GUIDED DOLORCLAST THERAPY



YOUR HOLISTIC SOLUTION FOR MUSCULOSKELETAL PAIN THERAPY



GDT - MASTERING THE WAVES FOR **PAIN FREE ACTIVITIES**



GDT – GETS PATIENTS GOING

GUIDED DOLORCLAST® THERAPY TREATS 90% OF ALL MAJOR INDICATIONS OF THE MUSCULOSKELETAL SYSTEM.



► Almost 3% of adults suffer from lateral epicondylitis, which without treatment will take up to two years to heal*.

OUPPER BACK PAIN

► Thoracic spine and neck pain represent the 4th leading cause of disability with an annual prevalence rate exceeding 30% of the population *.

5 LOWER BACK PAIN

► N°1 self-reported musculoskeletal pain, its prevalence is about 20% in individuals aged between 20 and 60 years old*.

PATELLA TIP SYNDROME

► Also known as Jumper's knee, this typical overload injury is characteristic of recreational athletes with a prevalence of 8.5% among this population*.

ACHILLES TENDINOPATHY

8

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► One of the most frequent ankle and foot overuse injury, this disorder affects about 9% of recreational runners and causes up to 5% of professional athletes to end their career *.



HERE YOU'LL FIND 40 OTHER INDICATIONS GDT CAN TREAT & REFERENCE STUDIES*



2 ROTATOR CUFF TENDINOPATHY

► This condition accounts for 45% of all shoulder pain which require professional medical care*.

ADHESIVE CAPSULITIS

► Up to 5% of the population with a greater predominance in female, will be affected by a frozen shoulder, usually appearing on the non-dominant hand*.

6 GOLFER'S ELBOW

► Less than 1% of the population will suffer from a medial epicondylitis. However, this condition affects subjects between the ages of 45 and 65, preventing them from living a normal life, working or doing sports *.

6 KNEE OSTEOARTHRITIS

► Almost 13% of women and 10% of men aged 60 years and older suffer from symptomatic knee osteoarthritis*.

PLANTAR FASCIOPATHY

► Very common, this condition acccounts for about 10% of runnerrelated injuries and up to 15% of all foot symptoms requiring professional medical care *.

6 STEPS, 1 GOAL: PAIN FREE PATIENTS

Guided DolorClast[®] Therapy (GDT) is a new treatment concept based on combination therapies, dedicated to practitioners who want to successfully, quickly and safely treat 90% of their patients suffering from a musculoskeletal disorder.

Treating patients has never been easier thanks to GDT devices. whose unrivaled performances enable best clinical outcomes, while their design simplifies practice workflow. With GDT, be the gamechanger in your patients' lives.

06 FOLLOW UP

EVALUATE THE THERAPY EFFICIENCY & PLAN FOR NEXT STEPS.

05 REHABILITATE

PERFORM COMPLEMENTARY SET OF EXERCISES TO INCREASE FUNCTION RECOVERY.

04 DOLORCLAST[®] FOCUSED SHOCK WAVES

TREAT WITH FOCUSED SHOCK WAVES TO CURE SPECIFIC PATHOLOGIES.

01 ASSESS & ENGAGE ASSESS YOUR PATIENT'S PATHOLOGY WITH KEY QUESTIONS & TESTS.ENGAGE YOUR PATIENT WITH A TREATMENT PLAN & OUTCOMES. 150---O DOLORCLAST **02** DOLORCLAST[®] **HIGH POWER LASER** CHERP TREAT WITH HIGH POWER LASER TO REDUCE INFLAMMATION & PAIN OF PATHOLOGY. **03** DOLORCLAST[®] **RADIAL SHOCK WAVES** TREAT WITH RADIAL SHOCK WAVES TO CURE PATHOLOGY.





O1 ASSESS & ENGAGE

WELCOME TO THE **GUIDED DOLORCLAST® THERAPY**

ANAMNESIS

► Check the medical and pathology history of your patient, available reports of screening tests and on-going medication to rule out possible contra indications to GDT.

