



Extracorporeal electromagnetic stimulation (ES) is a technique based on Faraday's law of magnetic induction, approved by the United States Food and Drug Administration (FDA) in 1998, for stimulating the central and peripheral nervous system. It generates electrical activity, which induces controlled depolarization of the nerves, resulting in pelvic muscle contraction and sacral S2-S4 roots neuromodulation.

Chronic pelvic pain syndrome(CPPS)/ prostatitis IIIB are complexconditions characterized by pelvic pain, dysuria, and reduced quality of life. Traditional treatment methods (medical therapy, physical therapy) are not always effective, requiring the search for new approaches. ES is an innovative method that affects the neuromuscular system and blood circulation of the pelvis.

### Aim

To evaluate the effectiveness of ES application in men with chronic pelvic pain syndrome/prostatitis IIIB. - To study the

## Method

- 37 men aged 25 to 55 years with diagnosed CPPS/prostatitis III B.
- Inclusion criteria: presence of CPPS for more than 3 months, absence of infectious process confirmed by laboratory tests.
- Extracorporeal magnetic stimulation device (Salus Talent Pro).
- Magnetic field intensity: 3 Tesla.
- Course duration: 10 sessions for 20 minutes each, 2 times a week.
- The mechanism of action is explained by the peculiarity of the nervous system response, so at a frequency of 1-4 Hz (tetta rhythm) in the stage of deep sleep there is myorelaxation of all muscles. Using this mode, we depress the nervous system and achieve myorelaxation.

NIH-CPSI questionnaire before and after treatment was used to evaluate the result of the treatment.

The NIH-CPSI assesses three main parameters:

dynamics of NIH-CPSI (National Institutes of Health Chronic Prostatitis Symptom Index) questionnaire indicators before and after the treatment course.

- Pain symptoms (scale from 0 to 21 points).

- Dysuria symptoms (scale from 0 to 10 points).

- Quality of life (0 to 12 point scale).

Statistical analysis: - Using Student's paired ttest. Level of significance: p < 0.05.



Extracorporeal magnetic stimulation device (Salus Talent Pro) – photo 1.

# Efficacy of Extracorporeal Electromagnetic Stimulation in Men With Chronic Pelvic Pain/Prostatitis III

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One of the sensors of the magnetic stimulation device. (photo 2).



Extracorporeal magnetic stimulation device (Salus Talent Pro). Auto regime, frequency of 1-4 Hz (tetta rhythm) photo 3.



## Results

### **Before treatment:**

- NIH-CPSI total score: mean  $28.5 \pm 3.2$ .
- Pain symptoms:  $16.8 \pm 2.5$ .
- Dysuria symptoms:  $7.5 \pm 1.2$ .
- Quality of life:  $9.2 \pm 1.8$ .

### **Post-treatment:**

- NIH-CPSI total score: mean 12.3  $\pm$  2.8 (p < 0.001).
- Pain symptoms:  $7.2 \pm 1.8$  (p < 0.001).
- Dysuria symptoms:  $3.1 \pm 0.9$

(p < 0.001).

Quality of Life:  $4.5 \pm 1.1$  (p < 0.001).

### **Overall treatment efficacy:**

- A positive was observed in 85% of patients.

- A moderate effect without a complete disappearance of the symptoms was observed in 15% of the patients. Discussion of results

Mechanisms of action of ES:

- Improvement of microcirculation in the pelvic organs.
- Reduction of muscle spasm and normalization of pelvic floor muscle tone.
- Stimulation of the nervous system produces antidepressant and analgesic effects.

Advantages of the method:

- It is non-invasive and has no side effects.

- Possibility of use in combination with other methods of treatment



Fig.1 NIH-CPSI questionnaire before and after treatment (pain, dysuria, quality of life).

### Magnetic Stimulation Protocol for Pelvic and Bladder Conditions Tabl.1

NAME	MODE	AREA	FREQUENCY, Hz	INTENSITY	TIME
Pelvic pain	M7	Pelvic floor, sacrum, lumbar area	10, 50 Hz	2% to 100%	20 min
Urinary incontinence	A2	Pelvic floor	3-23 Hz	2% to 100%	20 min
Hypoactive bladder	A2	Bladder	3-23 Hz	2% to 100%	10 min
		Pelvic floor, sacrum, lumbar area	3-23 Hz	2% to 100%	10 min
Hyperactive bladder	A2	Pelvic floor, sacrum, lumbar area	3-23 Hz	2% to 100%	10 min
		Tibial nerve	3-23 Hz	2% to 100%	10 min

This refers to the specific settings or protocols used on the magnetic stimulation device. Each mode is tailored to address a particular condition.

- M7 : Likely a mode specifically designed for treating pelvic pain.
- A2 : A mode used for addressing conditions like urinary incontinence, hypoactive bladder, and hyperactive bladder.

The table serves as a comprehensive guide for using magnetic stimulation therapy to address various pelvic health and bladder function issues. It breaks down the treatment parameters into manageable components, ensuring that healthcare providers can apply the therapy effectively and safely for their patients.

### Conclusion

1- Extracorporeal electromagnetic stimulation is a highly effective method of the treatment for men with chronic pelvic pain/prostatitis IIIB.

2. Significant reduction in NIH-CPSI scores confirms the positive effect of ES on pain symptoms, dysuria and quality of life of patients.

3. As part of the complex therapy of chronic prostatitis IIIB, the introduction of ES into clinical practice is recommended.

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