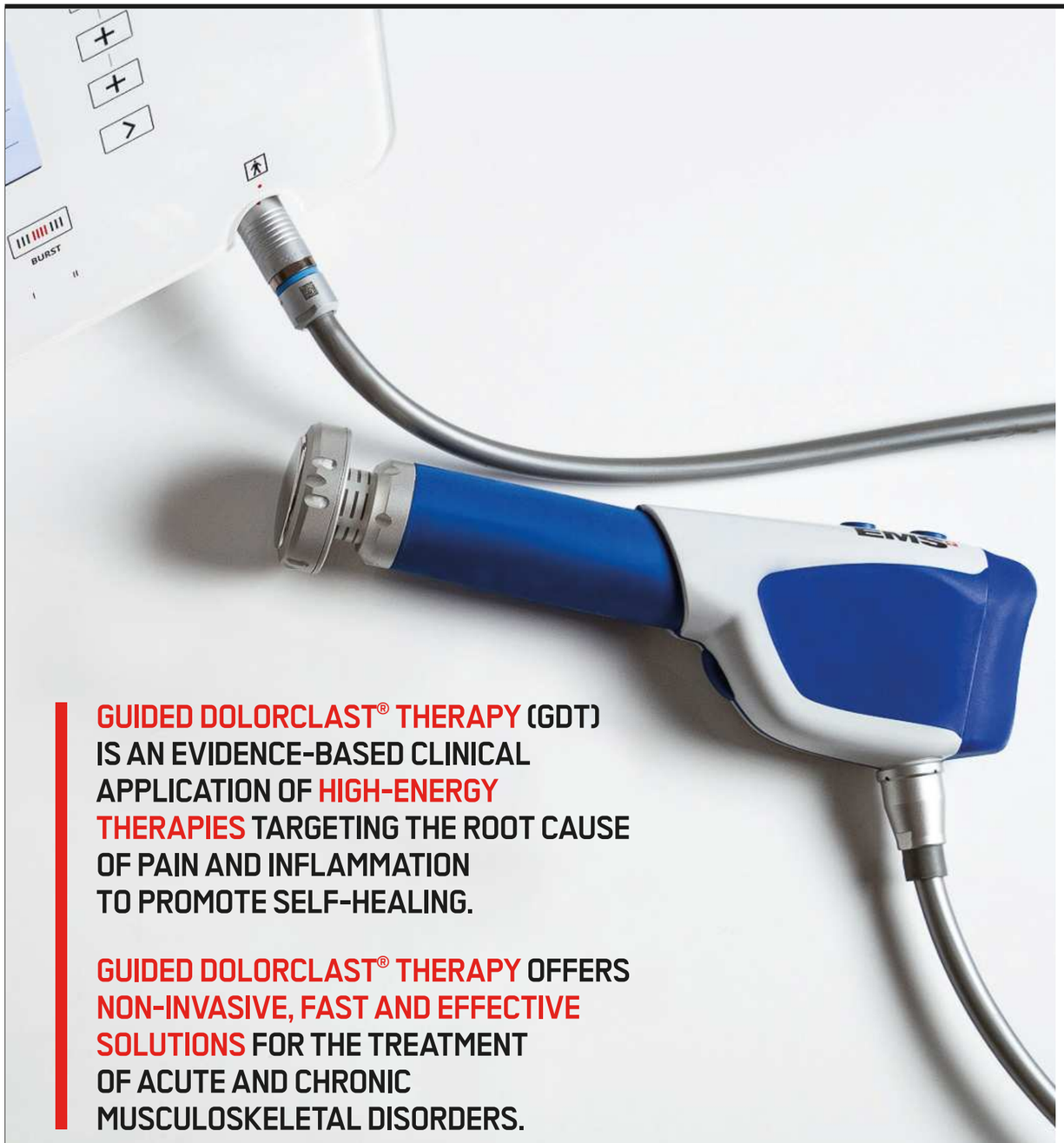
GUIDED DOLORCLAST® THERAPY

EVIDENCE-BASED HIGH-ENERGY THERAPIES

FROM THE INVENTORS OF RADIAL SHOCK WAVE THERAPY



GUIDED DOLORCLAST® THERAPY



GUIDED DOLORCLAST® THERAPY (GDT) IS AN EVIDENCE-BASED CLINICAL APPLICATION OF HIGH-ENERGY THERAPIES TARGETING THE ROOT CAUSE OF PAIN AND INFLAMMATION TO PROMOTE SELF-HEALING.

GUIDED DOLORCLAST® THERAPY OFFERS NON-INVASIVE, FAST AND EFFECTIVE SOLUTIONS FOR THE TREATMENT OF ACUTE AND CHRONIC MUSCULOSKELETAL DISORDERS.

THERAPISTS TRUST GDT
PATIENTS LOVE GDT

YOUR FIRST-LINE THERAPY

TOP-NOTCH HIGH-ENERGY THERAPIES

- DolorClast® Radial Shock Waves / Focused Shock Waves / High Power Laser
- Clinically proven with multiple Randomized Control Trials (RCTs)
- High rate of successful treatment outcomes

UNLOCKING NATURAL HEALING

- Treats acute and chronic inflammation
- Relieves pain
- Fosters regeneration

NON-INVASIVE PROCEDURES

- No surgery = no downtime
- No injections = no complication
- No pain medication = no risks of drug-related adverse effects

MAKING YOUR PATIENT SMILE

- GDT Compass supports patient-centered approach
- Low number of treatments for high compliance
- Fast effects from 1st session

TRAINING - SHARING - PRACTICING

- Worldwide expert-led training courses
- Collaborative learning community of users
- Certification program to increase practice exposure

PAVING THE WAY TO REHABILITATION AND SUSTAINABLE RECOVERY

GDT GUIDES YOU TO SUCCESS

SDCA
SWISS DOLORCLAST ACADEMY

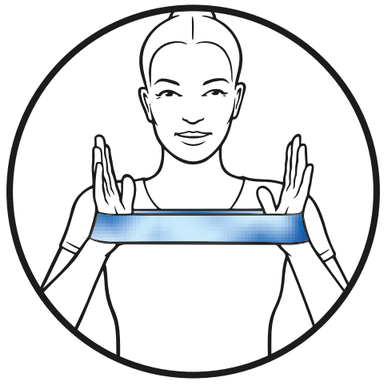


01 ASSESS

ASSESS YOUR PATIENT'S PATHOLOGY
WITH KEY QUESTIONS & TESTS

04 REHABILITATE

REHABILITATE WITH COMPLEMENTARY EXERCISES
TO INCREASE FUNCTION AND SUSTAINABLE RECOVERY



GUIDED DOLORCLAST THERAPY®



02 ENGAGE

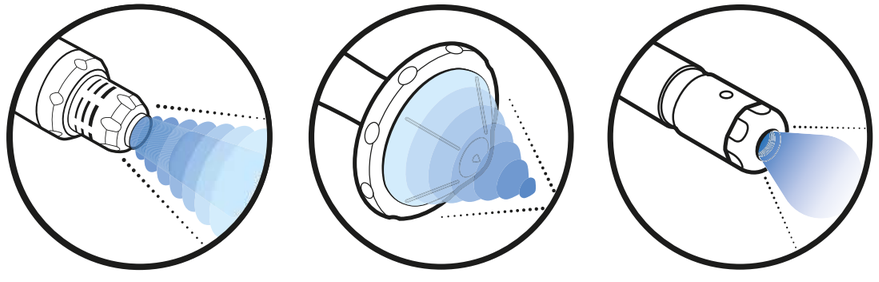
OFFER YOUR PATIENTS A HIGH ENERGY,
EFFICIENT AND DRUG-FREE SOLUTION TO:

- RELIEVE PAIN
- TREAT INFLAMMATION
- STIMULATE NATURAL HEALING

03 TREAT

CHOOSE THE APPROPRIATE HIGH ENERGY DOLORCLAST® THERAPY
TO TREAT YOUR PATIENT'S PATHOLOGY

- DOLORCLAST® RADIAL SHOCK WAVES
- DOLORCLAST® FOCUSED SHOCK WAVES
- DOLORCLAST® HIGH POWER LASER



UNLOCK YOUR HEALING POTENTIAL

Natural healing is blocked by biological interactions between pain and inflammation mechanisms.