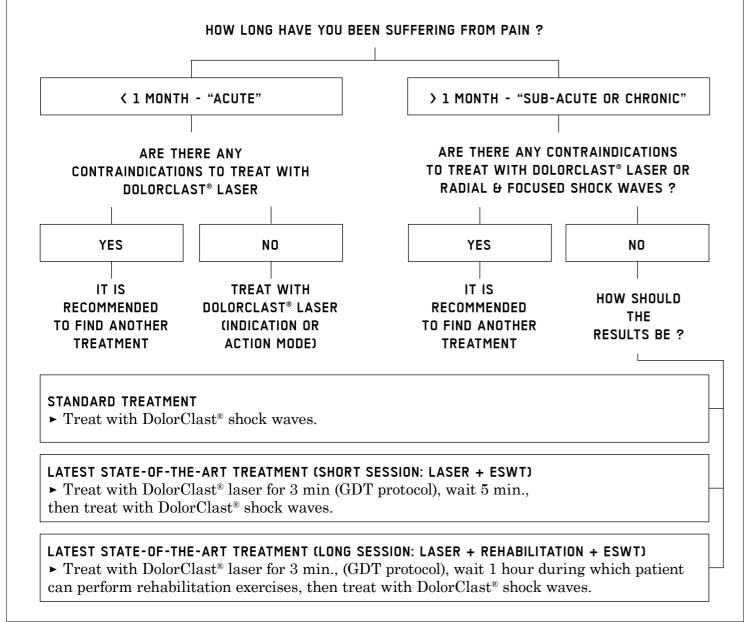
PHYSICAL EXAMINATION

▶ Perform a thorough examination, including palpation and functional tests, to confirm or establish a diagnosis, and track the evolution of the Range Of Motion (ROM).

PAIN LEVEL ASSESSMENT

► Use a Visual Analog Scale (VAS) to assess your patient's pain prior to the therapy, to be able to track its decrease through the course of treatment.

GDT DECISION TREE



CONTRAINDICATIONS CHECK

DOLORCLAST[®] LASER

USE OF THE DOLORCLAST® HIGH POWER LASER IS CONTRAINDICATED FOR:

- ► Treatment of areas affected by neoplasia.
- ► Treatment of pregnant women.
- ► Treatment over an implanted electrical stimulator. (e.g. pacemaker)

DOLORCLAST[®] SHOCK WAVES

USE OF THE DOLORCLAST[®] RADIAL SHOCK WAVES AND PIEZOCLAST[®] IS CONTRAINDICATED FOR:

- ► Treatment over air-filled tissue (lung, gut),
- ► Treatment of pre-ruptured tendons,
- ► Treatment of pregnant women,

▶ Treatment of patients under the age of 18 (except for the treatment of Osgood-Schlatter disease),

- ► Treatment of patients with blood-clotting disorders (including local thrombosis),
- ► Treatment of patients treated with oral anticoagulants,
- ► Treatment of tissues with local tumors or local bacterial and/or viral infections,

► Treatment of patients treated with cortisone. (within the 6-week period following the last local cortisone injection)



02 HIGH POWER LASER

NO OPIOIDS, NO SEDATIVES, NO PAIN

 Musculoskeletal injuries are described by patients as highly painful, especially in their acute phase. Unfortunately opioid medications or sedatives are still too often prescribed despite the risk of adverse events. To avoid any addictive form of pain management, EMS has developed the DolorClast® High Power Laser to offer a non-invasive, effective yet safe solution to patients suffering from acute phase or those having a low-tolerance threshold of pain.



► DolorClast[®] High Power Laser's 905nm wavelength triggers two main types of effects in the targeted area:

ANALGESIC EFFECT:

► Kicking in 5min after the end of laser treatment and lasting up to 72h.

ANTI-INFLAMMATORY EFFECT:

► Decreasing acute inflammation and leading to a quick absorption of the oedema and a faster healing process of the damaged tissue.





