



**The perfect
Workout**

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DISTRIBUTOR MEETING

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***Clinical Research & Practice
Department:***

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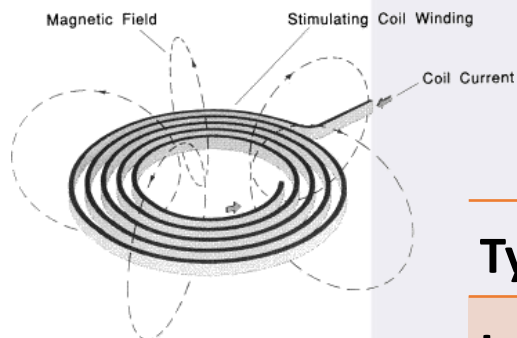
Lara Ronconi

Laura Pieri

Luca Giannoni

Schwarzy acts on different body areas and, in a few sessions, **tones and volumizes the muscles**, reducing localized fat, and improving the postural aspect.





Type of energy	Magnetic field
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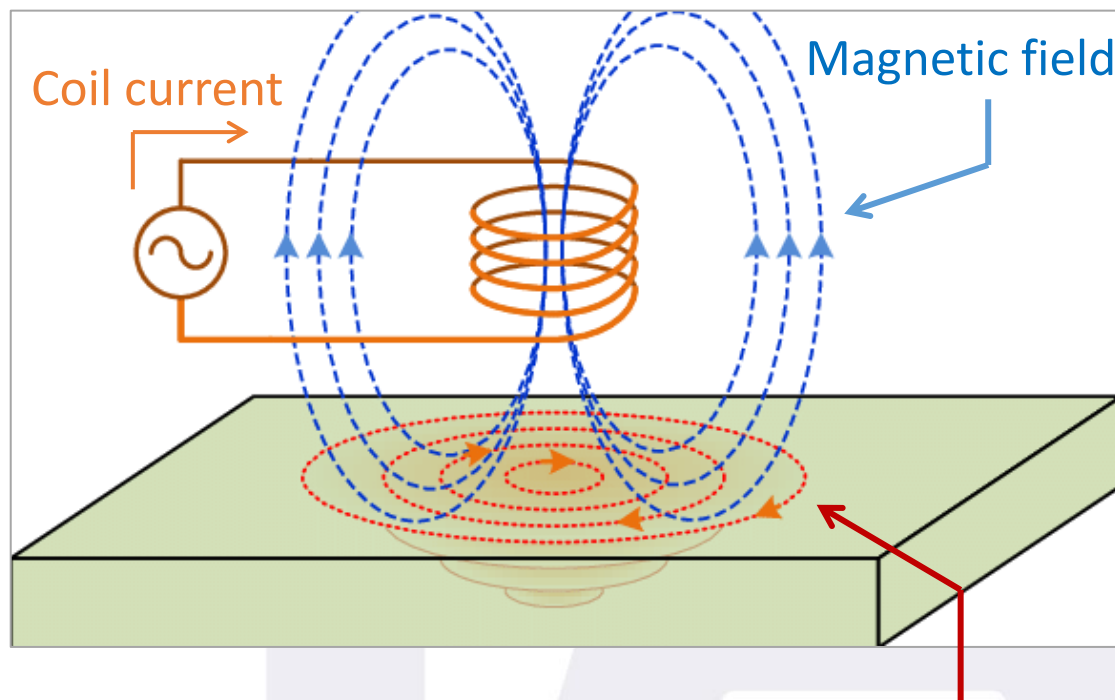
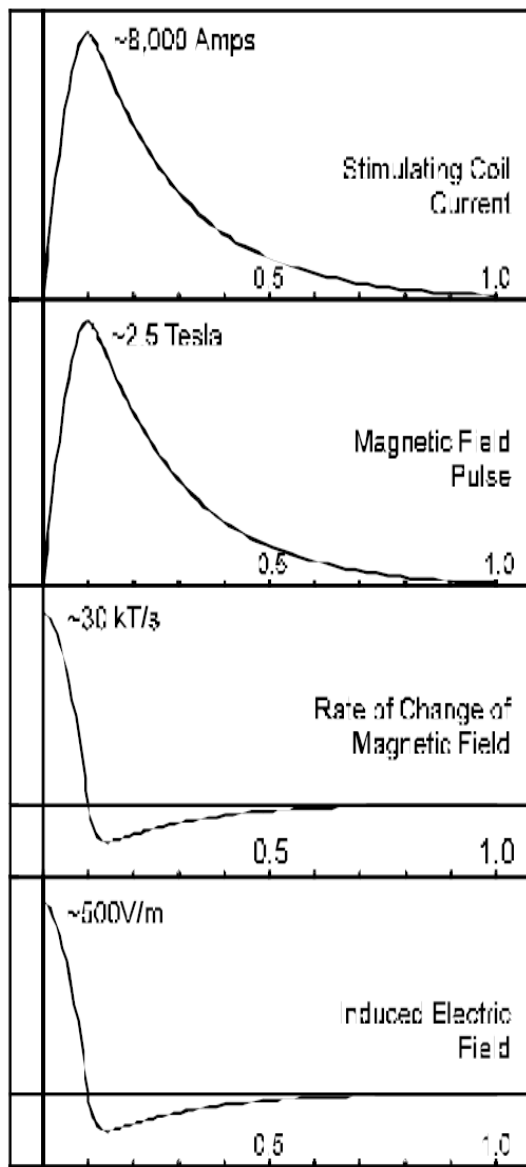
Intensity	up to 2.5 T
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Repetition Rate	1-150 Hz
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Pulse duration	250 ± 20% μs
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Mechanism of Action