GDT quickly and efficiently treats pain and inflammation, whether acute or chronic. It unlocks the body's ability to repair itself while activating specific healing mechanisms.

GDT gets patients moving and leads them to recovery within a few weeks.

RELIEVE PAIN

- Overwhelms C nerve fibers to inhibit the release of Substance P, which is responsible for increasing pain signals.[1-2]
- Inhibits sensory neurons located at nerve endings to suppress pain signals to the central nervous system.[3]
- **Analgesic effect kicks in right from the 1st treatment.**

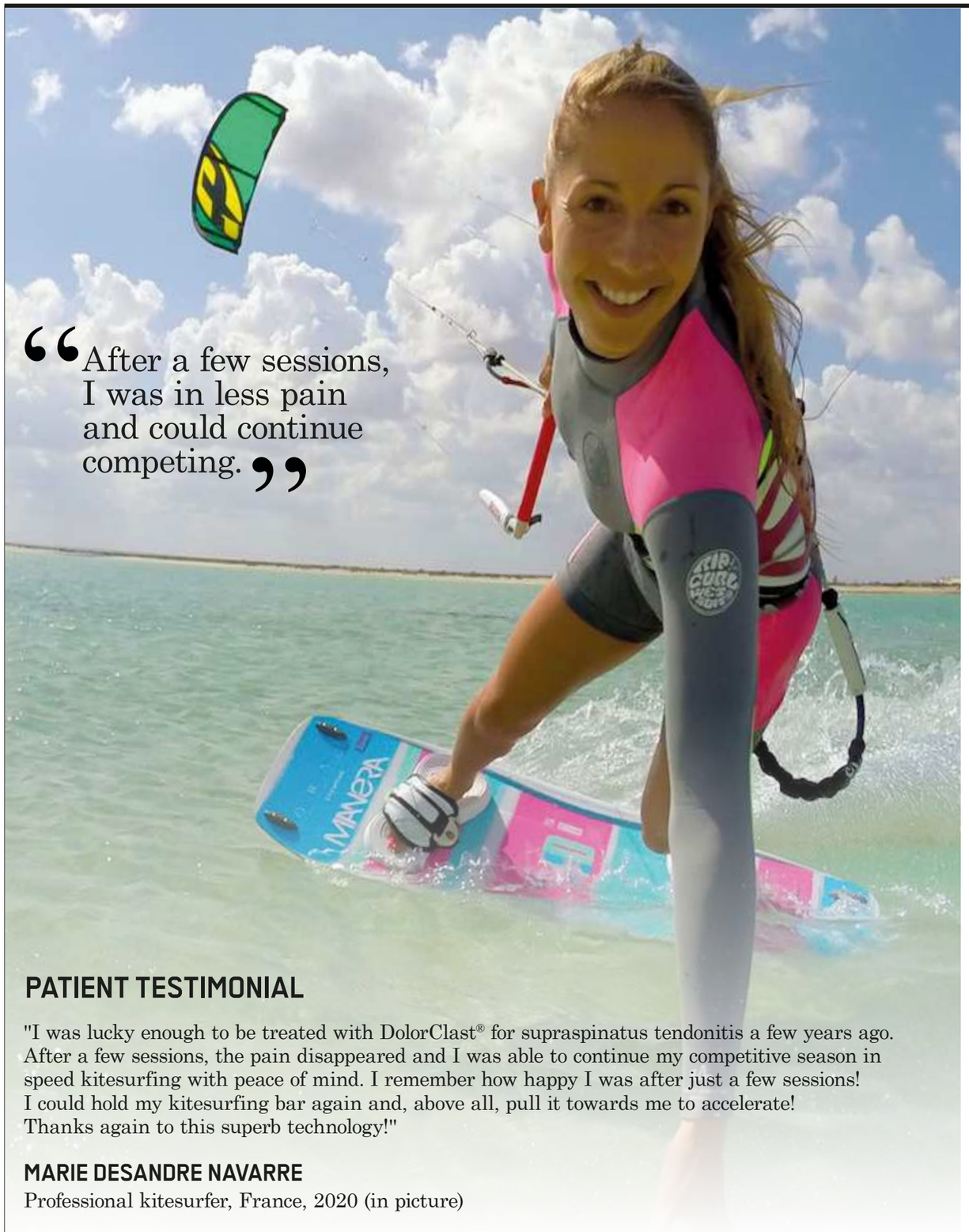
TREAT INFLAMMATION

- Reduces the release of Substance P, thus inhibiting neurogenic inflammation and allowing scleraxis expression.[1-2]
- Decreases the amount of Prostaglandin E_2 (PGE_2) responsible of mediating acute inflammation[4], mimicking the effects of non-steroidal anti-inflammatory drugs (NSAIDs) without side effects.
- **Induces an anti-inflammatory action, paving the way to healing.**

STIMULATE NATURAL HEALING

- Improves angiogenesis, blood circulation and pressure.[5-6-7-8-9-10-11]
- Activates the repair of damaged muscle fibers.[12-13]
- Stimulates tendon remodeling and helps decrease erosive wear.[14-15]
- Decreases cartilage degradation and stimulates its repair.[16]
- Stimulates bone healing.[17-18-19-20-21]
- **Fosters regeneration of muscles, tendons, cartilage and bone.**

MOVE, FEEL AND LIVE BETTER



PATIENT TESTIMONIAL

"I was lucky enough to be treated with DolorClast® for supraspinatus tendonitis a few years ago. After a few sessions, the pain disappeared and I was able to continue my competitive season in speed kitesurfing with peace of mind. I remember how happy I was after just a few sessions! I could hold my kitesurfing bar again and, above all, pull it towards me to accelerate! Thanks again to this superb technology!"

MARIE DESANDRE NAVARRE
Professional kitesurfer, France, 2020 (in picture)

GUIDED DOLORCLAST® THERAPY
ADDRESSES MULTIPLE MUSCULOSKELETAL, NEUROLOGICAL AND VASCULAR APPLICATIONS.

IS YOUR PATIENT SUFFERING FROM ONE OF THESE CONDITIONS?

- BACK PAIN
- TENDINOPATHY
- OSTEOARTHRITIS
- ENTHESOPATHY
- FASCIOPATHY
- MYOFASCIAL PAIN SYNDROME
- CALCIFICATION
- DELAYED UNION AND NON-UNION FRACTURE
- SPASTICITY
- ERECTILE DYSFUNCTION

OFFER YOUR PATIENTS A SOLUTION WITH GUIDED DOLORCLAST® THERAPY

GDT MAKES YOU SMILE

PRACTITIONER TESTIMONIAL



"EMS deserves my respect for promoting a combination of therapeutic modalities to address musculoskeletal pathologies, which includes the use of their equipment. In my 38 years of experience in healthcare, I can confidently say that DolorClast® Radial Shock Waves is the best-designed EMS equipment I've ever encountered."

