



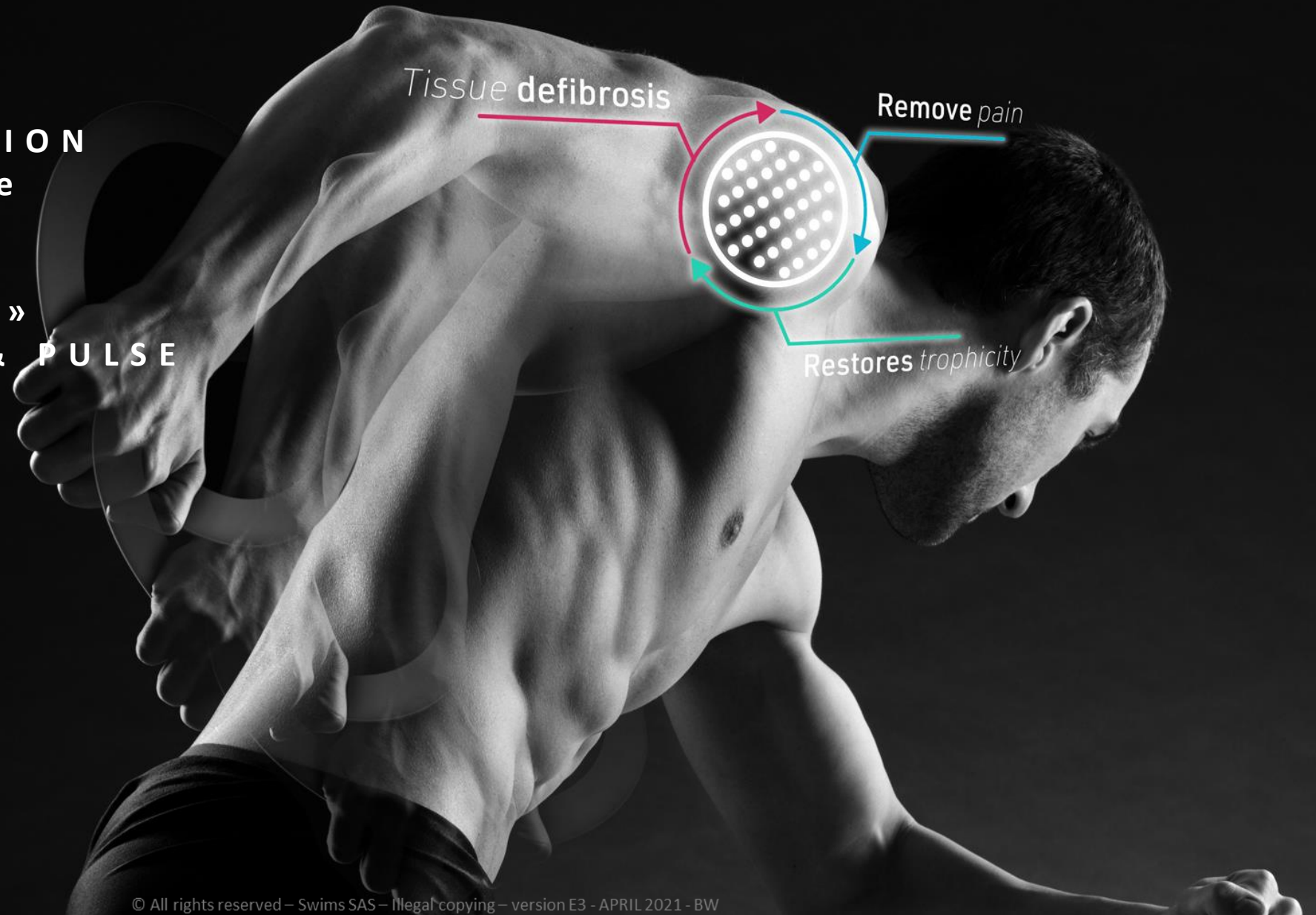
TRAINING BOOK

RSHOCK®

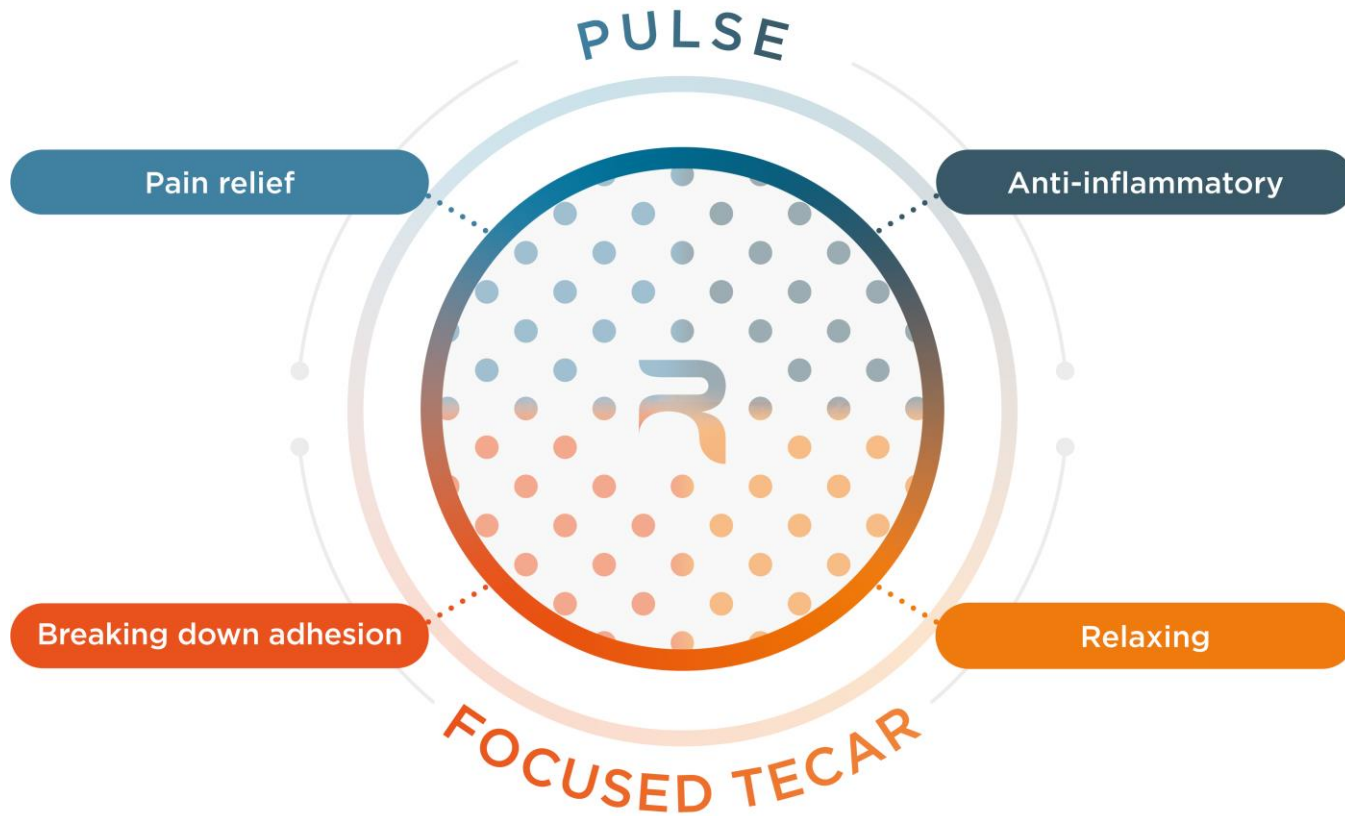
FAST AND LOCAL TREATMENT

NEW INNOVATION
1 electrode

« ALL-IN-1 »
FOCUSED TECAR & PULSE



ALL-IN-1 ELECTRODE



Focused TECAR :

Thanks to its ALL-IN-1 electrode, the TECAR energy is divided into several heating points for a focused and targeted deep action. The device provides diathermy through the current delivered by the electrode.

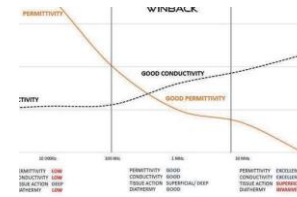
WINBACK AND R-SHOCK GENESIS



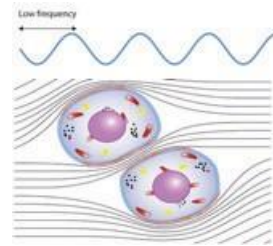
1890

Discovery of the permeability of the plasma membrane by high frequency currents from 100kHz to 10MHz, Jacques Arsène d'Arsonval, French physician, physicist and inventor.

Book about **diathermy** with Capacitive and Resistive application modes treated by William Beaumont, English physician and physicist on the first equipment. Frequency around 500kHz.



1995

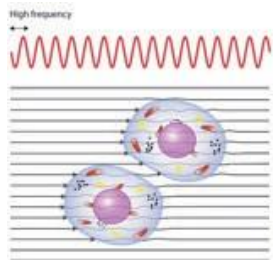


1939

Below 100kHz, the plasma membrane is an isolation.

Launch of **WINBACK** with more than 1000 installations in less than 3 years. Multiple frequency for better targeting 300kHz - 500kHz - 1MHz. New, more efficient current generation to promote **metabolic stimulation without heat**.

2013



1985

Development of high-frequency currents in aesthetic medicine for an action on the skin. Frequency 1MHz.

Below 100kHz, the plasma membrane is an insulator.



2020

Launch of R-SHOCK Focused TECAR therapy at 300kHz.

300 KHZ MONOPOLAR CURRENT

MOBILE electrode

The **MOBILE** electrode is held by the therapist.

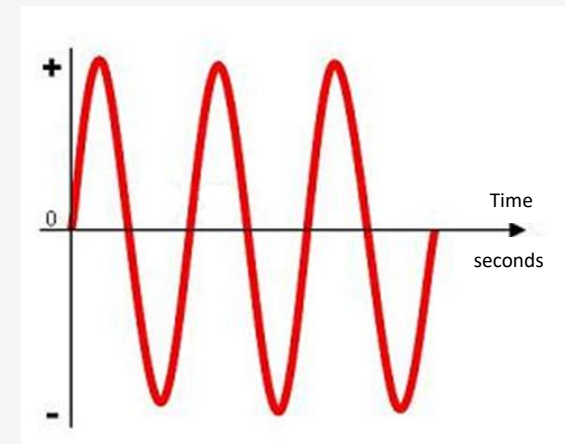
FIXED electrode