The magnetic field in turn generates a current inside the body, and this depolarizes axons of motor units, stimulating the muscle fibers contraction.

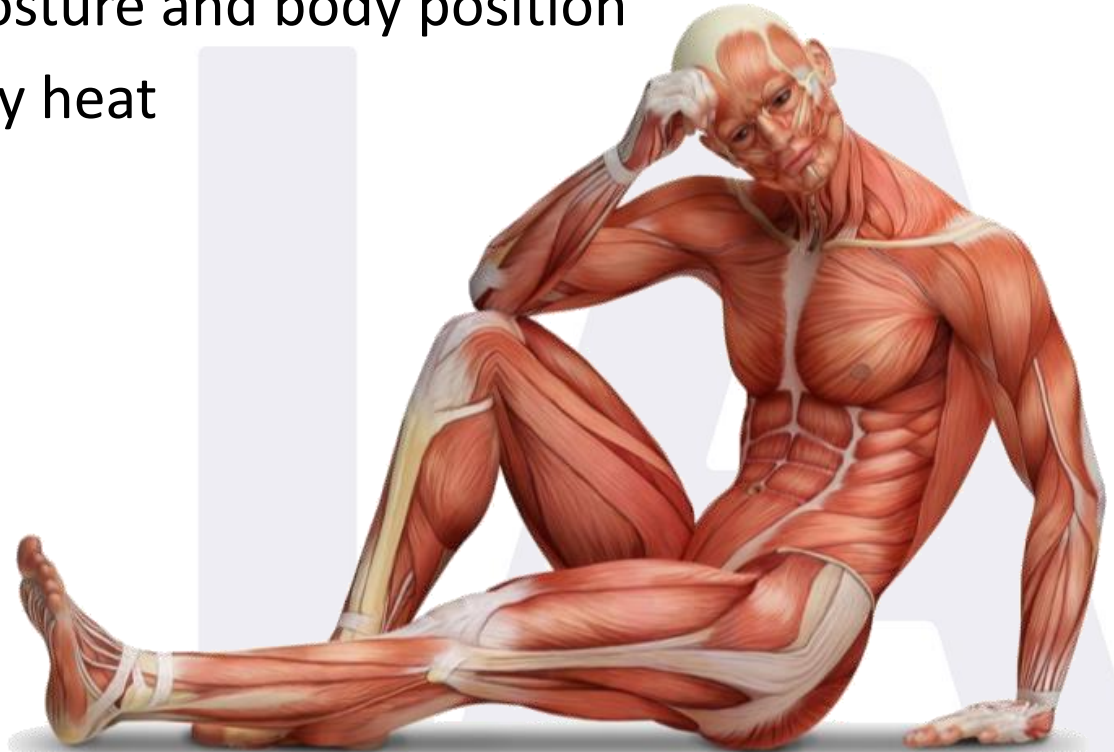


$$\mathcal{E} = - \frac{d\Phi_B}{dt}$$