STEVE BLOOR
Podiatrist at Cornwall Podiatry, United Kingdom, 2023

“Best-designed EMS equipment.”

GDT BENEFITS YOUR PATIENTS

1. CLINICALLY- PROVEN THERAPIES
2. NON-INVASIVE ALTERNATIVE TO INJECTIONS AND SURGERY
3. AVOIDS DRUG-RELATED SIDE-EFFECTS
4. NO DOWN-TIME
5. EFFECTS FROM 1ST TREATMENT
6. LONG-LASTING HEALING BENEFITS

GDT BENEFITS YOUR PRACTICE

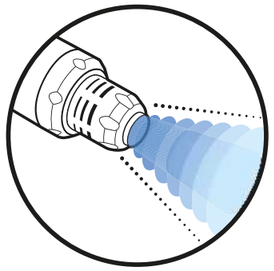
1. EVIDENCE-BASED THERAPIES
2. HIGH SUCCESS RATE
3. WIDE PATIENT GROUPS
4. FAST RETURN ON INVESTMENT
5. RELIABLE SWISS QUALITY
6. LOW MAINTENANCE
7. CONTINUOUS EDUCATION WITH SWISS DOLORCLAST® ACADEMY

HAPPY PATIENTS

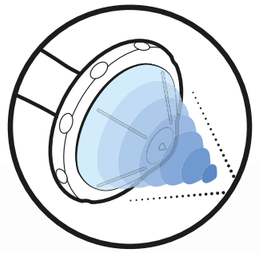
HAPPY PRACTITIONERS

READ MORE TESTIMONIALS

DOLORCLAST® SHOCK WAVE THERAPY



DOLORCLAST®
RADIAL SHOCK WAVES



DOLORCLAST®
FOCUSED SHOCK WAVES





ENERGY: CORNERSTONE OF SHOCK WAVE THERAPY

GUIDED DOLORCLAST THERAPY®

1

HIGH ENERGY PER SHOCK IS ESSENTIAL

► Recent clinical studies demonstrate that a high amount of energy per single shock wave is a prerequisite for treatment efficiency.[22]

► Even more importantly, delivering more shocks does not compensate for low energy per shock in terms of treatment efficiency.[22]

2

CAVITATION IS KEY FOR SUCCESS

► Cavitation plays a major role in the success of extracorporeal shock wave therapy.[23] In the absence of cavitation, some key biological responses simply do not occur in the treated tissues.[13-23]

► The effectiveness of shock wave therapy correlates with the levels of cavitation generated by a shock wave device.[23]

3

HIGH ENERGY OUTPUT FOR MORE CAVITATION

► The shock wave's initial compression phase increases with the energy delivered to the tissue. Similarly, in the decompression phase, more energy will create more cavitation bubbles.

► The greater the energy input, the greater the pressure in the tissues, the greater the level of cavitation[23] and, in turn, the physiological responses.

4

HIGH ENERGY RADIAL OR FOCUSED

► *"A wave is a wave" regardless of whether it is generated with a focused device or radial device. Much more important is whether sufficient energy is achieved where it is needed in the body.*[24]

► Radial or focused shock waves? One is not superior to the other.[24] The choice of the right type of shock waves shall be determined by the pathology type and localization, as well as the patient's history and response.

EFFICACY ROOTED IN SCIENCE AND HIGH TECHNOLOGY

GUIDED DOLORCLAST THERAPY®

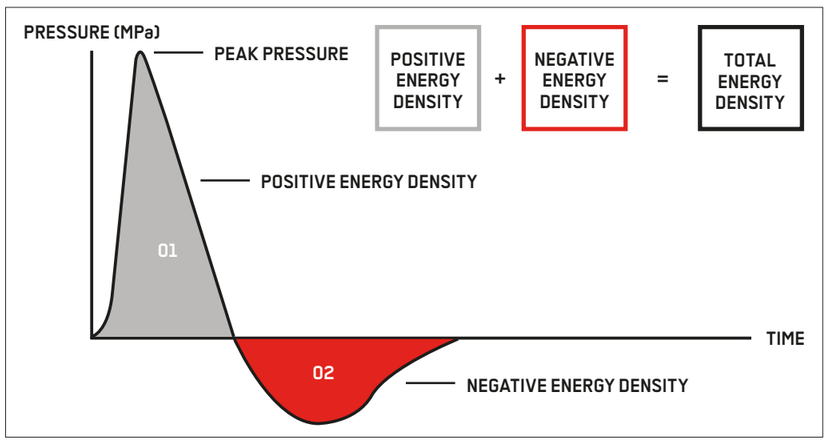
ENERGY TRANSMISSION AND RESTITUTION

Extracorporeal shock waves are acoustic waves with specific characteristics such as high pressure peak, short rise time and duration, and low tensile amplitude.

A shock wave consists of two phases:

01 Primary compression phase building up pressure and causing shear stress in the tissues.

02 Negative pressure phase releasing the energy, thus generating cavitation bubbles.



HIGH PRECISION TECHNOLOGIES SHAPE TRUE HIGH ENERGY SHOCK WAVES



DOLORCLAST® RADIAL SHOCK WAVES

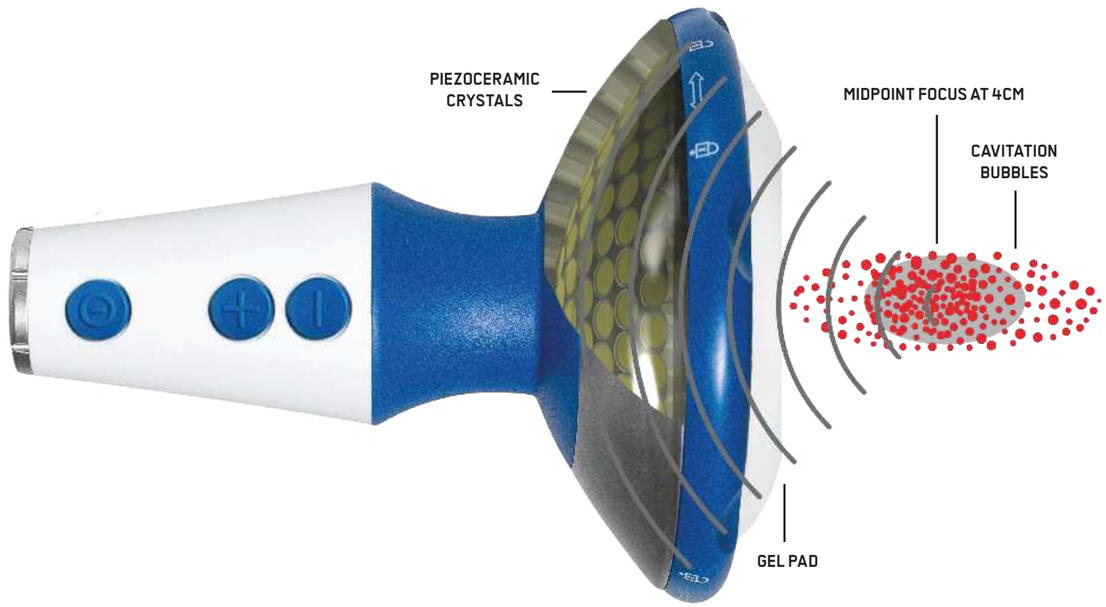
BALLISTIC TECHNOLOGY

PENETRATION UP TO 4CM

DOLORCLAST® FOCUSED SHOCK WAVES

PIEZOELECTRIC TECHNOLOGY

PENETRATION UP TO 6,5CM



HIGH ENERGY IS KEY TO SUCCESS

MASTER THE ENERGY AND SET THE GAME

GUIDED DOLORCLAST THERAPY®

HIGHEST ENERGY – HIGHEST EFFICIENCY

CLINICAL OUTCOMES ACHIEVED WITH DOLORCLAST® DEVICES MAY NOT BE ACHIEVED WITH DEVICES WITH SIGNIFICANT LOWER ENERGY OUTPUT