The **FIXED** electrode is in a stationary position in contact with the patient.

R-SHOCK : Unique and revolutionary frequency capable to generate a focused signal (focused TECAR) with short pulses of the same current.

Frequency : Number of complete cycles (sinusoidal wave) in one second (Hz).

Scientific studies have shown that the frequency range between 0.3 and 1.2 MHz induces an increase in intra- and extracellular exchanges and a diathermic effect on living tissue.



01

MECHANISM OF ACTIONS



CLINICAL EFFECTS OF R-SHOCK THERAPY (1)

TECAR/DIATHERMIC EFFECT: Internal heat is generated by the high-frequency current depending on current intensity and tissue resistance.

- Reaction of a tissue to the passage of the current.
- The greater the current intensity, the greater the resistance of the tissue the greater the amount of heat generated.
- Increase of nutrient supply and toxin removal.
- Recruitment of vascular functions to self-regulate localized heat (opening of the blood and lymphatic networks).

<p>BIO PAIN</p>	<p>BIO PAIN</p> <p>COLD</p> <ul style="list-style-type: none"> - Microcirculation - Oxygenation 	<p>BIO PAIN</p> <p>HEAT</p> <ul style="list-style-type: none"> - Venous and arterial systems - Vascularization 	<p>HYPERTHERMIA</p> <p>HEAT +</p> <ul style="list-style-type: none"> - Collagen synthesis - Enhanced vascularization
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R-SHOCK for each treatment phase

Acute	Sub-acute	Chronic
<p>Antalgic Drainage Healing</p>	<p>Antalgic Relaunch of the healing process</p>	<p>Defibrosis Improvement of the trophicity</p>

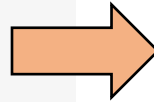
CLINICAL EFFECTS OF R-SHOCK THERAPY (2)