03 RADIAL SHOCK WAVES

THE SWISS ORIGINAL, BY THE INVENTOR OF RSWT®

► In 1997, EMS patents the first radial shock wave device, the Swiss DolorClast[®], based on the ballistic principle.

► Compressed air sent to the handpiece accelerates a projectile, which strikes a fixed applicator at high speed (up to 90 km/h). The kinetic energy resulting from this movement is converted into a shock wave transmitted in a radial manner to the targeted tissues.



► Shock waves delivery is short in time, usually lasting just a few minutes, thus enabling to be coupled with other therapies within the same session as recommended by the GDT. DolorClast[®] Shock Waves protocol usually includes a total of three to five sessions, planned at a rate of one to two sessions per week with an interval of minimum 72h between them.



04 FOCUSED SHOCK WAVES **05** REHABILITATE

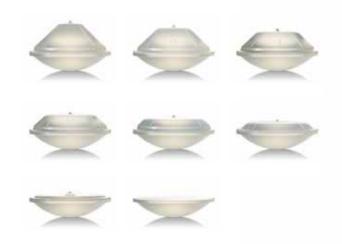
IN DEPTH FOCUS FOR PAIN RELIEF

► Following a decade of success in Radial Shock Waves Therapy (RSWT[®]), EMS has broaden its therapeutic arsenal by offering in 2009 Focused Shock Waves Therapy (FSWT).

► EMS Focused Shock Waves device uses the piezoelectric principle. High voltage is discharged in thousand piezoceramic crystals that induce thousand acoustic waves converging and steepening into a shock wave towards the targeted tissue.



► The convergence of the focused shock wave, at 4 cm with effect up to 8 cm deep-down the tissues, allows the treatment of specific deep pathologies such as subacromial pain syndrome or nonunion fractures. Focused shock waves are as well best suited to address painful enthesopathy as their propagation in the tissues is more comfortable than radial shock waves. DolorClast[®] Shock Waves protocol usually includes a total of three to five sessions, planned at a rate of one to two sessions per week with an interval of minimum 72 hour between them.

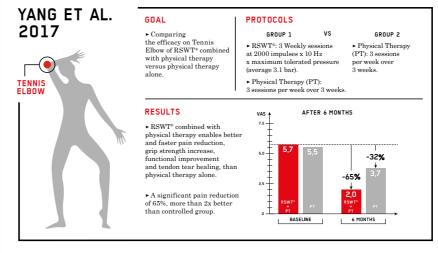




FOR BEST TREATMENT OUTCOMES

► To maximize your treatment outcomes, DolorClast[®] instrumental therapy should be completed with a rehabilitation program. Numerous studies proved that combining rehabilitation exercises with shock waves provides better outcomes compared to each treatment taken separately.

AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION



06 FOLLOW UP

MONITOR YOUR PATIENTS' PATHOLOGY EVOLUTION

▶ Patient compliance to treatments that last over few weeks is tricky. GDT helps you keeping patients within your practice and improving your overall success. Here are some quick tips to retain your patients:

TRACK TREATMENT SUCCESS:

 Via outcome measurement tools to reassure your patients and prove the efficacy of your treatment.

SCHEDULE NEXT APPOINTMENT:

▶ Before patient leaves to establish a treatment pattern.

DON'T FORGET!

 Patients are often your most passionate ambassadors. Their endorsement to the GDT will represent more than any paid campaign for your practice.

REHABILITATION EXERCISES:

► Exercises should gradually increase in intensity with patient improvement and tolerance to pain.

OTHER TREATMENTS:

► Taping, manual therapy or TENS can complement GDT treatment if judged necessary by the practitioner.

