



Scientific studies

Magnetic field training

Pontemed academy

The PonteMed Academy is an international circle of experts from both scientific and practical applications in the field of **“Functional Magnetic Stimulation (FMS)”**, which forms the basis of PelviPower® training.

Other scientific names are: **“Repetitive Peripheral Muscle Stimulation (RPMS)”** or **“Pulsed Magnetic Stimulation (PMS)”**.

Application examples

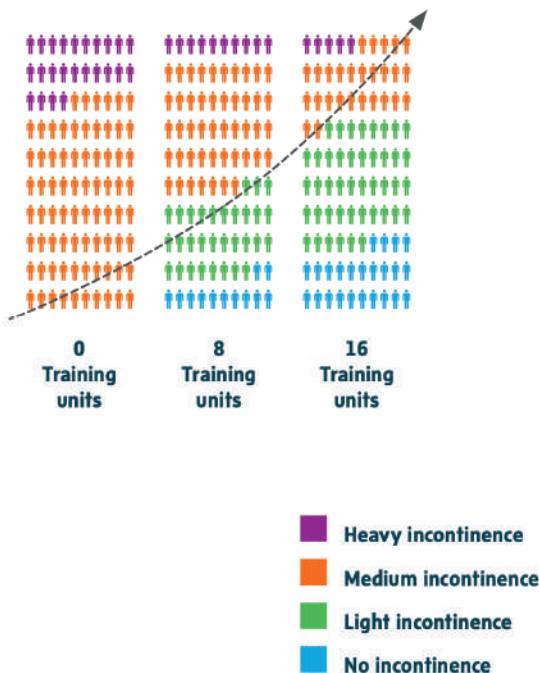
PelviPower® training is a non-invasive, neuro-muscular training by means of a magnetic field with the aim of improving the **functionality and strength of the pelvic floor** and the surrounding musculature.

Studies show that magnetic stimulation improves the functionality of the pelvic floor and can be used for a variety of preventive and therapeutic applications and to increase quality of life.

The PonteMed Academy is committed to continual analysis and review of research worldwide, and provides up to date, systematic results for the diverse applications of PelviPower® training in prevention and therapy.



Significant improvement
of severe and moderate incontinence
after only 8 weeks.



Voiding Dysfunction

Pulsed Magnetic Stimulation for Stress Urinary Incontinence: 1-Year Followup Results

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Abbreviations and Acronyms
 ICI = International Consultation on Incontinence
 ICIQ-LUTSqol = ICI Questionnaire-Lower Urinary Tract Symptoms Quality of Life
 ICIQ-UI SF = ICI Questionnaire for Urinary Incontinence-Short Form
 PFM1 = pelvic floor muscle
 PFM1 = PFM training
 PGI-I = Patient Global Impression of Improvement
 PMS = pulsed magnetic stimulation
 SUI = stress urinary incontinence

Purpose: Despite significant differences in success rates between surgical and nonsurgical treatments for female stress urinary incontinence, a few cross-sectional surveys showed that most patients still prefer the latter. We evaluated the efficacy of the under studied nonsurgical treatment using pulsed magnetic stimulation for female stress urinary incontinence.

Materials and Methods: This randomized, double-blind, sham controlled study was performed in 120 female subjects at least 21 years old with stress urinary incontinence. Treatment involved pulsed magnetic stimulation for 2 sessions per week for 2 months (16 sessions). After 2 months, subjects could opt for 16 additional sessions regardless of initial randomization. The primary response criterion was a 5-point reduction in the ICIQ-UI SF (International Consultation on Incontinence Questionnaire for Urinary Incontinence-Short Form) score. Key secondary response criteria included objective and subjective cure, supplemented by other secondary criteria. Followups were performed at months 1, 2, 5, 8 and 14.

Results: At 2 months 45 of 60 subjects (75%) in the active arm vs 13 of 60 (21.7%) in the sham arm were treatment responders (p < 0.001). After 2 months 24 subjects (40%) in the active arm and 41 (68%) in the sham arm elected additional active pulsed magnetic stimulation. At 14 months, subjects who received 32 sessions of active pulsed magnetic stimulation had the highest percentage of treatment responders (18 of 24 or 75.0%), followed by those who received 16 sessions (26 of 36 or 72.2% and 28 of 41 or 68.3%) and those who did not receive any active pulsed magnetic stimulation (4 of 19 or 21.1%) (p < 0.001).