1 BIOSTIMULATION (HEALING AND FIBROTIC TISSUE BREAKDOWN)

2 ANALGESIC EFFECT

3 ANTI-INFLAMMATORY EFFECT

4 RELAXING EFFECT



Collagen production

Decrease of inflammation/edema

Healing of myotendinous junctions and structures

Muscle regeneration and hypertrophy

Angiogenesis and neovascularization

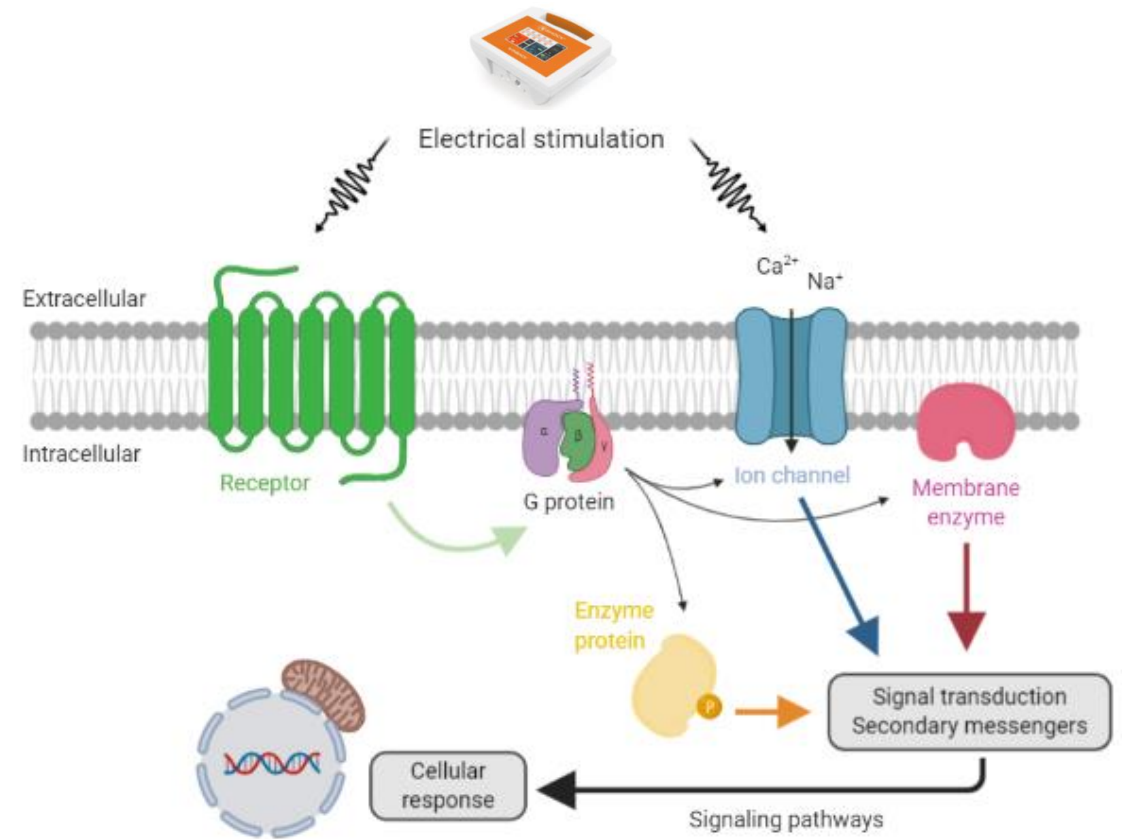
ACTION PRINCIPLES (1)

1

BIOLOGICAL EFFECT:

Membrane permeabilization allows an increase of intra-extracellular exchanges (Sustainable tissue reconstruction).

- Plasma membrane permeabilization
 - Membrane receptors activation
 - Opening of the ion channels (ion flow)
- Cell signaling pathways activation
- Cellular responses and biological effects
 - Lymphatic functions
 - Muscular functions
 - Bone functions



-Bohnert J. and Dössel O. *Effects of Time Varying Currents and Magnetic Fields in the Frequency Range of 1 kHz to 1 MHz to the Human Body - a Simulation Study*. 32nd Annual International Conference of the IEEE EMBS Buenos Aires, Argentina, August 31 - September 4, 2010.

-Hernandez-Bule M. et al. . *Electric Stimulation at 448 kHz Promotes Proliferation of Human Mesenchymal Stem Cells*. *Cell Physiol Biochem* 2014;34:1741-1755.

-Kajiya K. et al. *Electric current-induced lymphatic activation*. *Experimental Dermatology*, 2014, 23, 922–941

ACTION PRINCIPLES (2)

2

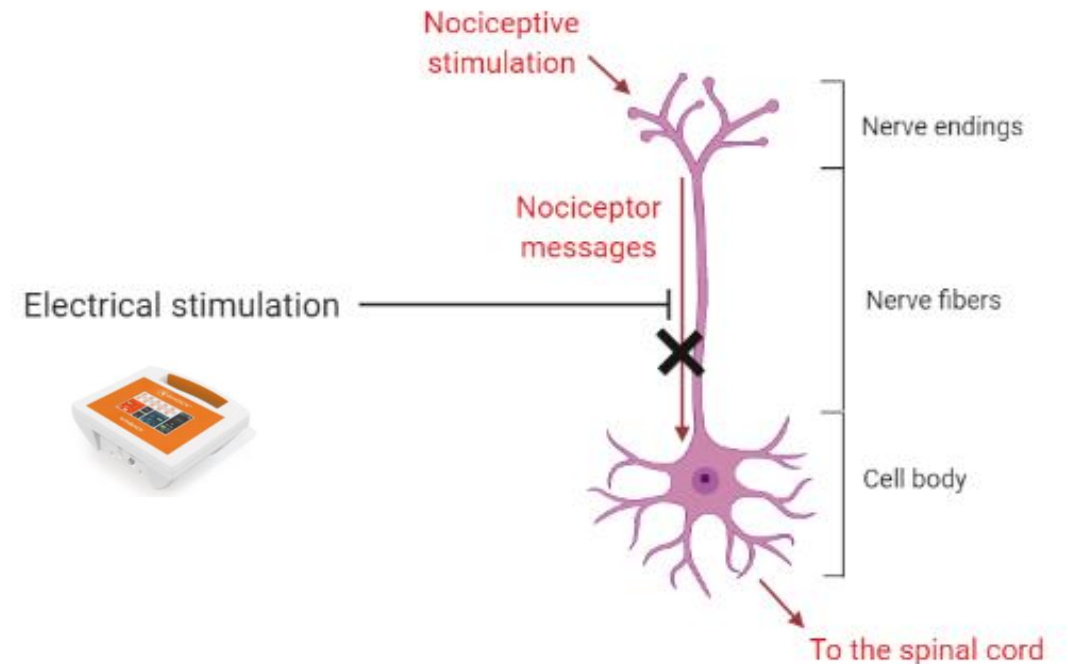
ANALGESIC EFFECT:

By synaptic interference of nociceptors (*disturbance of the nervous flow*).