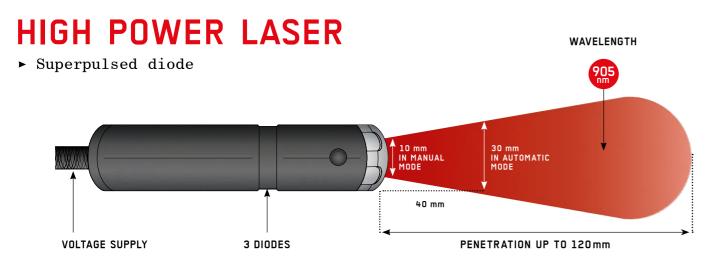


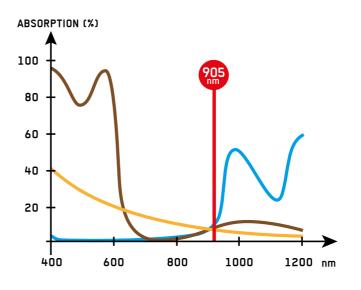


GDT -THE GAME-CHANGER IN PAIN THERAPY

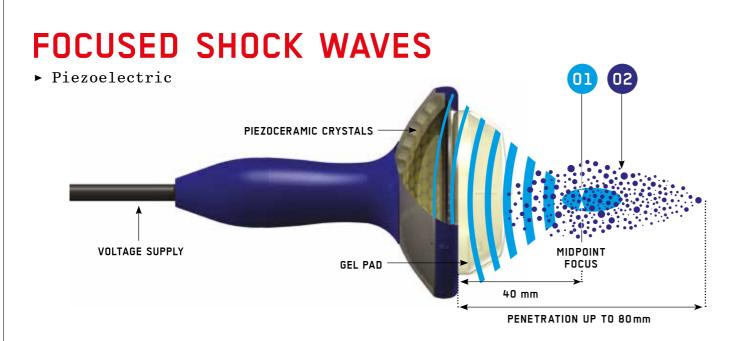


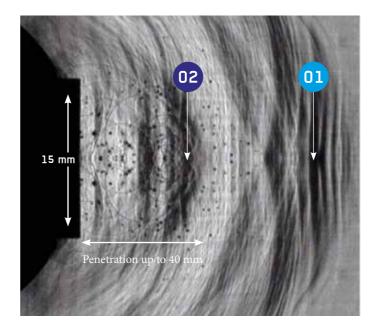
TOP TECHNOLOGIES, BEST RESULTS

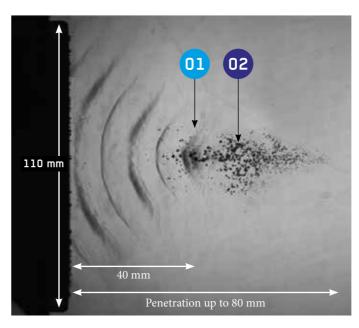




RADIAL SHOCK WAVES ▶ Ballistic PROJECTILE APPLICATOR COMPRESSED AIR PENETRATION UP TO 40mm











905 NM

► The 905 nm wavelength is unique as it is the least absorbed by water, blood and melanin within the near infra-red spectrum. This specific wavelength allows interactions with deeper tissues and guarantees optimal energetic exchanges at the targeted site.