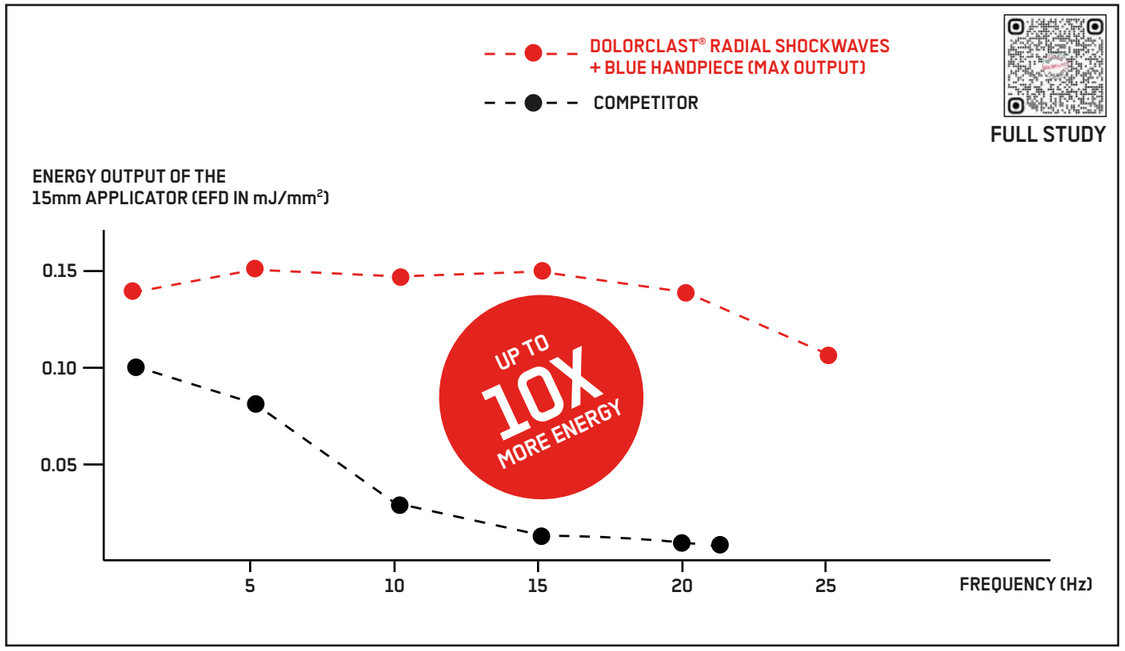
85% OF ALL LEVEL 1 CLINICAL TRIALS* SETTING THE ENERGY DENSITY >0.1mJ/mm² PUBLISHED IN THE PEDro DATABASE ARE PERFORMED WITH A DOLORCLAST® DEVICE.[25]

80% OF PUBLISHED STUDIES* PERFORMED WITH A DOLORCLAST® DEVICE DEMONSTRATED A POSITIVE PATIENT OUTCOME IN ONLY 3 SESSIONS.[25]

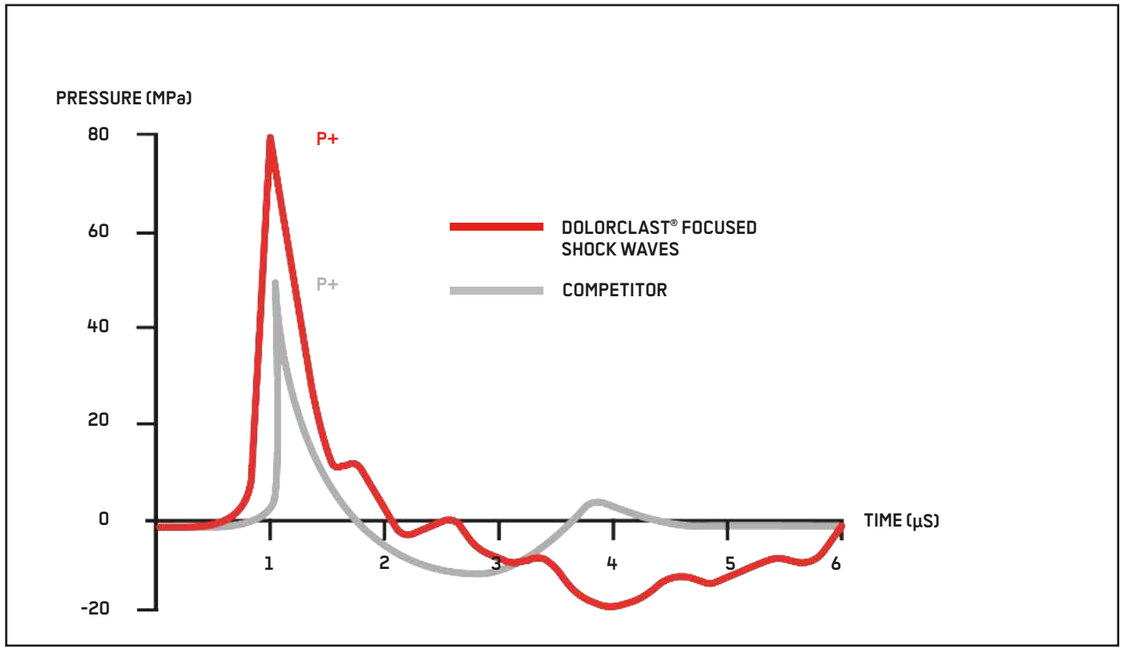
60% OF ALL STUDIES* DEMONSTRATING CELLULAR AND BIOLOGICAL EFFECTS ARE PERFORMED WITH A DOLORCLAST® DEVICE.[24]

FEEL THE ENERGY !