→ **Blocking pain pathways**

- **Immediate effect:** pain release to the touch, promoting a deep and active massage.
- **Lasting effect:** thanks to the release of tensions and the improvement of tissue trophicity.

The electrical pulses associated with a thermal action on the peripheral receptors allow a rapid polarization of the nociceptors, **blocking pain signals**.



-Bhadra N. and Kilgore K. High-frequency electrical conduction block of mammalian peripheral motor nerve. *Muscle Nerve* 32: 782–790, 2005.

-Soin A. et al. High-Frequency Electrical Nerve Block for Postamputation Pain: A Pilot Study. *Neuromodulation* 2015; 18: 197–206.

ACTION PRINCIPLES (3)

3

ANTI-INFLAMMATORY EFFECT

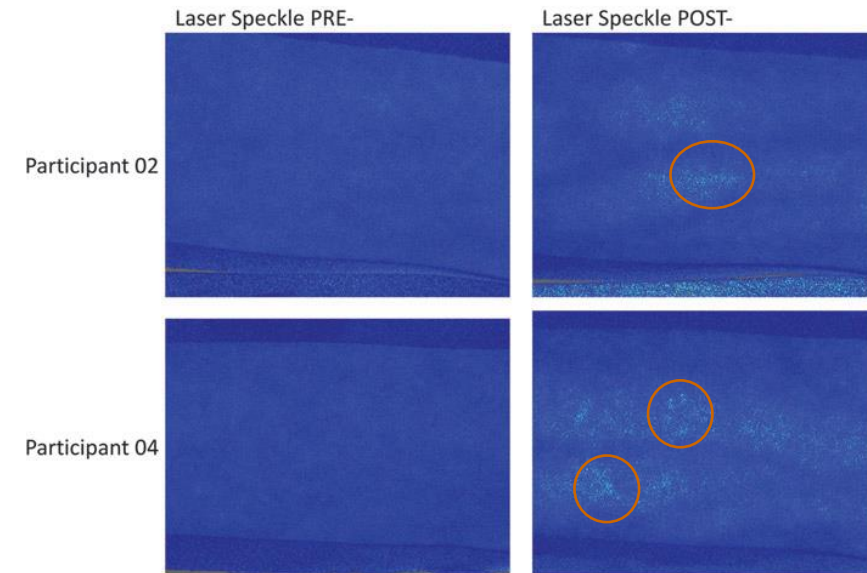
- Triggering vasodilatation of the arteries
- Increased oxygen supply to the tissues
- Increased microcirculation
- Phagocytosis

The anti-inflammatory process rebalances the microcirculation and reduces pain. Through controlled vasodilatation, the neo-angiogenesis process ensures the reactivation of lymphatic peristalsis and the collection of catabolites from the inflammatory cascade.

Anti-edematous effect

Influence on the asymmetry of the vessels: the diameter increases, and the evacuation of proteins is increased.

An increase microcirculation is essential to trigger mitochondrial activity, bring oxygen to the cells and allow the evacuation of waste products.



The brightest dots represent an increase in blood perfusion and blood flow after radiofrequency treatment.

-Clijse R. et al. Does the Application of Tecar Therapy Affect Temperature and Perfusion of Skin and Muscle Microcirculation? A Pilot Feasibility Study on Healthy Subjects. J Altern Complement Med, 26(2), 147-153, 2020

ACTION PRINCIPLES (4)

4

RELAXING EFFECT

- Initiate vasodilatation of the vessels
- Nutrient supply to the cells
- Reduction of the ischemia produced by the contracture
- Phagocytosis

In the case of an energy crisis, muscle relaxation does not occur, and contracture persists, associated with vasoconstriction. The oxygen supply decreases, and the mitochondria reduces its production of ATP. The amount of energy will be not sufficient to allow muscular relaxation. Poor venous circulation also prevents the elimination of waste products, which will cause pain.

Action on trigger points

Fight against pain related to these areas of hyper-irritability (or muscular hypertonicity). Deep action for ATP production.