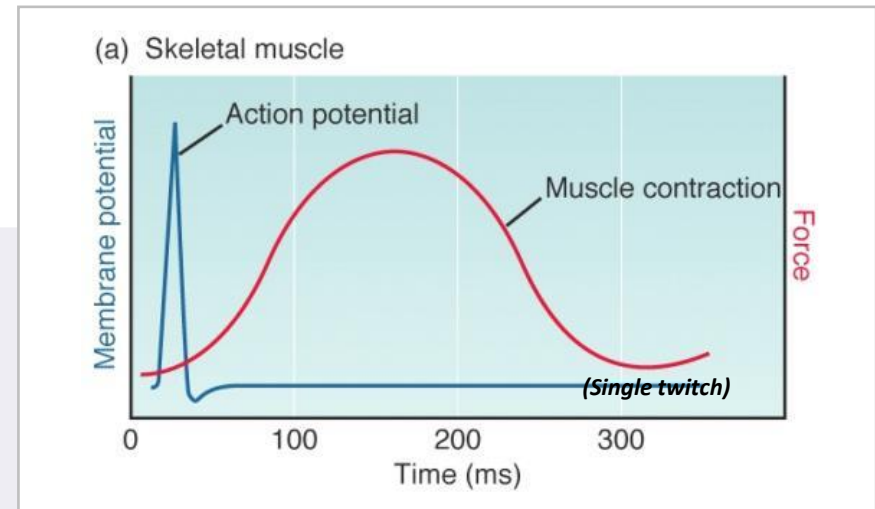
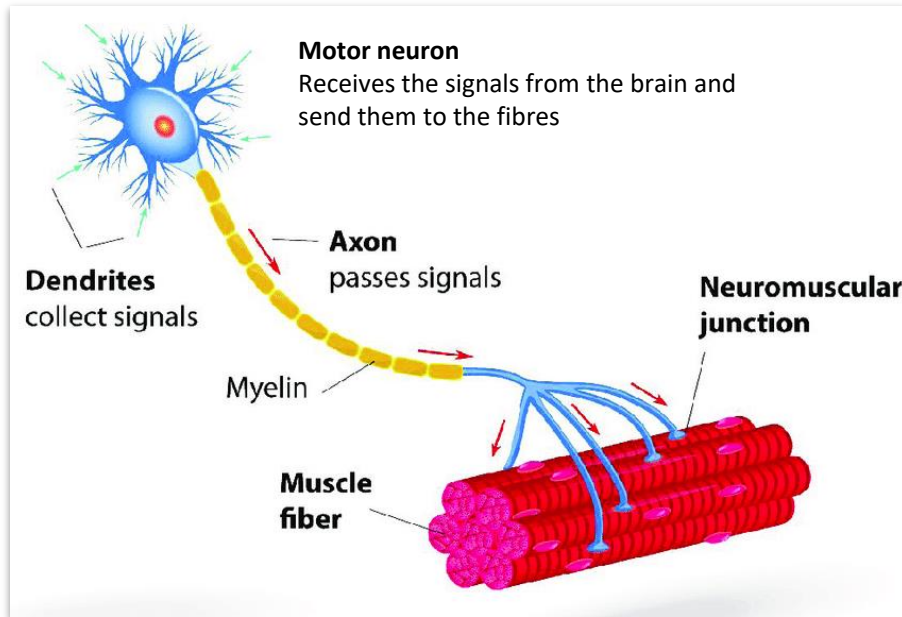
Electric field generated by the magnetic field

Function of Skeletal Muscle Tissue

- Movement by muscle contraction
- Maintenance of posture and body position
- Generation of body heat