CALL YOUR GDT EXPERT AND BOOK A DEMO



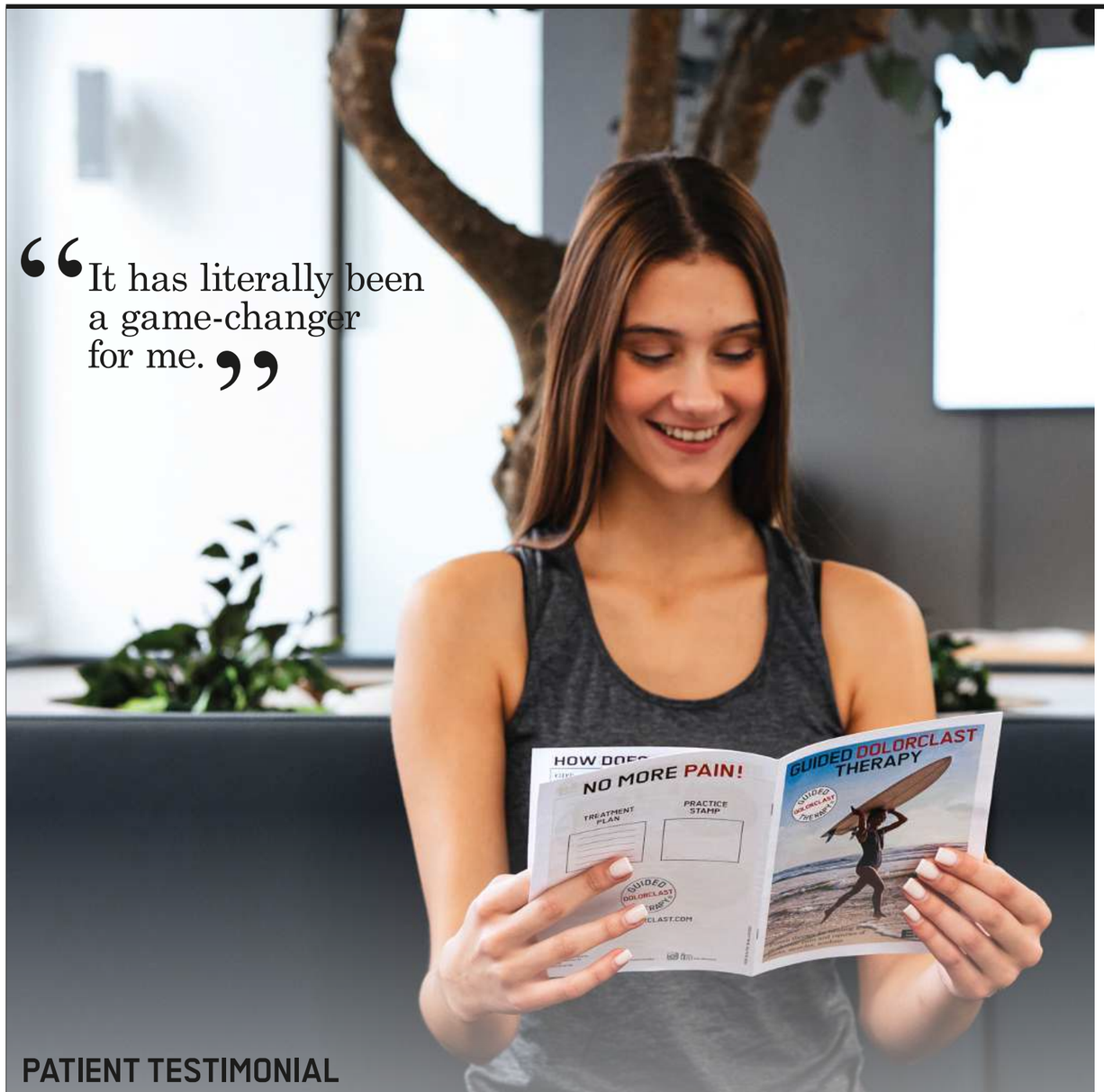
Comparison of energy output at all frequencies. Source of extracted measurements.[26]



Acoustic characterization of the DolorClast® Focused Shock Waves. Internal measurements.

* Using radial shock waves.

PAIN-FREE ACTIVITIES



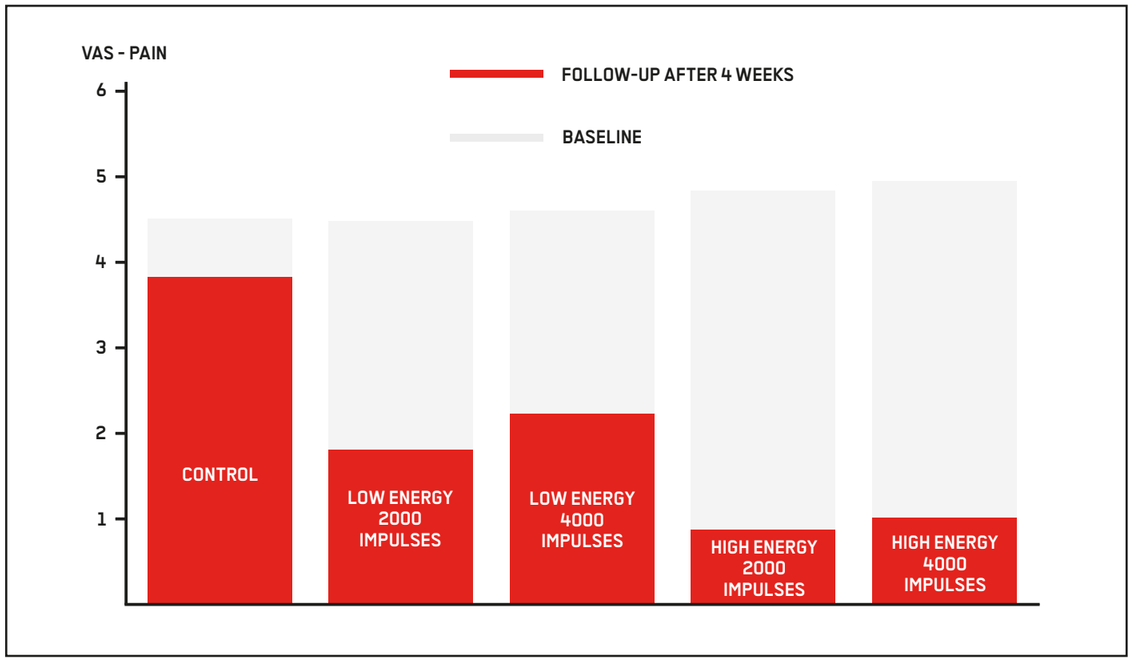
PATIENT TESTIMONIAL

"As a dental hygienist, I'm always on my feet. For the last 7 years, I've suffered severe pain in my left foot. Even walking on the beach, I get shooting pain up my leg. As a result, I haven't been able to wear any high heels without being in pain for hours afterwards. After just one Dolorclast® Shockwave Treatment, I was in less pain. In only 7 minutes! It has literally been a game changer for me, I can't believe how quickly it worked. I now recommend all my friends suffering back, neck, shoulder, knee or with any muscle issue seek out EMS DolorClast® shockwave therapy. It really works."

TABITHA

Dental Hygienist - Newcastle, Australia , 2023

SUPERIOR TREATMENT OUTCOMES OF HIGH-ENERGY DOLORCLAST® SHOCK WAVE THERAPY.



Importance of high energy over number of shocks for pain reduction in knee osteoarthritis.[27]

- This study on knee osteoarthritis proved superior pain relief with high energy shock waves over low energy shock waves. High energy shock waves are more efficient for improving patients' conditions.
- A low energy shock wave does not provide the same treatment outcome as a high energy shock wave.
- Low energy cannot be compensated for by applying more shocks.

FULL STUDY

FAST-FORWARD RECOVERY



PATIENT TESTIMONIAL

"I was struggling with plantar fasciitis in the middle of last season and I thought my rugby season may be cut short, or a rest period may be required. Fortunately, our clinic uses Shock Wave Therapy for this exact issue and after a few treatments, the pain started to ease and eventually disappeared completely. It enabled me to stay fit until the end of the season despite a very busy period."

JAMIE GEORGE
Rugby Player, Saracens London, 2023

DOLORCLAST® SHOCK WAVE THERAPY REDUCES LAY-OFF TIMES IN ELITE SPORTS AND RE-INJURY RATES

- When compared to conventional treatments, shock waves prove to be beneficial in reducing duration of activity interruption in professional sports.[28]
- Average duration of activity interruption (lay-off time) in Type 1a (muscular tightness / hypertonicity) and 2b (muscular strain injury) muscle injuries was 50% shorter than comparable cases reported in literature.[28]
- High frequency radial shock wave treatments enable fast treatments on large regions of the body without compromising the energy delivery to the treated tissues.