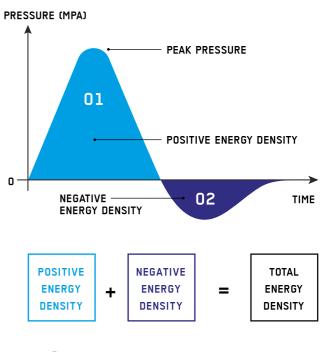


MELANIN

HEMOGLOBIN

01

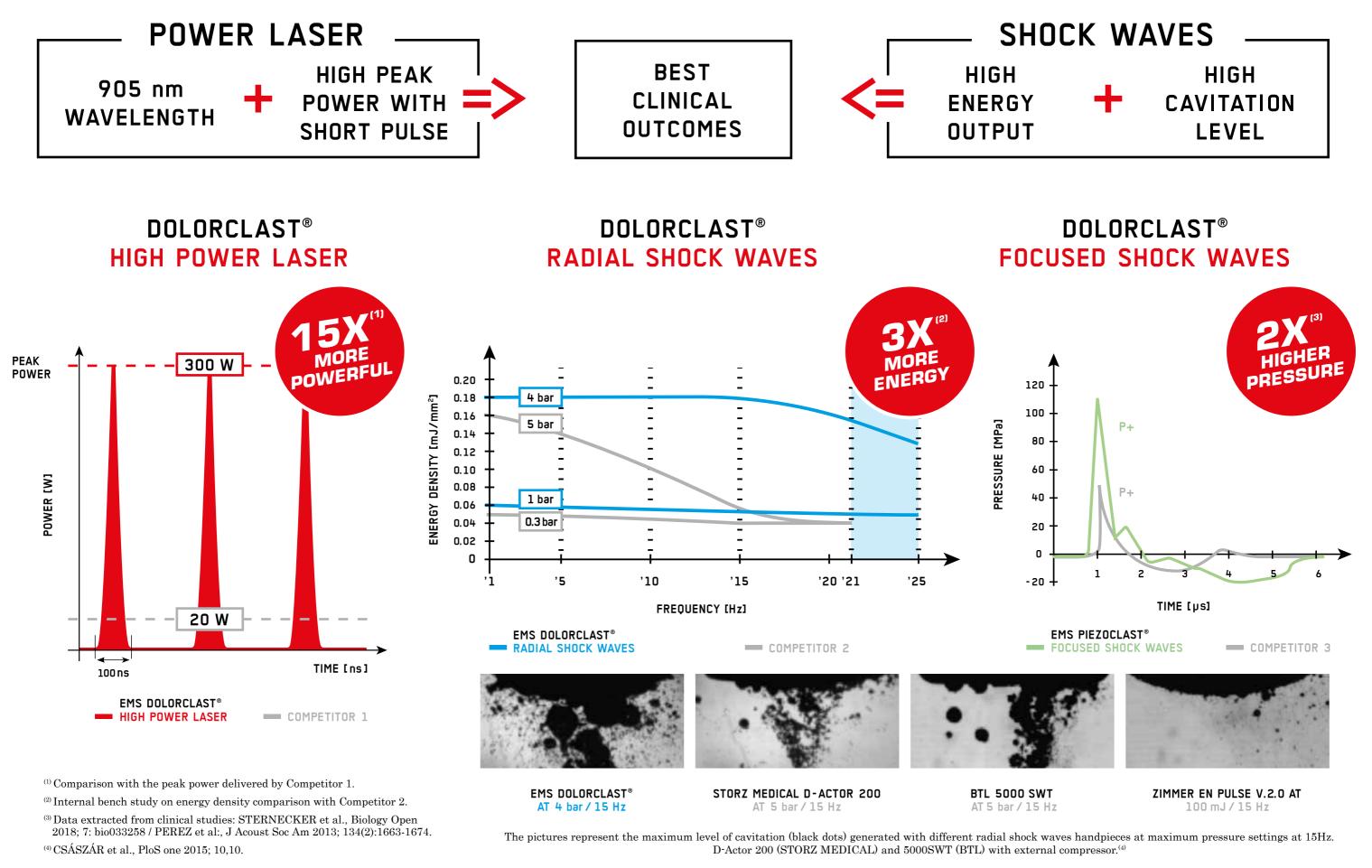
► A shock wave begins by a compression phase. The peak pressure creates shear stress in the tissues. In focused shockwaves, the peak pressure is usually higher than in radial shock waves, but the energy densities are equivalent.



