**The impact of electrical stimulation Kots currents and dynamic and static exercises with biofeedback the function of the muscles acting on the knee joint in patients with gonarthrosis.**

 Dr n. med. Robert KLIMKIEWICZ

 Department of Rehabilitation and Physical Medicine

Head of Department: dr hab. Marta Woldańska – Okońska prof. UM

 Doctoral Dissertation – abstract

 Advisor - dr hab. Marta Woldańska- Okońska prof. UM

 Reviewers - prof. dr hab.Wojciech Hagner, prof. dr hab. Krystian Żołyński

 Official Doctoral Dissertation Date – 22nd of January 2013

 Approved by the Scientific Council of Military Medical Faculty - 5th of February 2013

Osteoarthritis is one of the most serious diseases, which comes to face modern medicine.
In about 30% of cases degenerative changes affecting the knee joint.

Important role in maintaining or rebuilding the efficiency knee, quadriceps plays.
In addition to numerous forms of kinesis therapy forming a single muscle of the methods used in physiotherapy training is muscle electrostimulation using medium frequency alternating current of 2500 Hz - the so-called.

**Aim:** The aim of this study was to assess the impact of electrical currents and exercises Kots biofeedback static and dynamic of the shaping forces of muscles acting on the knee joint in gonarthrosis.

**Material and methods:** The study was conducted in 2010-2012 in the Department of Rehabilitation and Physical Medicine, University Hospital them. Military Medical Academy - Central Veterans Hospital in Lodz. The material studied consisted of 120 patients of both sexes aged 25 - 80 years. Due to the applied treatment, they were divided into 4 groups. **Results and conclusions:** The results helped put the following proposals:

1. Electrostimulation Kots currents has a positive influence on the strength of her muscles stimulated extensor and flexor muscles of the knee.
2. Electrical stimulations Kots currents combined with static exercises of biofeedback intensely than with any of these exercises dynamic shapes and extensor muscle strength of knee flexors.

3. Electrical stimulation Kots currents, and static exercises of biofeedback and dynamic features       effective analgesic.

4. Kots electrical currents in the field of physiotherapy exercises affect the increase in functional       capacity of patients with gonarthrosis.

5. Elektrical stimulation Kots currents and dynamic exercise show greater efficiency in the        operation of reducing swelling in the knee joints gonarthrosis.