02

TECHNOLOGY



CONTRAINDICATIONS

CONTRAINDICATIONS*



CANCER
CUTANEOUS TROUBLES



PREGNANCY
MINORS



COAGULATION DISORDERS
TROMBOPHLEBITIS



INSENSITIVITY TO HEAT
LOCAL INSENSITIVITY TO PAIN



FEVER AND BACTERIAL INFECTION
SEVERE HYPERTENSION/HYPOTENSION



ELECTRICAL IMPLANTS:
PACE MAKER, INSULIN PUMPS



GROWTH
CARTILAGE

**ALL CONTRAINDICATIONS ARE LISTED IN THE USER MANUAL*

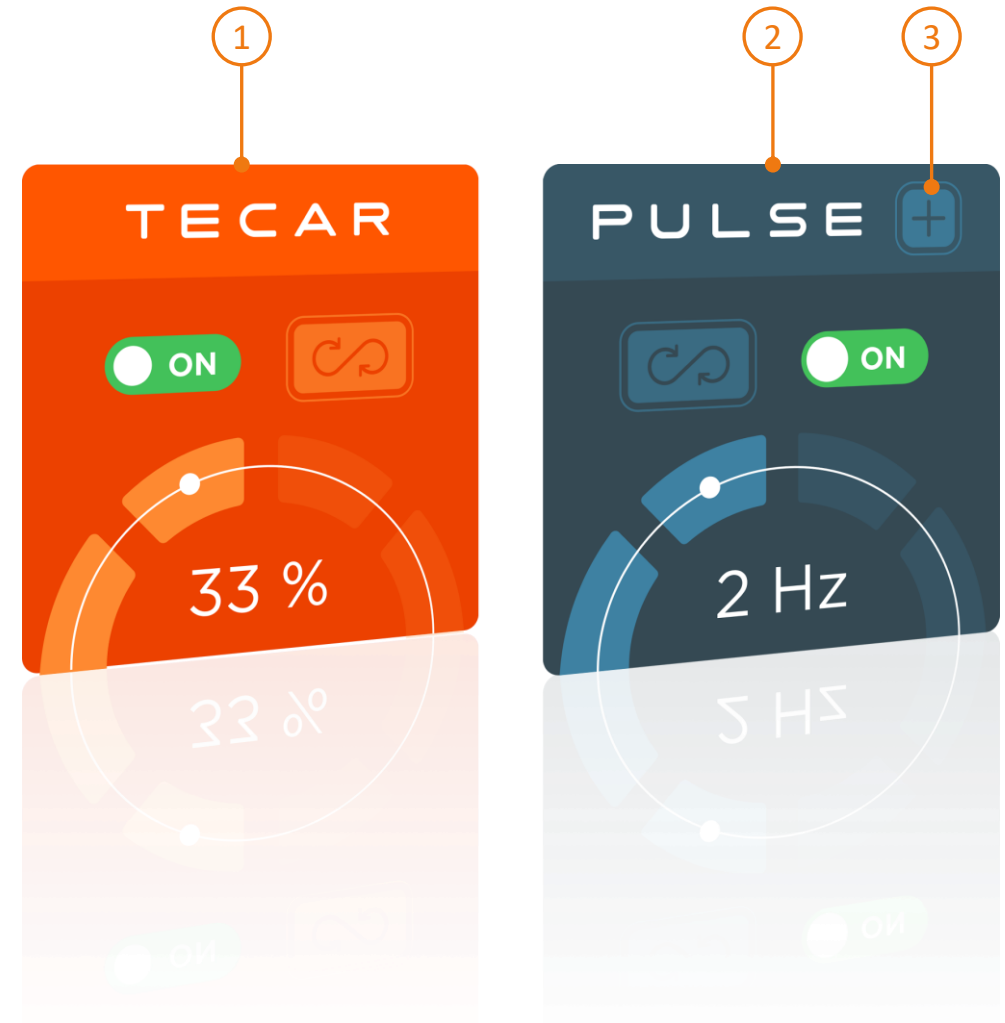
NO CONTRAINDICATIONS TO PROTHESIS OR FRACTURES

CONDUCTIVE CREAM

- Conductive cream allowing energy transfer/electrical exchanges with the electrode and protecting the patient's skin.
- Apply a fair amount of cream for good conduction (do not hesitate to apply more during treatment).
- DO NOT USE ultrasound gel (risk of burns). Use only the creams recommended by WINBACK.

DIFFERENT MODES

- 1 TECAR (Focus TECAR therapy): Healing improvement, fibrosis and muscle relaxing effect. The high frequency current generates the targeted intensity required by the therapist.
 - Soft thermia: 33%
 - Medium thermia: 66%
 - Hyperthermia: 100%
- 2 PULSE: TECAR current at maximal intensity for 50ms (current pulses).
 - 2Hz = 2 impulsions per second
 - 3Hz = 3 impulsions per second
 - 5Hz = 5 impulsions per second
- 3 PULSE +: multiplies the number of pulses per second for an analgesic effect through a saturation of the receptors.
 - 10Hz = 10 impulsions per second
 - 15Hz = 15 impulsions per second
 - 25Hz = 25 impulsions per second



ANALGESIA AND PULSE

- 1 PULSE:**
 - 2Hz - Trophic effect (muscle twitch)
 - 3Hz - Trophic and drainage
 - 5Hz - Endorphin - anti-inflammatory
- 2 PULSE +:** immediate analgesic effect by saturation of the nociceptors
 - 10Hz - Deep action
 - 15Hz - Medium action
 - 25Hz - Superficial action

The notion of depth will also be optimized by the positioning of the return electrode:

- Superficial action -> return electrode is on the same side as the handheld electrode
- Deep action -> return electrode is placed in front of the handheld electrode