Conclusions: The encouraging long-term response rates show that pulsed magnetic stimulation is an attractive nonsurgical alternative for patients who do not want to undergo surgery.

Key Words: urinary bladder; urinary incontinence, stress; pelvic floor; magnetic field therapy; risk

Stress urinary incontinence is a common and distressing condition.^{1,2} The 5th ICI advocated PFMT with success rates of 15% to 56% as the gold standard nonsurgical treatment.^{3,4} However, there is no standardized PFMT regimen⁵ and the success of PFMT is often limited by poor compliance.^{6,7} Other nonsurgical options (eg biofeedback, vaginal cones and electrical stimulation) are limited by low success rates of 9% to 63%,

Excerpt study list

Area : Incontinence

Sun et al. (2020) conducted a high quality meta-analysis of randomized controlled trials on the use of magnetic stimulation for female stress urinary incontinence. It revealed that magnetic stimulation has a positive effect on stress urinary incontinence, with no adverse reactions across all studies.

He et al. (2019) show in a systematic review and meta-analysis that magnetic stimulation reduces symptoms and improves quality of life in all forms of urinary incontinence (stress-, urge- and mixed incontinence).

Area : Sexual function

Abd El-Rahman et al. (2020) show a significant improvement in erectile function after training on a magnetic stimulation chair. They conclude that functional magnetic stimulation is an effective, conservative, noninvasive and safe method for treatment of erectile dysfunction.

Area : Support function of the pelvis floor

Zhang et al. (2020) found an improvement in the stage of prolapse, improved pelvic floor awareness and contraction in a retrospective study of young postpartum women after magnetic stimulation of the pelvic floor in combination with electrical stimulation.

Area : Back

Savulescu et al. (2021) demonstrated both pain improvement and peripheral nerve regeneration after repeated peripheral magnetic stimulation (RPMS) of lumbar radiculopathy (a pain condition affecting the nerves in the lower back.)

Area : Prostate / Pelvic pain

Giannakopoulos et al. (2011) carried out an RCT that showed significant improvements in the symptoms of clients with enlarged prostate in the magnetic stimulation group that persisted one year later ! This was a stark contrast to the participants in the control group (drug therapy), who all had to undergo prostatectomy surgery after the completion of the study because of deteriorated symptoms and no change in prostate size !

Kim et al. (2013) conclude that magnetic stimulation is a new training option for clients with chronic prostatitis or pelvic pain syndrome who do not respond to pharmacological treatments. They showed significant improvements post-treatment, which were maintained in the 24 week follow-up.

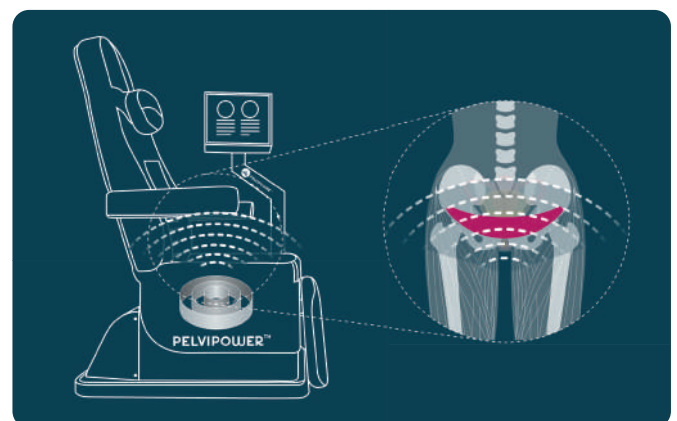
Area : Core strengthening sport

Ptaszkowski et al. (2020) observed increased pelvic floor activity using surface electromyography (sEMG) after magnetic stimulation training in a prospective, randomized, single-blind study with sham intervention group. Their results show that magnetic field training improves pelvic floor activity, control and functionality.

Area : Postnatal recovery

Silanteva et al. (2020) show that magnetic stimulation was significantly more effective than electrical stimulation in improving symptoms of pelvic floor dysfunction in postpartum women. This significant difference was shown in the improvement of pelvic floor muscle contraction (electromyography) and also in the subjectively reported perceptions (a validated questionnaire).

Sabbour & Shaffik (2009) showed in a randomized controlled trial that pelvic floor magnetic stimulation alongside pelvic floor exercises are more effective than pelvic floor exercises alone in treating postpartum fecal incontinence. Significantly improved results were seen after magnetic stimulation in both subjective and objective (Anorectal manometry) measures.





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