LAY-OFF TIME REDUCTION WITH DOLORCLAST® SHOCK WAVES

Type 1A INJURIES	Type 2B INJURIES	Type 3B INJURIES
REDUCED by 54%	REDUCED by 50%	REDUCED by 23%

Return to play after treating acute muscle injuries in elite football players with radial extracorporeal shock wave therapy.[28]

FULL STUDY

DOLORCLAST® RADIAL SHOCK WAVES



NO MAGIC TRICKS – JUST TECHNICAL FEATS
MAXIMUM ENERGY OUTPUT
FOR FAST RECOVERY

1. OUTSTANDING RADIAL SHOCK WAVE TECHNOLOGY – RIVALLING COMPETING FOCUSED PRESSURE WAVE UNITS

- Patented air management system allows for efficient conversion of airflow input to constant high energy output at all frequencies.
- High performing integrated compressors solution reduces unit's weight (15kg) and enables treatment anywhere at any time.

2. OPTIMAL ENERGY DELIVERY – ENHANCED RECOVERY

Specific protocols and treatment modes increase patient's tolerance and compliance to shock wave therapy:

- SMART preset protocols increase treatment efficiency.
- ANALGESIC mode with high-frequency settings builds up tolerance to treatment for sensitive patients.
- RAMP-UP mode with gradual increase of energy settings to maximum output ensures best clinical outcomes.
- BURST mode with alternating frequencies prevents patients from acquired tolerance to mechanical stimulation.

3. FAST AND EFFICIENT TREATMENT

- Offer patients short efficient shock waves sessions with the 25Hz frequency (1500 high-energy shocks/ min).
- Adjust energy while treating directly from the handpiece.
- Swap applicators instantly with the quick-release system.

DOLORCLAST® FOCUSED SHOCK WAVES



HIGH ENERGY LEVELS AND DEEPER PENETRATION TO COVER A WIDER RANGE OF PATHOLOGIES

1. SAVE TIME TO FOCUS ON THE ESSENTIALS

- Intuitive touch-screen interface for seamless navigation.
- Integrated step-by-step treatment tutorial.
- Preset protocols for easy guidance.
- Real-time monitoring of key parameters.
- Fully customizable protocols.
- 2 special modes (Analgesic and Ramp-up) to increase efficiency, tolerance and compliance.

2. IMPROVE PATIENT EXPERIENCE AND CLINICAL OUTCOMES

- Key function directly activated on the handpiece for streamlined operation (Intensity and on/off buttons).
- Piezoelectric generation of shock wave avoids mechanical micro displacement of handpiece's applicator, thus providing comfortable treatment even for highly sensitive patients.
- 3 gel pads to adjust the depth of the focus point based on the pathology.

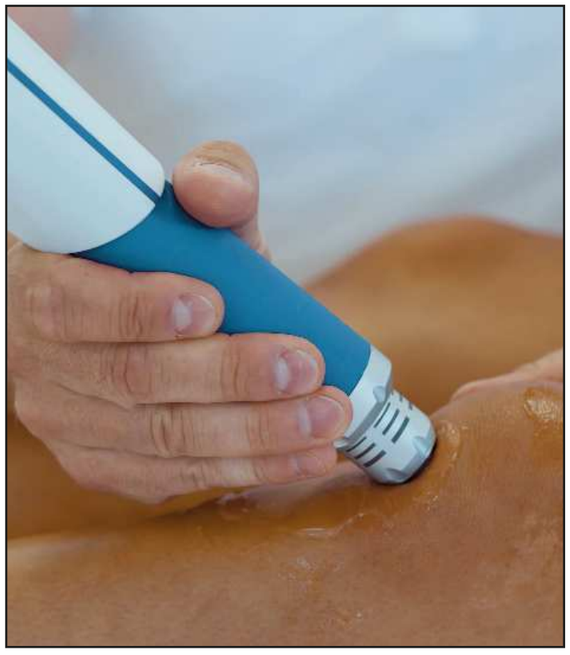
3. EASE YOUR PRACTICE WORKFLOW

- Treat anywhere anytime with transportable plug-and-play device.
- Maintenance-free.
- Long handpiece lifespan of over 5 million impulses.

THE RIGHT SOLUTION, FOR EACH PATIENT

GUIDED DOLORCLAST® THERAPY

PATHOLOGY DEPTH AND REQUIRED ENERGY
GUIDE THE THERAPEUTIC CHOICE



DOLORCLAST®
RADIAL SHOCK WAVES

Indication depth:

► Shallow pathologies (0-4 cm)

Maximum energy output:

► 0.28 mJ/mm² delivered at the tip of the applicator

Ideal for:

► Superficial tendinopathies
► Fasciopathies
► Myofascial pain syndromes
► Large muscular areas
► Spasticity



DOLORCLAST®
FOCUSED SHOCK WAVES

Indication depth:

► Deep pathologies (0-6,5 cm)

Maximum energy output:

► 0.55 mJ/mm² delivered at the focus point, approximately 4 cm below the skin

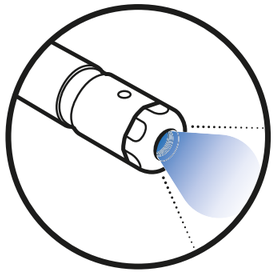
Ideal for:

► Deep structural pathologies
► Calcifications
► Bone lesions
► Pseudarthrosis
► Deep trigger points
► Painful enthesopathies





DOLORCLAST® HIGH POWER LASER THERAPY



DOLORCLAST®
HIGH POWER LASER

4 PILLARS OF SUCCESSFUL GDT LASER THERAPY

GUIDED DOLORCLAST THERAPY®

1 CORRECT WAVELENGTH FOR BEST TRANSMITTANCE

► To treat musculoskeletal conditions, the wavelength must be able to pass through the skin barrier and transmit the highest energy to subcutaneous tissues. The best wavelength is therefore the one least absorbed by unwanted molecules present in the skin, such as melanin, water and blood.

2 HIGH POWER FOR DEEP ENERGY DELIVERY

► 90% of laser energy is typically absorbed within the first 10 mm of tissue[29]. As musculoskeletal pathologies lie beneath the skin, a high peak power is required to deliver therapeutically efficient energy to subcutaneous tissues.

3 SUPERPULSED EMISSION FOR THERMAL PROTECTION

► Pulse durations over 200ns lead to thermal increase in treated tissues[30], which may turn into unwanted irreversible protein damage. Real superpulsed emission is characterized by high energy short pulses emitted at an interval allowing thermal relaxation. It enables high energy transfer without thermal increase.

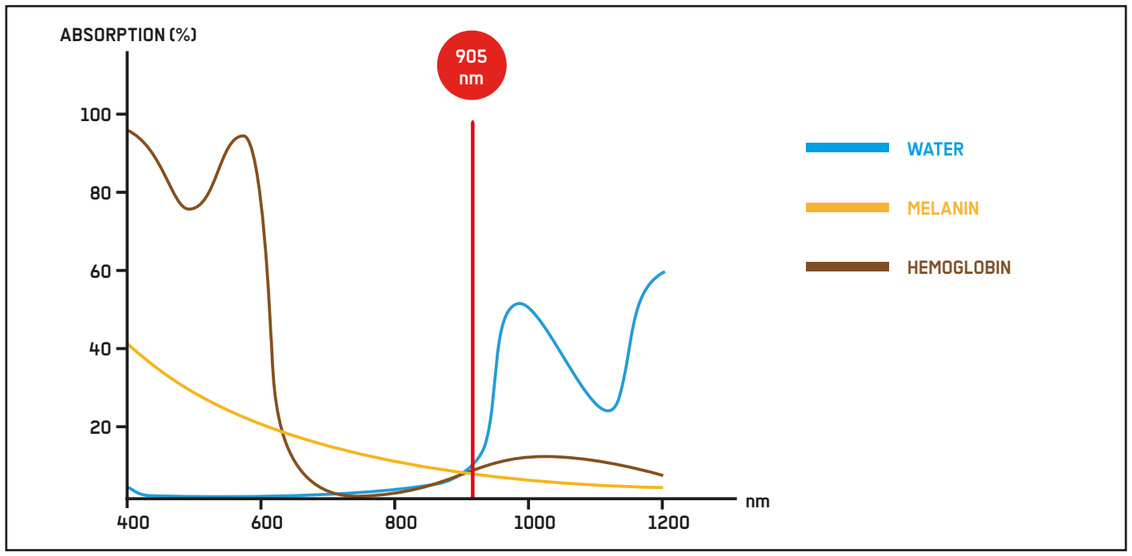
4 UNIFORM BEAM FOR OPTIMIZED DISTRIBUTION

► A laser beam must be uniform to allow homogeneous distribution of the energy to the treated tissues and keep them safe from thermal damage. Top-hat distribution profile is ideal to ensure correct dosing of the energy[29].