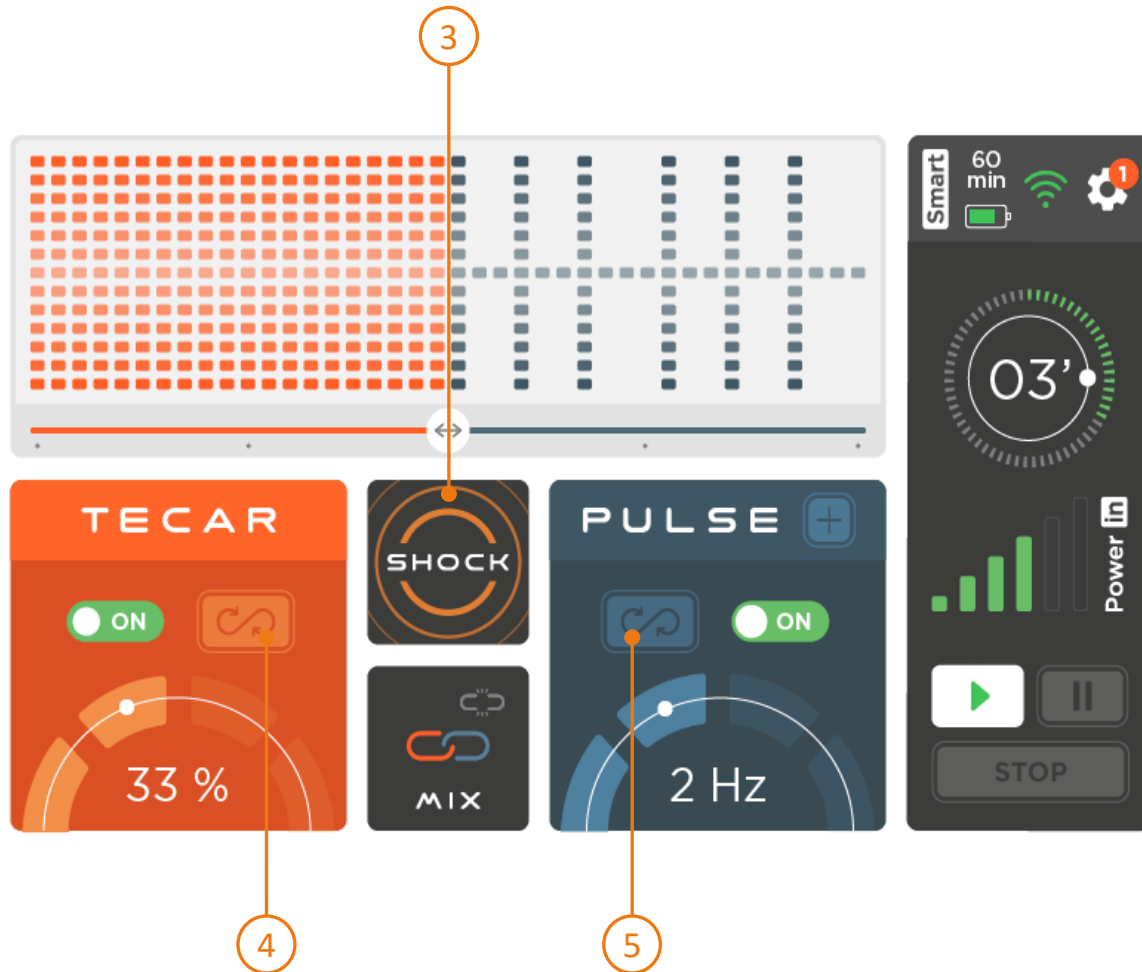


FUNCTIONS - 1/2






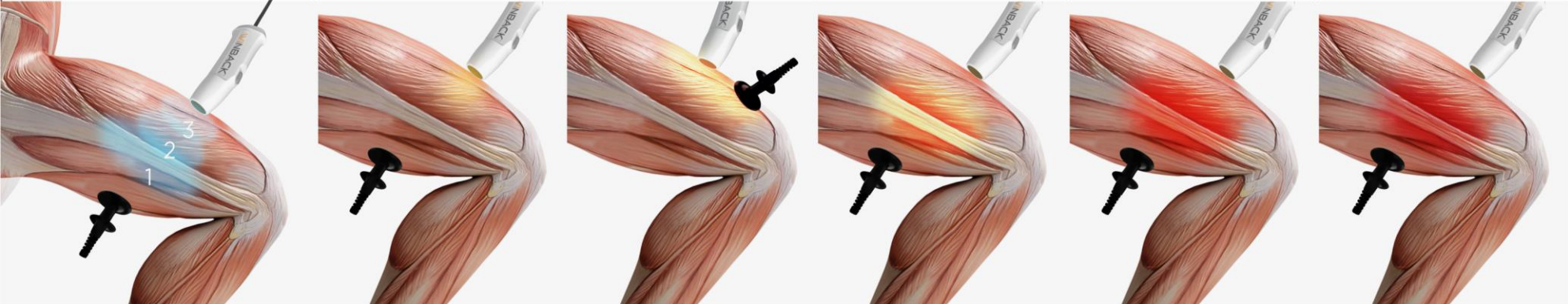
- 1 SWAP: alternating focus TECAR then PULSE (possibility to increase their duration)
 - Tissue relaxation and analgesic effects
 - Tissue preparation for manual therapy
 - Acute and subacute conditions
- 2 MIX: focus TECAR + PULSE, between each pulse, RF energy is generated at the selected intensity (possibility to choose the number of pulses per second)
 - Strong thermal effects
 - Relaxation of deep contractures and revascularization
 - Subacute and chronic conditions

FUNCTIONS - 2 / 2



- 3 SHOCK: focus TECAR + PULSE at maximum intensity (safety limiting the maximum duration of continuous stimulation to 5 seconds)
 - Hyperthermia
 - Increasing the elasticity of the tissues in order to combine the treatment with manual therapy
 - Chronic cases, breaking down fibrotic tissues and promoting collagen synthesis
- 4 DYNAMIC TECAR: Alternating intensity from 33% to 100% (possibility to manage the duration of the alternation) to alternate intensity to limit the heating of the tissues.
- 5 DYNAMIC PULSE: Alternating pulses from 2Hz to 25Hz (possibility to manage the duration of the alternation) to limit the phenomenon of tissue over-adaptation.

TARGETED EFFECTS

	Localized soft warmth	Heat	Deep heat	High heat	Hyperthermia
PULSE +	 SWAP ----- TECAR / PULSE +	FOCUSED TECAR		 MIX ----- TECAR + PULSE	
		Return plate on the same side	Return plate on the opposite side		
3 - Superficial 2 - Medium 1 - Deep	Analgesic Improve tissue physiology	Superficial TECAR Healing process	Deep TECAR Healing process	Drainage Deep contractures	Collagen Neo-vascularization
Acute pain	Acute pathology	Skin Fascia	Muscle Ligament Tendon	Stiff muscles Deep vascularization	Fibrosis Scars
					

THE BENEFITS OF R-SHOCK

Impedance adaptation: regardless of the distance to the return electrode, the power remains the same. Better control of the current with the possibility to work on long or very short paths.

Battery operated, minimum autonomy of 30 minutes in SHOCK mode (max. intensity).



Possibility to work on mains while the battery is recharging.

WIFI connection for remote updates and service diagnostics.



R-SHOCK's intelligence

- **Comfort and efficiency:** Immediate adaptation of the signal according to the **distance** between the electrodes. Allows to work on very short distances.
- **Adapted and targeted effectiveness:** Adaptation of the signal according to the change in tissue **resistance** throughout the treatment.



03

PRACTICAL ADVICE IN USE



ELECTRODES APPLICATION

- Apply sufficient pressure to maintain **full contact** over the entire surface of the electrode and allowing a smooth movement.
- The fractional handle must be moved with slow and uniform movements without stopping. It is preferable to reduce the intensity if it is too warm for the patient and then gradually increase intensity. A high intensity requires a faster movement of the fractional handle.
- The surface of the electrodes must be in **full contact** with the skin. **DO NOT INCLINE** the electrodes. It is important that the conduction is done correctly to avoid any risk of overheating.



ELECTRODES POSITION

- The conductivity of muscle tissue is directly related to the level of vascularization. If this level is very low, the fractional handle and the return electrode should be placed as close as possible to the area to be treated (to promote the passage of current).
- The position of the patient depends on the area to be treated and therefore the best position for the fractional handle and the return electrode will have to be determined.

Different settings are possible :

1. **Superficial:** Electrodes on the same side: more superficial action (the current makes the shortest path between the electrodes).
2. **In depth:** Face-to-face electrodes allow a deeper action (the current flows through the different tissues).
3. **Articular:** Staggered electrodes (current flowing through the joint).
4. **Neurologic:** Follow the neurological pathway.