Action Potential vs. Muscle Contraction



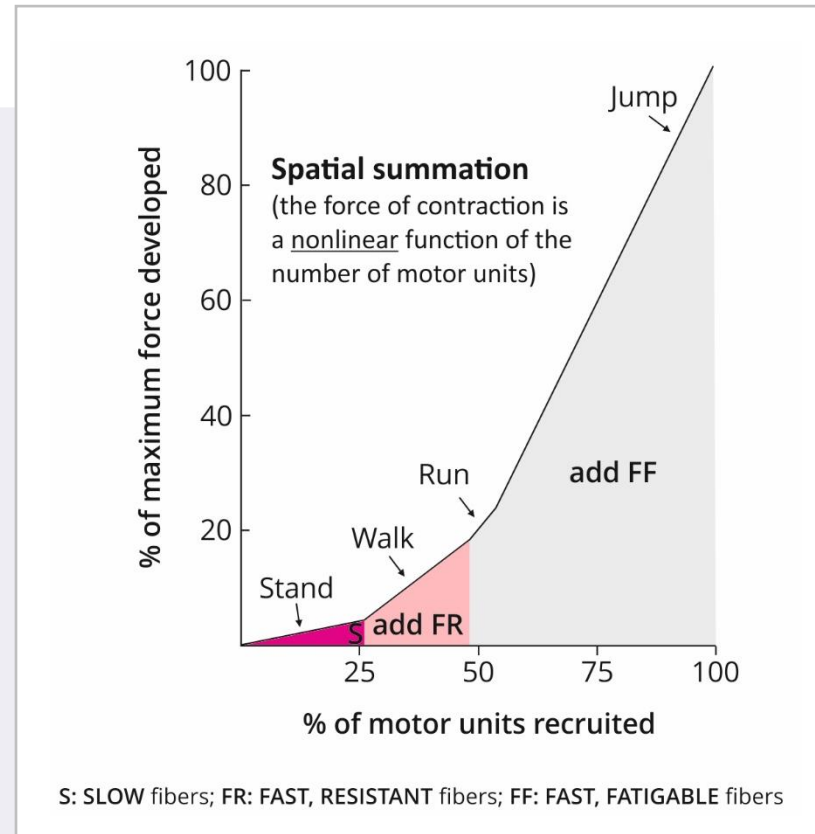
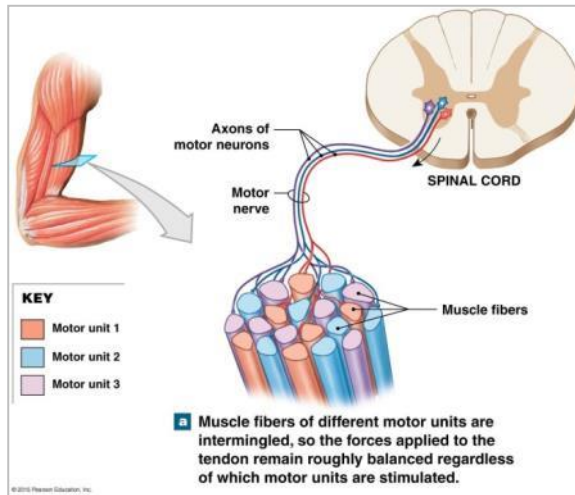
The main types of fiber, which have different physiologic and staining properties, include the following:

- **Type I or red fiber (slow)**
- **Type II fiber (fast, resistant, fatigable)**

