

TMRTM Ortho

THERAPEUTIC MAGNETIC RESONANCE

Medical device for clinical and home treatment of orthopedic pathologies, surgical or traumatic injuries and pain management.



THERESON

THERSON is the Italian company that has developed **TMR[®] Therapeutic Magnetic Resonance**, an innovative technology for the non-invasive treatment of orthopaedic pathologies.



2 to 4 TMR[®] applications per day
are sufficient

Applications

TMR[®] is indicated for the treatment of many orthopedic pathologies, including:

- ✓ Osteoporosis and bone marrow edema
- ✓ Tendinitis and calcific tendinopathies
- ✓ Epicondylitis
- ✓ Arthritis, arthrosis and joint stiffness
- ✓ Simple and complex fractures
- ✓ Delays in fracture consolidation
- ✓ Injuries resulting from surgery or trauma, particularly if covered with a plaster cast or plaster splint or requiring a dressing, bandage or brace.

Benefits

- ✓ Ease of use
- ✓ No direct contact with any skin lesions
- ✓ Acts on pain
- ✓ Complementary to other treatments
- ✓ Can also be used where there is a plaster cast, plaster splint or brace
- ✓ Outpatient and home therapy.

The TMR[®] Technology

TMR[®] Therapeutic Magnetic Resonance is a particular form of biological tissue stimulation using low frequency and low intensity pulsed magnetic fields, based on a biophysical process validated in the literature.

Since 1957, numerous studies have been conducted demonstrating the effectiveness of certain forms of magnetic therapy in the treatment of bone lesions due to trauma or calcium content reduction.

The electromagnetic forces acting on the bone are decisive for its growth and repair, when necessary. Magnetic factors are now considered the basis of an adequate biological response.

FDA

Food & Drug Administration

The FDA has for years approved the use of pulsed electromagnetic fields for the treatment of bone consolidation delays, for the reduction of edema in soft tissue and for analgesic efficacy in pain treatment.

What is unusual about pulsed magnetic fields is that they are able to stimulate the bone tissue **both mechanically and electrically**, inducing **bone repair**.

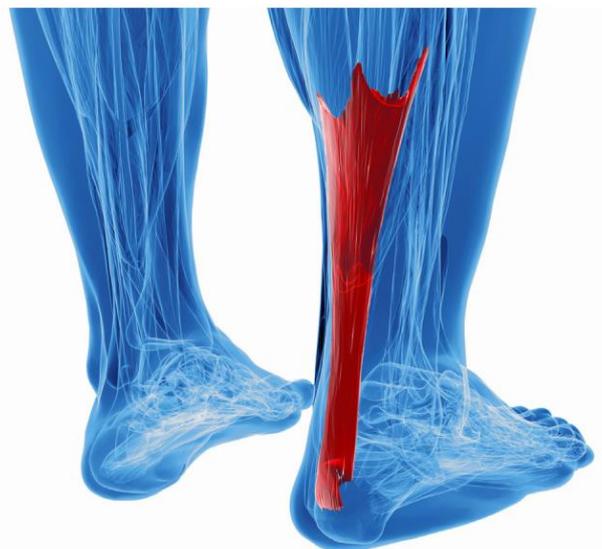
Recent scientific publications have highlighted the clinical efficacy of TMR[®] in reducing inflammation and pain, **reactivating the cellular replication mechanism necessary to repair lesions and reduce edema**.

Specific in vitro tests have demonstrated the biological effect of TMR[®] **electromagnetic fields on the absorption mechanism** of intracellular calcium, **the reduction of oxidative stress and the restoration of microcirculation and vascularization**.

Recent in vitro tests conducted at the University of Padua have shown that by stimulating stem cell cultures in osteogenic medium with TMR[®], a **significant increase** in osteoblasts and osteogenic genes is obtained compared to controls.

TMR[®] and inflammation reduction

Treatment with TMR[®] **is able to** reduce the inflammatory state of the injured tissue, common to several chronic orthopedic pathologies, such as arthritis, epicondylitis, tendonitis and injuries resulting from trauma or surgery.



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THERAPEUTIC MAGNETIC RESONANCE

A new and effective non-invasive therapy that can be performed by the patient on an outpatient basis or in the comfort of their own home.

TMR[®], THERESON makes the benefits of Therapeutic Magnetic Resonance available in a compact, lightweight and extremely easy to use medical device.

The TMR[®] system is designed to be used directly by the patient at home, without the help of a medical professional. The sessions do not require special dressings or preparations, the patient does not need to undress or remove bandages, plaster casts or braces.

All the controls are clear and simple so that everyone can use them; no special training or familiarity with the technology is required. The data on therapies conducted using TMR[®] **can be sent to physicians, thus allowing effective** continuity of care to be maintained between healthcare professionals and patients across the region.

TMR[®] is the only instrument capable of acting on both the bone repair process and the wound healing process.



 **THERESON**
THERAPEUTIC MAGNETIC RESONANCE

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