In each case, especially for small treatment areas, the conductive cream applied to the surface of the split handle must not encounter the return electrode.



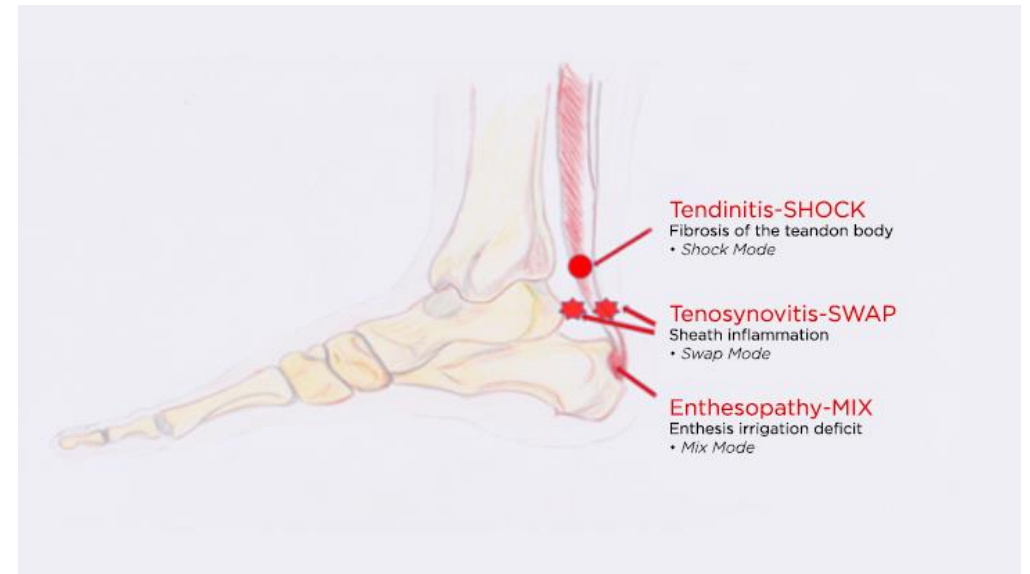
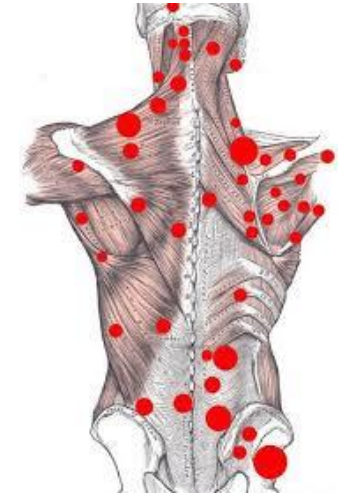
04

INDICATIONS



R-SHOCK INDICATIONS

- 1 Muscle lesions
- 2 Localized edema
- 3 Sprains
- 4 Trigger points
- 5 Tendinopathies
 - Tendinitis
 - Tenosynovitis
 - Enthesopathy
- 6 Scars and fibrosis
- 7 Myofascial syndrome, radiating pain
- 8 Articular indications
- 9 Active work



ACUTE MUSCLE LESIONS

FIBROTIC MUSCLE LESIONS

Objective:

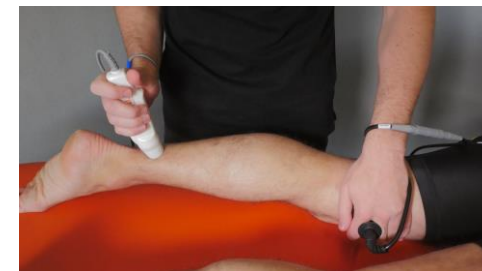
- Support healing
- Prevent possible fibrosis
- Vascularize and oxygenate the lesion area

MODE	METHOD	TIME
TECAR	Return electrode on the same side. Intensity 66% Sweep the area to release any muscle tension.	3 min
TECAR	Electrode on either side of the lesion. Intensity 100% Fixed point - recruitment of deep vascularization, alternating with manual work.	3 min

Objective:

- Defibrosis
- Neo-collagenesis
- Realignment of collagen fibers

MODE	METHOD	TIME
MIX	Return electrode on the same side. Intensity 100% and pulse of 5Hz Sweep the area to release any muscle tension and adhesions.	4 min
SHOCK	Electrode on either side of the lesion Fixed point - hyperthermia, alternating with manual work like MTP defibrosis.	3 min



ACUTE SPRAINS

Objective:

- Pain relief
- Local drainage - microcirculation
- Improve wound healing

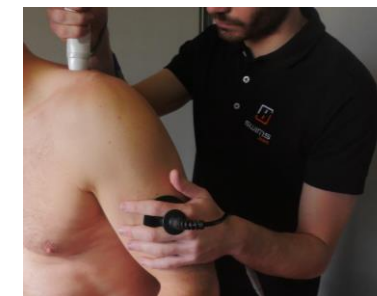


MODE	METHOD	TIME
PULSE+	Return electrode on the same side. Frequency of 25Hz Target the ligament.	3 min
SWAP	3 seconds TECAR - Intensity 66% 1 second PULSE+ - Frequency 25Hz Sweep the edematous area.	5 min
SWAP	2 seconds TECAR - Intensity 33% 2 seconds PULSE+ - Frequency 25Hz Target the ligament.	3 min

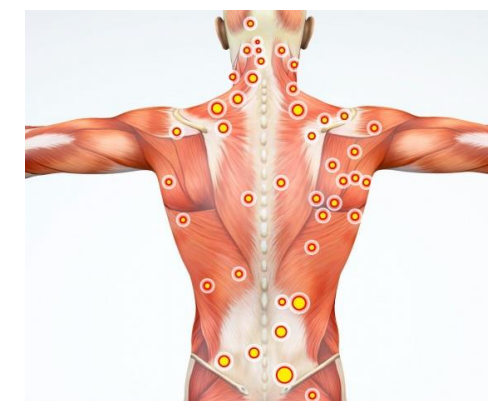
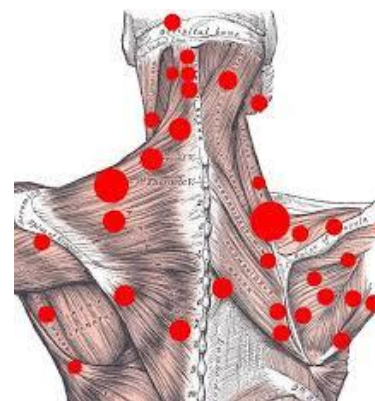
TRIGGER POINTS