Strength of Muscle Contraction

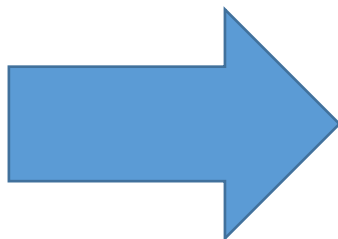
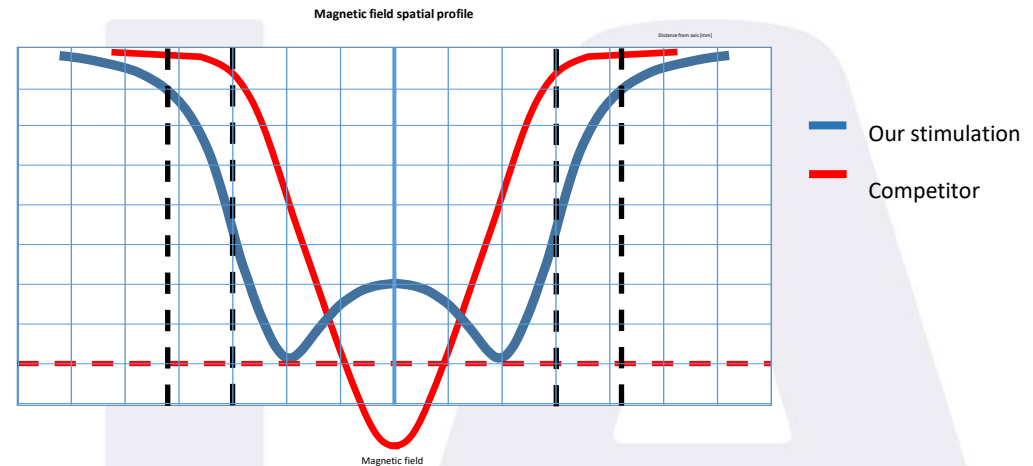
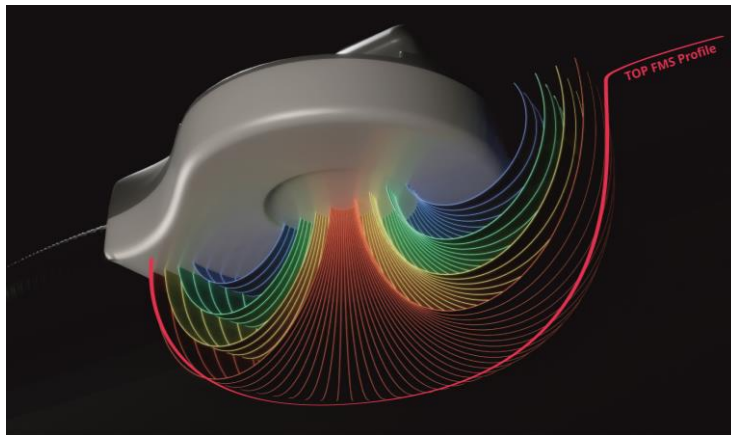
The strength of a muscle's contraction can be controlled by two factors:

1. Varying the **number of motor units** involved in contraction (**spatial summation**) and



TOP FMS (TOP Flat Magnetic Stimulation)

Uniqueness of the TOP FMS field:
uniform field lines over the entire muscle fascia.

