

# Physiological Approach to Muscle and Toning Therapy with Wonder® MT Device.

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## **I. INTRODUCTION**

Medical and cosmetic body remodeling treatments based on increasing muscle mass in specific areas of the body such as the buttocks, legs and arms are experiencing an exponential increase in demand from patients of all ages, genders and morphologies.

Numerous previous studies have amply demonstrated that tetanic contraction, a highly stressful condition that induces changes in muscle as an adaptive response, has been shown to be effective in increasing muscle mass accompanied by apoptosis and subsequent reduction in fat.

This study is based on the results of using a therapeutic and aesthetic device under the commercial brand Wonder® Medical Technology (Wonder MT), whose work is based on the combined radiation of focused electromagnetic waves and selective electrical stimulation of high intensity.

Since Wonder MT technology directly stimulates muscles, it can be used to tone and strengthen body parts such as the buttocks, abdomen, legs and arms. In terms of volume, the gluteus maximus muscle is one of the largest muscles in the human body, and its stimulation can produce positive results for the patient.

The aim of this study is not to provide definitive conclusions about the status of Wonder MT technology as an alternative to fat loss surgery, but to investigate its use as an effective and safe option for them.

## **II. DEVELOPMENT.**

Wonder MT technology can potentially be used in treatments to reduce localized fat mass, improve skin condition and tone body parts such as the abdomen, legs, and buttocks. It turned out to be a non-invasive method that provides a safe alternative to existing gluteal muscle shaping procedures.

This device uses the principles of electrical stimulation of skeletal muscles due to the combined radiation of electromagnetic waves focused on the buttocks, and selective electrical stimulation of high intensity.

This technology is based on the use of magnetic and electrical fields that change rapidly and generate electrical currents in the skin, depolarizing motor neurons and causing muscle contractions.

If the frequency of stimulation is greater than the time required to relax the muscles, the muscle is forced to contract super-maximally, that is, it cannot be provoked arbitrarily.

We hypothesize that the use of Wonder MT technology in the gluteus muscles can induce glute hypertrophy, as observed in the abdominal muscles, and can lead to aesthetic enhancement of the buttocks by lifting the gluteal fold and strengthening their structure.

The aim of this study is to conduct an initial investigation into the feasibility, safety and efficacy of gluteal muscle treatment with a device that uses Wonder MT technology.

### **III. RESEARCH PROCEDURE.**

For this study, treatment sessions were conducted with five people, two of whom were women and three were men. They were all overweight, moderately active, and were not on a restrictive diet.

All subjects received verbal instructions and information, after which they signed informed consent. Subject weight fluctuation was statistically analyzed using a test with a 5% significance level.

The subjects were placed the applicators of the device on the muscles of the abdomen, buttocks and legs. The treatment time in each case was 30 minutes. Following the protocol, patients were treated for 25 minutes with a hypertrophy program followed by 5 minutes with a cellulite program.

During the session, patients were instructed to perform a manufacturer-developed technique called WonderGym, consisting of voluntary contraction of the leg and abdominal muscles.

The sessions were carried out with a frequency of two sessions per week, with a break of at least two days between them. All patients reported muscle pain (stiffness) within 24-48 hours after each session, but this pain subsided within 72 hours.

### **IV. RESULTS.**

During treatment, it was possible to record a decrease in the thickness of the subcutaneous fat and a significant increase in the volume of muscle mass. Visual assessment of photographs taken before and after the sessions clearly shows a decrease in abdominal circumference by an average of 5 centimeters.

People admitted that now they feel better emotionally, feel a surge of strength and energy.

However, the fluctuations in the subject's weight were analyzed statistically and in no case showed significant changes. Considering the visual results, we can explain this fact as a consequence of the increase in muscle mass and loss of fat mass, which leads to a decrease in body volume, but not weight.

We linked the observed aesthetic improvement to the effect of Wonder MT in muscle, as an increase in muscle thickness has been reported in previous studies. Since muscle weakness plays a critical role in body laxity, correcting it is key to improving your overall appearance and creating an athletic, rejuvenated and desirable look.

Thus, we have come to a conclusion that is not final. We know Wonder MT Technology can treat muscle weakness by inducing super-maximal muscle contractions.

There is no quantitative and more objective assessment of treatment, such as MRI measurements of muscle thickness, MRI assessment of muscle volume, or 3D volumetric assessment.

### **V. CONCLUSIONS**

Analysis of the research results shows that Wonder MT technology can lead to very significant aesthetic improvement.

The result was visible to the naked eye after the second session and is quite satisfactory, according to the patients' expectations.

The treatment was safe and comfortable for the patients who found it extremely enjoyable and exciting. All expressed their intention to continue treatment.

The most notable effects were a decrease in abdominal fat mass, restoration of leg muscles, a buttock lift and, in the case of women, a skin tightening (e.g. greater firmness).

Based on our experience with Wonder MT, we believe it is a highly effective and safe option for important aesthetic results while accelerating fat loss and overall muscle regeneration.

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