard, 2023

Studies and research



BACK PAIN

"The significant improvement in the MBST®-group was primarily evident in the [...] questions regarding incapacities caused by Low Back Pain, particularly sleeping problems, fatigue, bending ability, and the time required to get dressed."

Kullich et al., 2006, Journal of Back and Musculoskeletal Rehabilitation, 19, 2006, 79–87

"Those patients who were treated with magnetic resonance therapy had significantly fewer sick days [...]. Sick leave before therapy was 14.7 days, after therapy 5.8 days. In contrast, the sick leave of the control group [without MBST] was 7.6 days before therapy and 13.8 days after therapy."

Salomonowitz et al., 2011, Z Orthop Unfall, 2011, 149(5), 575–581, DOI 10.1055/s-0031-1280121

Kullich et al. 2006, Rheumatologia, 20/1, 7–12 • Kullich et al 2006, Journal of Back and Musculoskeletal Rehabilitation, 19, 79–87 • Salomonowitz et al., 2011, Z Orthop Unfall, 2011, 149(5), 575–581, DOI 10.1055/s-0031-1280121 • Kutenev et al. 2017, Moderne Medizin, 1/5 • Levchenko et al. 2017, Saratov Journal of Medical Scientific Research, 13/3



BASIC RESEARCH

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Baños 2021, Nerve card – the function card [16]
Clinical Evaluation Report (CE-TPL-01) in accordance with Medical Device Regulation (EU) 2017/745 and MEDDEV 2.7/1 Rev. 4 for the MBST Product Family, medXteam GmbH, 22.03.2022, Rev. 2.0 [6]

Patient experiences



The surgeon told me three months with crutches and a splint so that it wouldn't be overstretched. And yes, we went on vacation three weeks later. I hope the surgeon doesn't watch this video, but I didn't have the crutches or the splint with me. So it improved really quickly, much quicker than expected and that was great.

Sven G., 39 | Post-surgery after muscle rupture



Before the treatment, I could walk only about 20-30 meters and that with crutches. Two weeks after completing MBST therapy, I was pain-free when walking slowly and sitting down. Six weeks later, I could go for longer walks again. Since three months after MBST, I can go for walks and even hikes for over three hours with no problems.

Nina H., 67 | Osteoporosis with vertebral fractures



My MBST treatment was 6 years ago and I've had no issues since then. I can ride my racing bike again, I can dance with my wife and I can also go hiking for long periods. For me, the attempt has paid off.

Wolf H., 72 | Osteoarthritis of the knee



With MBST and additional physiotherapy, stretching exercises, walking and a sitting ball, I didn't have to call out sick for a day. I was immediately fit to work again and without having to suffer. Without MBST, I probably wouldn't have been able to return to work so soon.

Jenni K., 44 | Lumbago



The swelling went down and I could move better. Obviously, I had to try out if the therapeutic success would hold up to sports activities. And I can only say: Yes! I cycle, swim and do cardio and the pain hasn't returned. This is the longest pain-free period I've had since 2015.

Marc S., 23 | Chronic inflammation of the knee



Want to know more?

More information, studies and patient experiences can be found on the MBST® Webseite or ask your MBST® treatment centre.

mbst.com

Your MBST® treatment centre

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Patient Information:
In line with the German Medicines Advertising Act [HWG], we are required to note that the effectiveness of MBST® Magnetic Resonance Therapy is currently still debated in conventional medicine. More than 30 clinical studies and basic reasearch exist, but sufficient scientific evidence is not yet available for all areas of treatment. Since each person responds differently, no treatment can guarantee success. Statements regarding treatment possibilities, applications, effectiveness, and tolerability are based on the experiences in the application of MBST® by treatment centres and their patients and do not constitute a promise of improvement or cure. Therapy is conducted solely upon the patient's request, as a self-paid service and after a medical diagnosis and detailed advise incl. contraindications and potential accompanying effects. Public and private health insurers are not obliged to reimburse costs. The content of MedTec publications is intended for general health information and should not replace medical advice, diagnosis, or treatment or be used for independently changing or terminating ongoing therapies. Always consult your trusted doctor if you have any health concerns or questions.

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