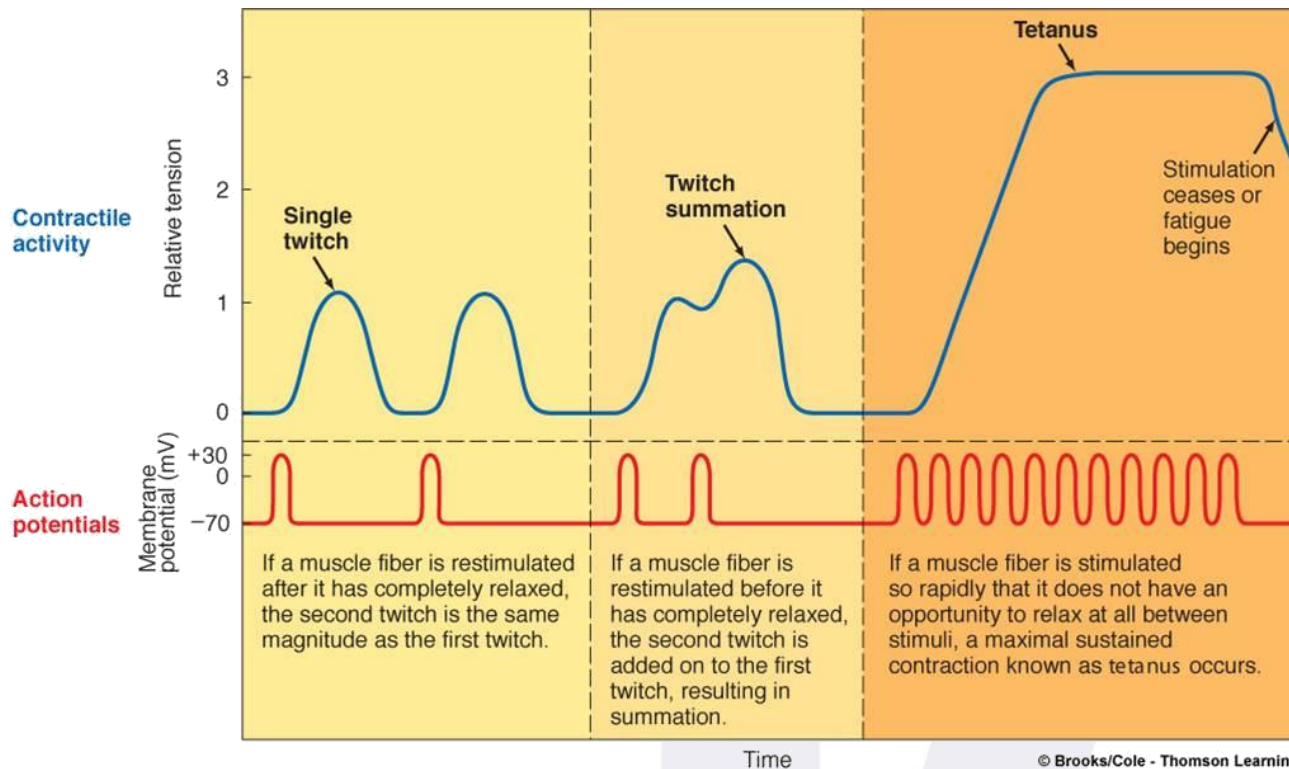


Homogeneous volumetric stimulation

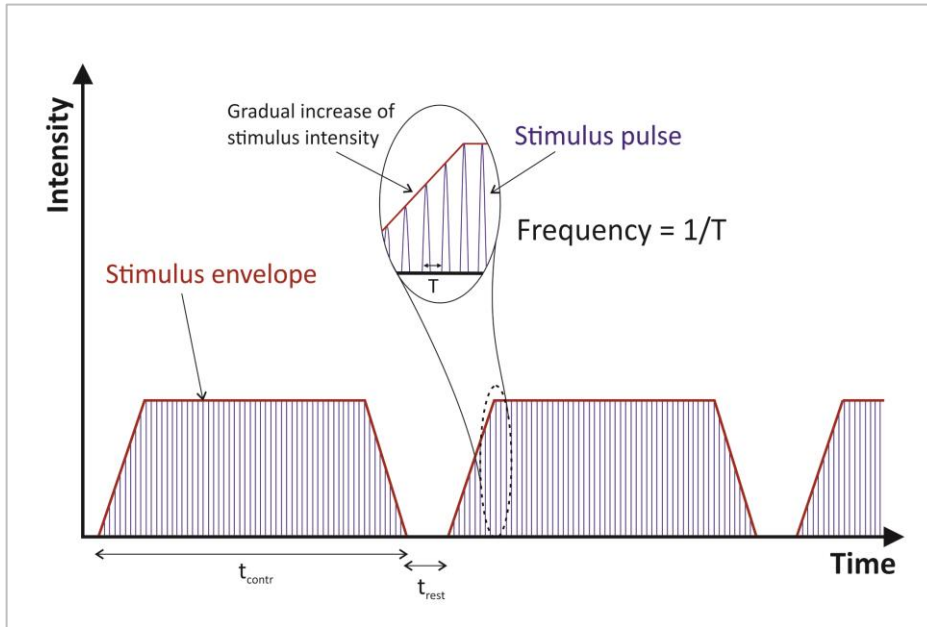
- Correct recruitment of fibers
- Minimal pain

