TESLA-3000

ELECTRO MAGNETIC THERAPY

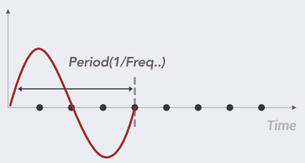
Unlike general electrical therapies used for pain treatment, magnetic therapy treats pain by generating a current induced in a non-contact manner instead of directly conducting current to and through the human body. When a magnetic field that changes rapidly in time is applied around an electrical conductor, an eddy current is formed in the conductor according to Faraday's Law (the human body has a lower electrical conductivity compared to metal, while having the properties of a conductor). The eddy current formed as described above stimulates the nerve cells and muscles, thus providing lasting pain relief effects. In other words, the magnetic therapy allows more fundamental treatment by stimulation of deep biological tissues that are not treatable with conventional electric treatment. The maximum strength of the electromagnetic field generated on the surface of the transducer is 100 to 140V/m, which is transmitted to the deep part of the human body and decreases as an exponential function. It safely stimulates the heart and treats it. An electromagnetic field of 15 to 30 V/m is generated at 100 mm deep inside the body safely stimulates the deep part. It enables the treatment of parts of the body where it is difficult to attach electrodes for electric therapy, while the harmless magnetic therapy significantly reduces tissue damage and other risks. In addition, a magnetic field has the property of passing through a specific medium without significant energy attenuation (treatment can be delivered with the patient wearing clothes), thus allowing treatment of the depth of the affected area.

LOW LEVEL LASER THERAPY [LLLT]

Researches on low-power laser treatment (600 to 904 nm / 2 to 100 mW) for biostimulation effect have been actively conducted since the 1980s. A study published by the Hyogo College of Medicine in Japan in 1993 suggested that the softer therapeutic effect and far superior safety of the low-power laser compared to high-power lasers, and in 2000, the European Society for Lasers and Energy-based Devices has verified its clinical effectiveness worldwide.

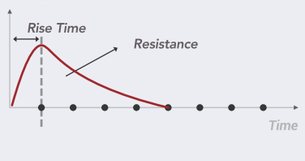
3 TYPES OF WAVEFORMS FROM A MAGNETIC FIELD

A. Biphasic



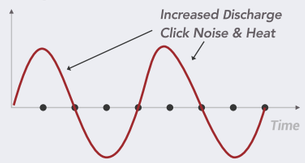
While making slightly more noise than Monophasic, it is a short pulse and the most effective for treatment by stimulating the deep part of the human body

B. Monophasic



Monophasic generates less noise and heat than Biphasic, yet it hardly affects the deep part of the human body

C. Polyphasic



Despite its effectiveness in stimulating the cortex on both sides of the human brain, Polyphasic generates a lot of noise and heat, and is not as precise.

A waveform with a narrow pulse and short rise time is suitable for penetrating deep into the body, whereas the less noise and less heat is generated, the better it is for the treatment of the human body. TESLA-3000 is a magnetic therapy device manufactured in a Biphasic, the most suitable waveform for the therapeutic magnetic field.

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TESLA-3000 PR brochure ENG Rev.1

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Electro Magnetic Stimulator

TESLA-3000

Great for Physiotherapy & Pain relief

TESLA-3000

Electro Magnetic Stimulator

Deep-penetrating Electromagnetic Field Therapy & Laser Therapy

TESLA-3000, a compound stimulus device for deep-stimulation electromagnetic field therapy and laser therapy, is a medical device for pain treatment that provides synergistic effects. It applies a strong time-varying magnetic field (Biphasic) instantaneously to the body that affects the depth of the muscles and nerve tissue to help relieve pain.

Features of TESLA-3000

1. The magnetic field safely and conveniently stimulates the nervous system without the interference of fat and bones, while causing no harm to the body
2. Offering non-invasive stimulation, it does not cause skin damage or pain.
3. The magnetic field penetrates deep into the human body, thereby allowing deeper and better stimulation compared to conventional electrical stimulation therapies.
4. A non-invasive, non-contact treatment can be performed even with the patient wearing clothes.

Application of TESLA-3000

1. Therapeutic laser - Pain relief
2. Electromagnetic therapy stimulator - Muscle pain relief

Advantages of TESLA-3000

1. High power and intensified stimulation
2. Stable operation even after a long period of treatment
3. Easy and convenient operation (learning how to use it takes no longer than 5 minutes)
4. It can be used semi-permanently without any maintenance costs including consumables
5. The minimum time required to complete the treatment of one patient

TESLA-3000 Specifications

Rated Voltage	AC 220~230V, 50/60Hz
Power Consumption	2KVA
Magnetic Field Strength	0~4.5T
Magnetic Field Waveform	Biphasic
Stimulation Frequency	0.1~30Hz
Treatment Mode	10 Automatic Mode
Size	38(W)×49(D)×141(H)cm
Weight	56kg

Treatment of Musculoskeletal Disorders

TESLA-3000 effectively relieves pain by applying non-invasive magnetic filed (deep stimulation) and using 3-point laser on the patient's tender points.

Treatment sites of TESLA-3000


Shoulder


Arm


Leg

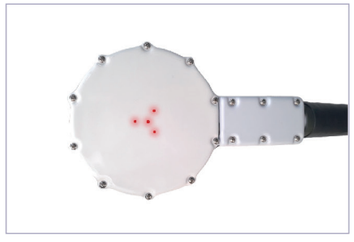

Waist

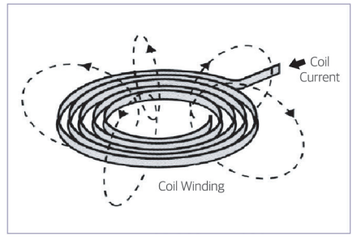

Hip joint


Achilles tendon

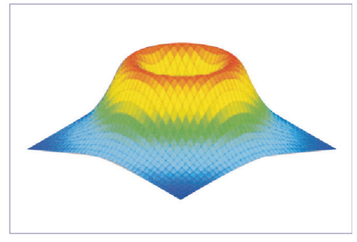
Magnetic Head(Transducer)

TESLA-3000 applies a strong biphasic magnetic field instantaneously to the body that affects the depth of the muscles and nerve tissue


3-Point Diode Laser



Induced magnetic field generated by a coil of wire


Simulation of induced electromagnetic field generated in the human body