OPTIMAL SETTINGS FOR PEAK RESULTS

905NM WAVELENGTH
MAXIMUM TRANSMITTANCE

- Clinical research[29-31] demonstrates that, within the therapeutic window of near infrared light, 905nm wavelength is the least absorbed by chromophores and offers the best overall transmittance of energy to targeted tissues.



MAXIMUM EFFECTS

REDUCTION OF PAIN TRANSMISSION IN JUST 3 MIN

- 905nm laser light has been demonstrated to switch off nociceptors responsible for the transmission of pain after only 3 minutes of application[3]. 905nm wavelength provides quick pain relief without having recourse to any pain medication.

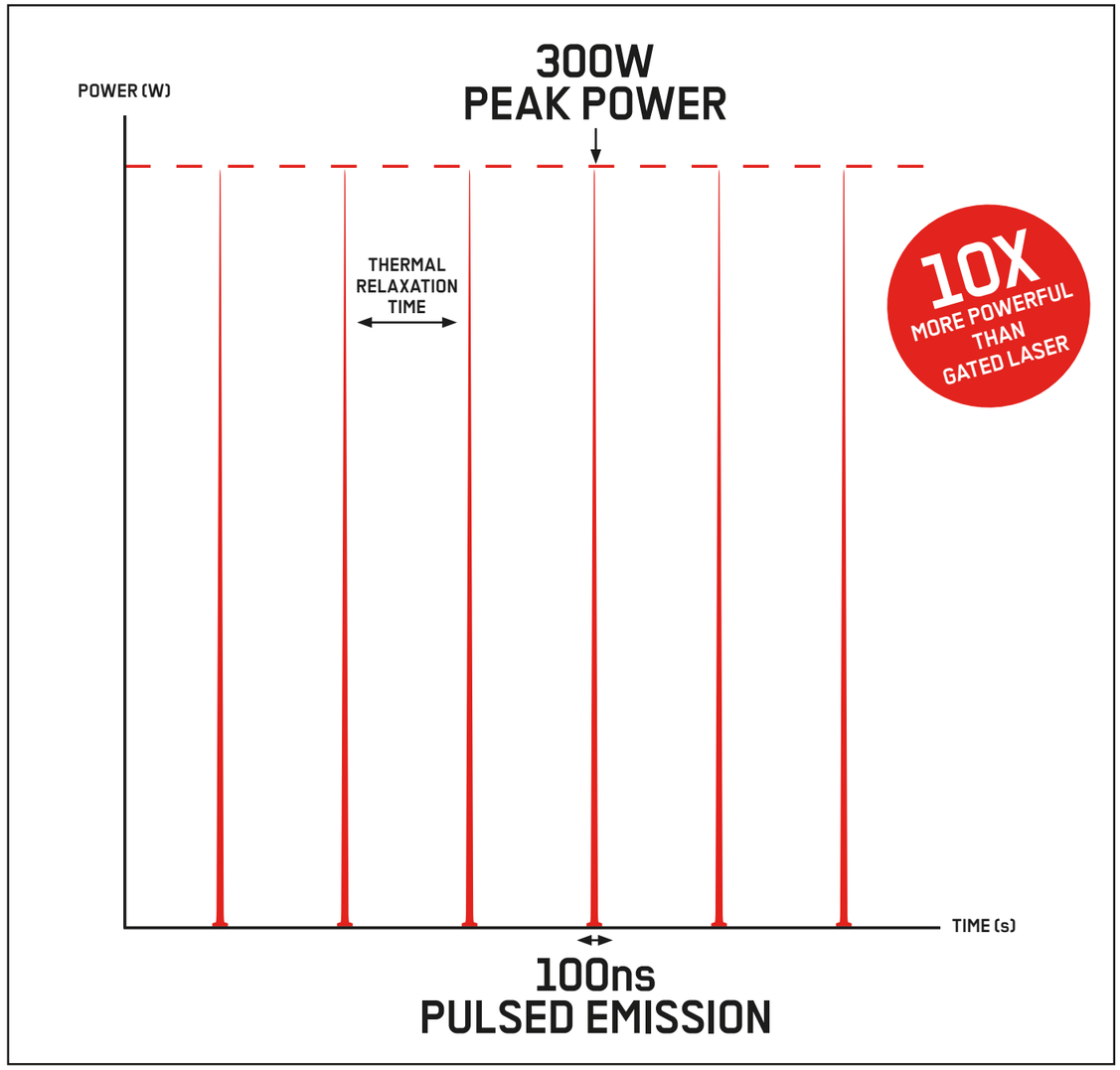
REDUCTION OF ACUTE INFLAMMATION IN 1 HOUR

- Clinical research[4] shows that exposing tissues to 905nm wavelength diminishes the level of concentration of Prostaglandin E_2 (PGE_2) in 1 hour. This leads to the reduction of acute inflammation in treated tissues. By mimicking the effect of nonsteroidal anti-inflammatory drugs (NSAIDs), without exposing patients to their side-effects, DolorClast® High Power Laser facilitates the healing process.