Strength of Muscle Contraction

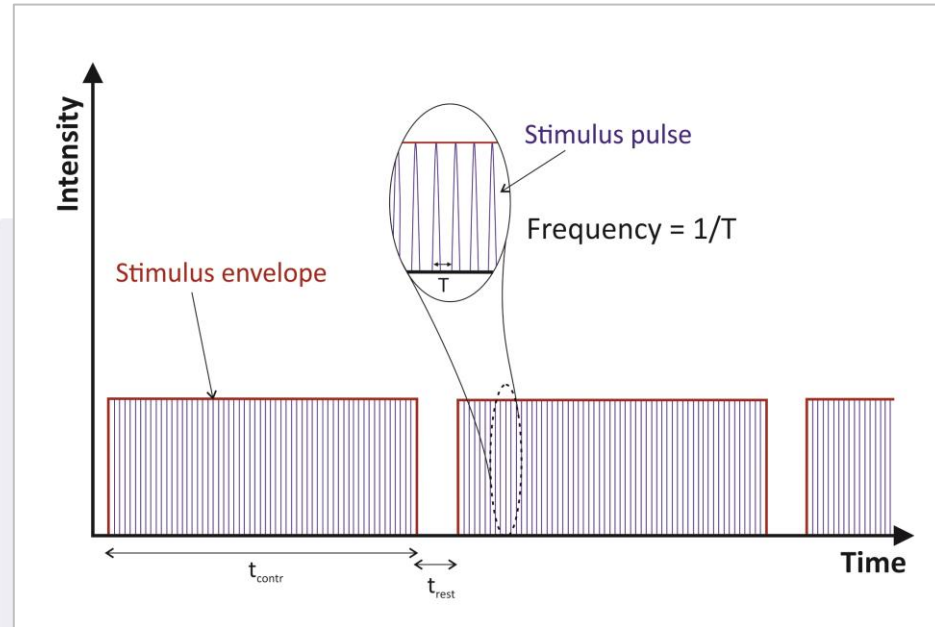
- Increasing the **amount of stimulus** from the nervous system (**temporal summation**).



Pulse Envelope Shapes

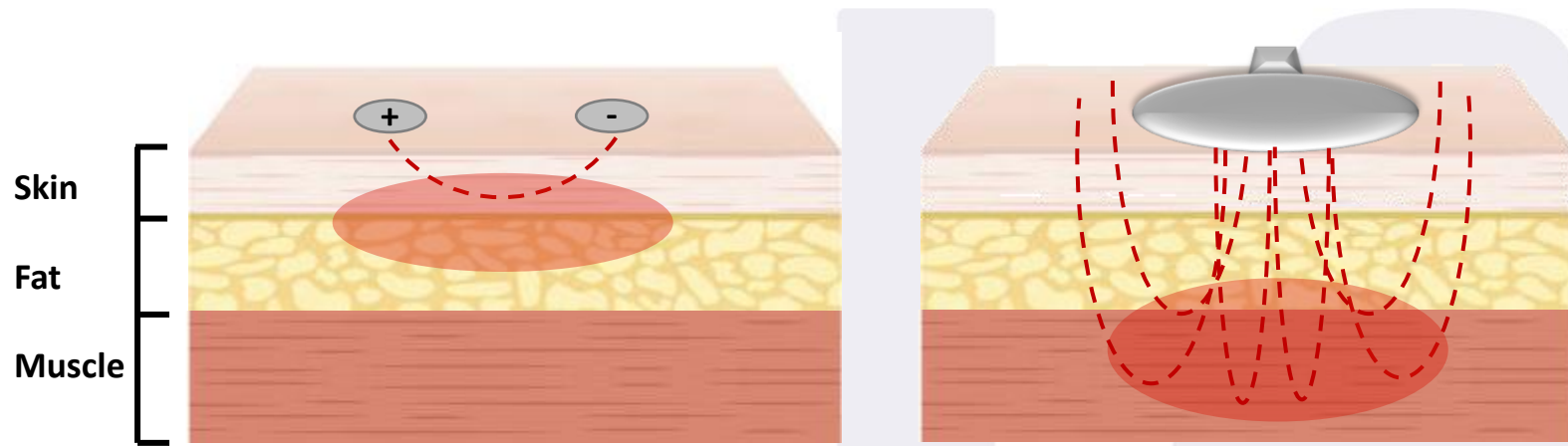


The envelope of pulse burst in every module **#1** is trapezoidal. This allows a gradual increase/decrease of pulses intensity generating muscle contraction.