Objective:

- Release tensions
- Increase microcirculation



MODE	METHOD	TIME
MIX	Intensity 66% and pulse of 3Hz Stay in a fixed point on the trigger point, release a few seconds if the temperature is too high then start again.	2 min



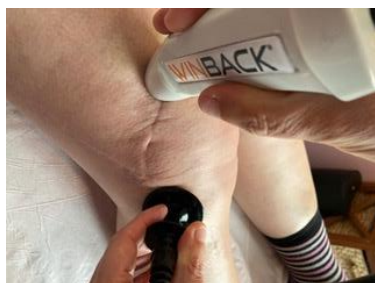
SUPERFICIAL SCARS

FIBROSIS

Objective:

- Stimulate fibroblasts and produce collagen
- Increase microcirculation and revascularize
- Defibrosis, restore trophicity and elasticity

MODE	METHOD	TIME
SHOCK	The return electrode on one end of the scar. Perform several alternating R-SHOCK / manual work cycles to reach the maximum tolerable temperature and work manually for about 1 min.	5 min
MIX	The return electrode on one end of the scar. Stabilize the temperature by passing the split handle over the scarred area.	5 min



Objective:

- Stimulate fibroblasts and produce collagen
- Increase microcirculation and revascularize
- Defibrosis, restore trophicity and elasticity

MODE	METHOD	TIME
SHOCK	The return electrode on one end of the scar. Perform several alternating R-SHOCK / manual work cycles to reach the maximum tolerable temperature and work manually for about 1 min.	5 min



TENDINITIS

Objective:

- Pain relief
- Recondition the collagen architecture
- Work on trigger points
- Defibrosis the tendon



MODE	METHOD	TIME
MIX	Target the different trigger points present. Release muscle tension by sweeping the muscles. Return electrode on the same side.	3 min
SHOCK	Electrodes on either side of the tendon facing the fibrotic area Alternate with manual defibrosis work.	2 min
MIX	When hyperthermia is obtained, switch to MIX mode. Electrodes on either side of the tendon facing the fibrotic area Alternate with manual defibrosis work.	3 min

TENOSYNOVITIS

Objective:

- Decrease inflammation of the tendon
- Promote cellular exchanges of connective tissue
- Rebalance muscle tension
- Recover range of motion

MODE	METHOD	TIME
SWAP	In case of pain, 1st analgesic phase: 2 seconds TECAR - Intensity 66% 2 seconds PULSE+ - Frequency 25Hz	2 min
MIX	Intensity 33/66% and pulse of 2/3Hz R-SHOCK scans	3 min



ENTHESOPATHIES

Objective:

- Pain relief
- Promote cellular exchanges of connective tissue
- Increase microcirculation and revascularize

MODE	METHOD	TIME
TECAR	Intensity 66% Sweep the enthesis	2 min
MIX	Intensity 66% and pulse of 3Hz Target pain points	3 min



ARTICULAR INDICATIONS

Objective:

- Pain relief
- Increase microcirculation and revascularize
- Reduction of inflammation
- Recover range of motion

MODE	METHOD	TIME
SWAP	In case of pain, 1st analgesic phase: 2 seconds TECAR - Intensity 66% 2 seconds PULSE+ - Frequency 25Hz	2 min
MIX	Intensity 66% and pulse of 3Hz Alternate joint mobilizations and R-SHOCK scans	3 min



MYOFASCIAL SYNDROME

ACTIVE WORK

Objective:

- Desensitize the myofascial area
- Improve the trophicity of the fascia

MODE	METHOD	TIME
PULSE+	Return electrode on the same side. Frequency of 25Hz Sweep the painful area	3 min
SWAP	2 seconds TECAR - Intensity 66% 2 seconds PULSE+ - Frequency 25Hz Sweep the area	3 min



Objective:

- Support the work in charge
- Pain relief
- Increase microcirculation and revascularize

MODE	METHOD	TIME
MIX	Intensity 100% and pulse of 5Hz Active work with 2 adhesive plates	10 min



05

FASCIA TOOL



FASCIA TOOL

Thanks to its focused action, TECAR energy provides targeted collagenesis and revascularization which, associated with the mechanical properties of the **FASCIA** tool, allows optimum manual work of fibrotic soft tissues. The mechanical action, coupled with the diathermic and biological properties, offers the opportunity to release adhesions and restore elasticity in record time.



CERVICALGY

Objective:

- Release cervico-dorsal tensions
- Pain relief
- Restore amplitudes

MODE	METHOD	TIME
TECAR	« Blading » with Fascia tool along the trapezius, elevator of the scapula, rhomboids	3 min
SHOCK	Target the different Trigger points and key points (C7-D1, D4, scapular insertions)	2 min



TENDINOSIS

Objective:

- Pain relief
- Recondition the collagen architecture
- Work on trigger points
- Defibrosis the tendon



MODE	METHOD	TIME
MIX	Target the different trigger points present Release muscle tension by sweeping the muscles Return electrode on the same side	3 min
TECAR	« Blading » with Fascia tool to restore slip planes	1 min
SHOCK	Electrodes on either side of the tendon facing the fibrotic area Alternate with manual defibrosis work	2 min

TENDINOSIS

Objective:

- Defibrosis mechanically while taking advantage of the properties of R-SHOCK

MODE	METHOD	TIME
MIX	When hyperthermia is obtained, switch to MIX mode Electrodes on either side of the tendon facing the fibrotic area Alternate with manual defibrosis work	3 min
TECAR	« Blading » on the nodular area to break adhesions mechanically	2 min



PLANTAR FASCIITIS

Objective:

→ Release tensions along the posterior chain

MODE	METHOD	TIME
TECAR	« Blading » with Fascia tool to restore the sliding planes of the posterior plane	2 min
SHOCK	Target the different trigger points along the posterior chain If necessary, target calcaneal insertions	2 min

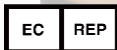
PLANTAR FASCIITIS

Objective:

→ Defibrosis mechanically while taking advantage of the properties of R-SHOCK

MODE	METHOD	TIME
SHOCK	Target fascial insertions of the plantar fascia	2 min
TECAR	« Blading » under the arch of the foot	2 min





SWIMS SAS

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