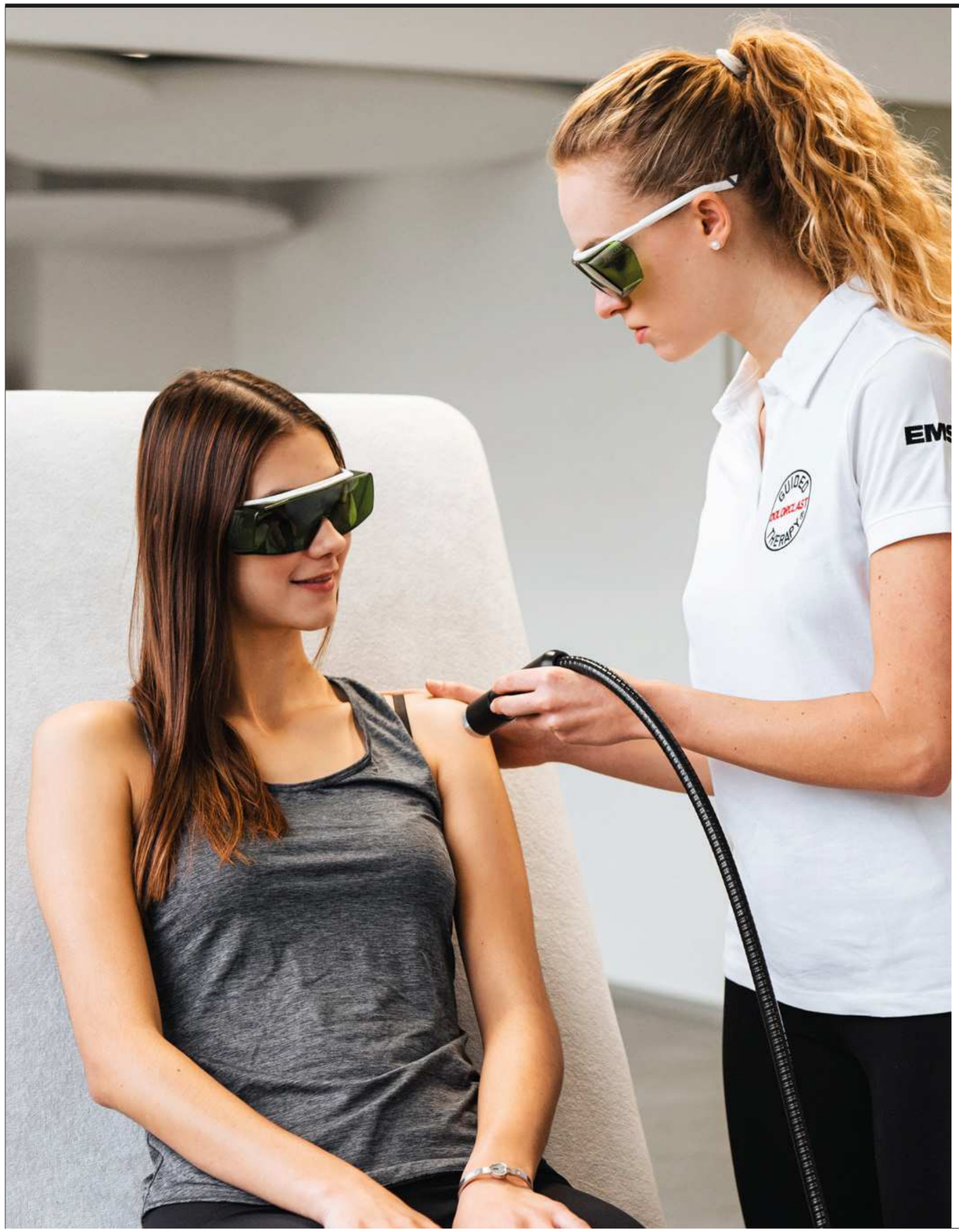
300W PEAK POWER
MAXIMUM ACTIVATION BELOW THE SKIN

- High peak power of 300W maximizes the laser energy delivery in subcutaneous tissues. This allows efficient targeting of musculoskeletal conditions.

- More energy is delivered in less time. This allows therapeutic dosage to be achieved more quickly.



TREAT - DON'T HEAT

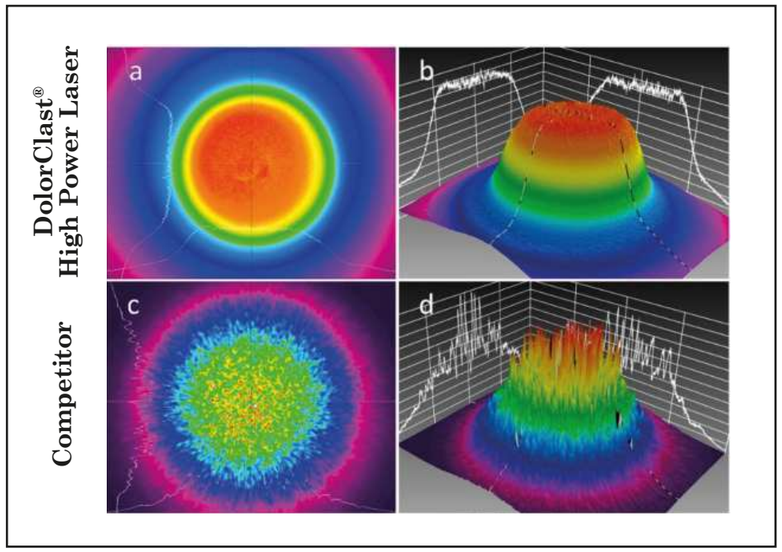


100 NS SHORT PULSES
MAXIMUM THERMAL RELAXATION TIME

- DolorClast® High Power Laser is a real superpulsed laser and not a sequential gated laser. This modern technology enables the emission of short pulse of 100ns per cycle, 100x shorter than gated lasers can achieve.
- Such parameters allow transmission of the energy into targeted tissues while providing enough relaxation time to reduce the risks of thermal increase.

BEST IN CLASS BEAM QUALITY
MAXIMUM DISTRIBUTION

- The intensity distribution of the DolorClast® High Power Laser beam is uniform[29], enabling the energy to be distributed evenly and effectively to the tissues.
- Uneven energy distribution can be inefficient when underdosing or lead to tissue damage by overdosing certain areas.



Power density maps recorded with a beam profiling camera.[29]

FULL STUDY

POWER IS IN YOUR HAND



> “The DolorClast® High Power laser has proved to be an invaluable asset to our practice.”

PRACTITIONER TESTIMONIAL

"The DolorClast® High Power laser has proved to be an invaluable asset to our practice. Its customisable protocols and different modes of action mean it can be adapted to each patient, making it an ideal ally for manual therapy. The remarkable benefits our patients feel from the very first session give them the confidence they need to recover. Its ease of use and manoeuvrability quickly convinced us to use it almost systematically, increasing the attractiveness of our practiceat the same time."

MÉLANIE DEUDON

Physiotherapist, Megève, France, 2024

TAILORED PROTOCOLS
MAXIMUM PATIENT CARE

- DolorClast® High Power Laser offers personalized treatments depending on anatomical location, surface of injured tissues and types of patients.

TARGETED ACTION-MODES
MAXIMUM PERFORMANCE

- DolorClast® High Power Laser features 5 action modes, tailored to target specific tissue effects, based on therapeutical objectives: reduction of inflammation, pain-relief, resorbtion of edema, stimulation of tissular regeneration, or promotion of muscle relaxation.

GDT COMBINED THERAPIES
MAXIMUM SYNERGIES

- The analgesic effect provided by the DolorClast® High Power Laser pre-treatment maximizes overall outcomes of the DolorClast® Shock Waves session.

- A clinical study[32] demonstrated that this combination increases the effectiveness of DolorClast® Shock Waves treatments by enabling the delivery of up to 50% more energy just 5 minutes after laser pre-treatment and up to 100% when waiting 1 hour between treaments.

FULL STUDY

DOLORCLAST® HIGH POWER LASER



EMPOWER YOUR PRACTICE.

TREAT PAIN AND INFLAMMATION WITH 300W SUPERPULSED LASER

1. TAILORING TREATMENTS TO EACH PATIENT

- Preset parameters to guide application in function of the treatment location.
- 5 specific action-modes to focus on desired effects (Pain relief, anti-inflammatory, anti-oedema, anabolic stimulus and myorelaxant).
- Create and record your own treatment protocols.

2. FACILITATING TREATMENT MANAGEMENT

- Clear display of treatment settings in real time on screen.
- Top performances in a portable unit (7 kg) to treat patients wherever they are.
- Divergent laser beam enabling to adapt to treatment surfaces.

3. TIME-SAVING FOR OPTIMIZED CLINIC WORKFLOW

- Versatile hands-free mode to save time and combine with other treatment modalities or treat more patients per day.
- Easy to set up and use with step-by-step treatment tutorials.
- Minimum maintenance with no need for calibration.

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E.M.S. ELECTRO MEDICAL SYSTEMS SA
Chemin de la Vuarpillière 31
CH-1260 Nyon

Tel +41 22 99 44 700
EMS-DOLORCLAST.COM
Email welcome@ems-ch.com

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