The envelope of pulse burst in every module **#2** is rectangular. No gradual increase/decrease of pulses intensity. The stimulus for muscle contraction is simply on or off.

Magnetic vs. Electrical Stimulation



EMS



Pads & Areas

Couple of *round flat* pads, mainly suitable:

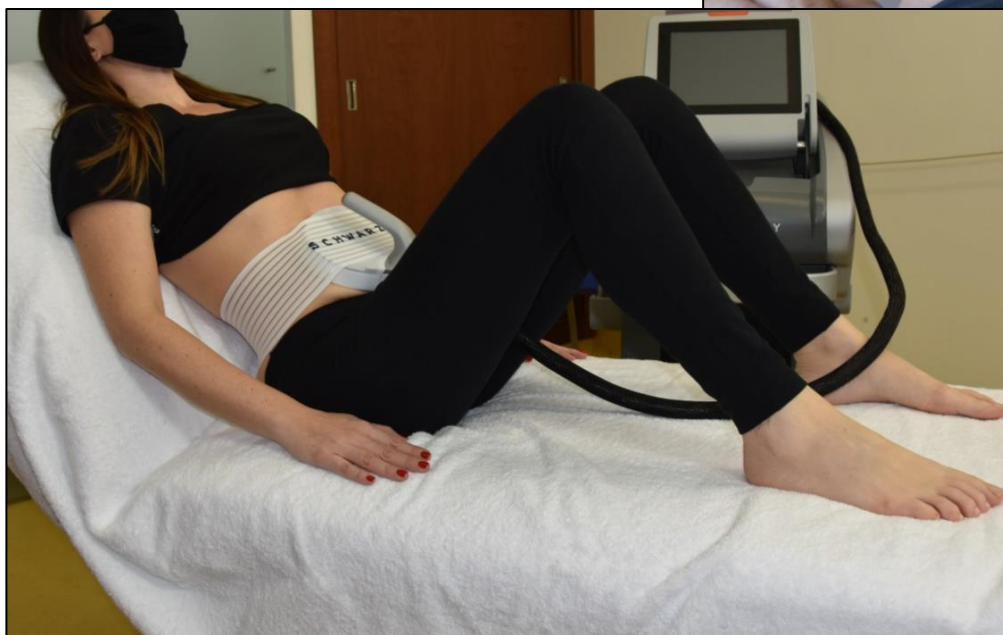
- Upper legs/thighs
- Buttocks



Pads & Areas

Single *oval flat* pad, mainly suitable for:

- **Abdomen**



Pads & Areas

Couple of *round curved* pads, mainly suitable for:

- Lower legs/calves
- Forearm





Aerobic Protocols - For Untrained Subjects



Target:

- Slow red fibers
- (Re)Activate muscle activity
- Non intense muscle contractions

Muscle Shaping Protocols - For Subjects with Flabby Muscle



Target:

- Slow red fibers
- Increase muscle tone – Muscle shaping
- Mild/intense muscle contractions

Muscle Strengthening Protocols - For Trained Subjects



Target:

- Fast white fibers
- Increase muscle power – Muscle building-up
- Intense muscle contractions

Safety & Comfort

With the protective covers to use for each patient:



Summary of Main Advantages

- **Non-invasive** system
- Greater penetration than ES
- No dermo-epidermal involvement
- **Painless**
- **Workout tailored for any patient** (with different pads specific for the different body areas and the Aerobic, Shaping and Strength preinstalled modules, editable by the user and upgradable by a USB key)
- Trapezoidal and square envelope pulses shape
- Exclusive **TOP FMS** magnetic field emission for a more uniform muscle action
- Perfect **synergy and integration with Onda** system

S C H W A R Z Y

Effortless and Progressive Muscle
Strengthening Through Neuromuscular
Stimulation

**THANK YOU FOR
YOUR ATTENTION**