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## Empathy-technique for patients with phantom limb pain

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**Introduction**: The Empathy-Technique (ET) can be regarded as an upfront method of phantom limb pain (PLP) elimination. It is aimed at removing the excitation focus in the brain structures and increasing of antinociceptive system activity.

**Objectives**: The objective of the study is to determine the ET effect in treatment of PLP patients.

**Materials**: Seventy-nine patients suffered from PLP and empathy-technique method was used for neutralizing PLP and decreasing pain sensations in the stump trigger points (TP).

**Results & Discussion**: In contrast to high intensity of PLP ( $6.61\pm0.22$ ) before the empathy-technique session, substantially lower PLP intensity level ( $2.25\pm0.17$ ) (p<0.001) was recorded after it. Testing colors of visual sensations by the patients with their eyes closed at the pain stimulation and after it, demonstrated that both PLP and pain in the stump TP were perceived in the colors of both the long-wave part of chromatic zone spectrum and the dark–gray colors of achromatic zone (pain colors). During the pain intensity reduction, there were changes of the visual sensation colors from pain colors to the medium and short-waves colors and light grey one (healthy colors). The decrease in PLP intensity and stump pain might be explained by the convergence of visual and pain modalities at the thalamus level. At this, visual and pain signals are transmitted along the thalamocortical pathways into the associative zones of cerebral cortex. There, an evaluation of incoming information is carried out and the flow of impulses is formed which enhances the inhibitory effect of the antinociceptive system. As the result, the focus of pathological excitation in the brain structures is removed. The values of empathy-technique are that, this not only eliminates (erases) the irritation focus and enhances the antinociceptive system activity, but also mobilizes the reserve resources, and has no side effects. Besides, the patients are able to practice this method independently out of clinic.

## **Recent Publications:**

- 1. Cliff Richardson and Jai Kulkarni (2017) A review of the management of phantom limb pain: challenges and solutions. Journal of Pain Research 10:1861-1870.
- 2. Eugene Hsu and Steven P Cohen P (2013) Postamputation pain: epidemiology, mechanisms, and treatment. Journal of Pain Research 6:121-36.
- Vera A Ishinova, Irina A Svyatogor and Ilja U Ishinov (2017) Peculiarities of using empathy-technique and biofeedback as psychotherapy methods for chronic pain of psychogenic origin. Psychopatology and Addiction Medicine 2(1):18-25.
- 4. Vera A Ishinova and Ilja U Ishinov (2016) Features of using of empatho-technique for 7 patients with phantom pain. Psychopatology and Addiction Medicine 17-25.

## Biography

Vera A Ishinova is a Medical Psychologist at the Federal Research Center for Rehabilitation of the Disabled. Her educational background comprises three complementary research areas: medicine (Medical School, St. Petersburg), physiology (State University, Kalinin), and psychology (Institute of Psychoanalysis, St. Petersburg). She has an expertise in investigation and cure of chronic pain of various origins. She is the author of the patented method of psycho-physiological self-regulation (Empathy-technique), aimed at elimination of chronic pain. Empatho-technique is based on the concept of Kryzhanovsky et al. claiming that any disease is accompanied by the development of the excitation focus in the brain which quickly disappears after the irritation stops. If the irritant keeps functioning, the pathological system develops manifesting in the form of various symptoms including PLP. The effect of Empatho-technique is elimination of pathological excitation focus along with enhance in inhibitory effect of antinociceptive system.

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