02

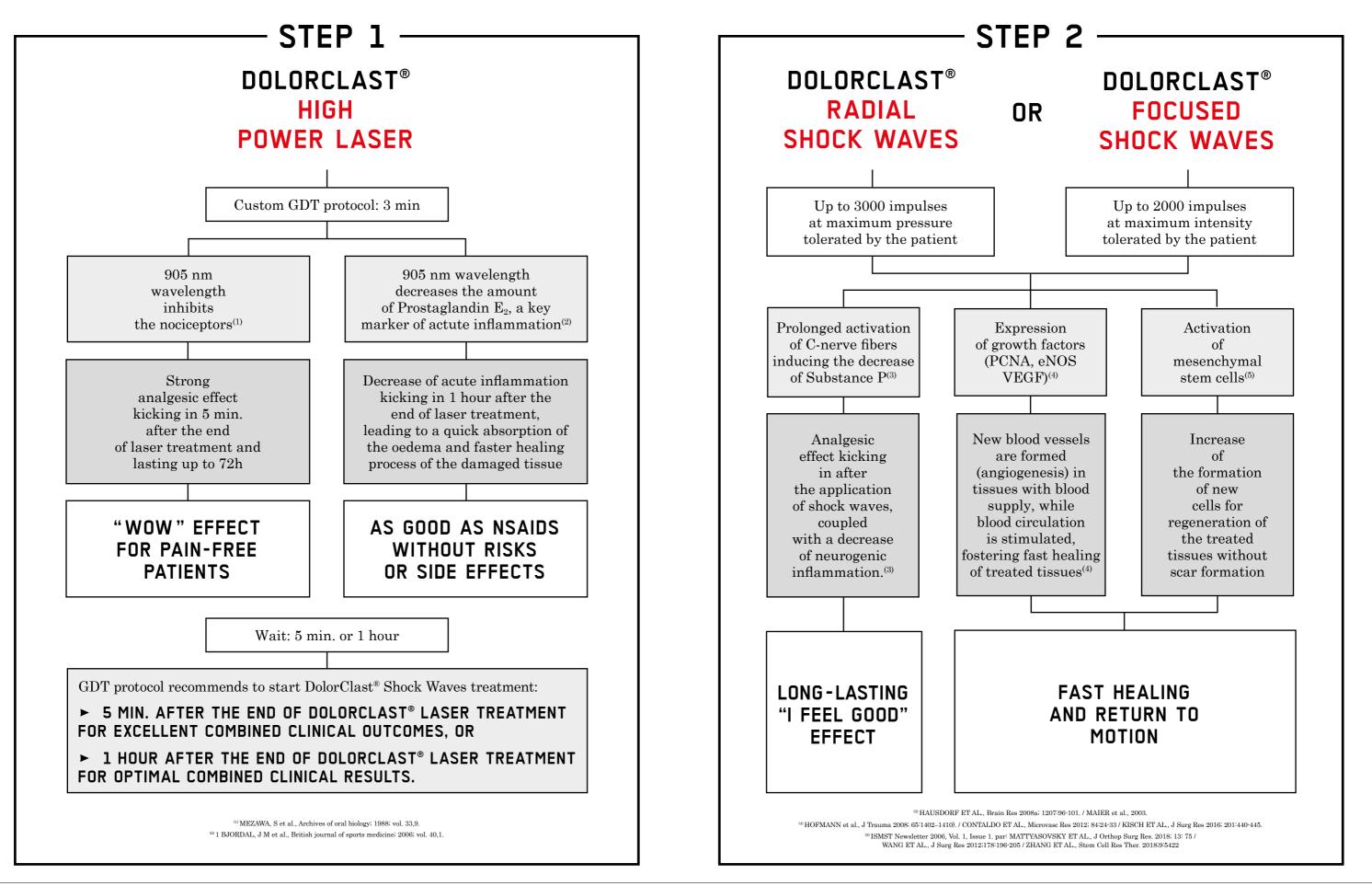
► A tensile phase follows and generates cavitation bubbles. A high cavitation level is a result of a high amount of energy density delivered by the shock wave device.

SUPERIOR TREATMENT OUTCOME





GDT - PAIN RELIEF AND HEALING





DOLORCLAST® HIGH POWER LASER

EMS"

THE MOST POWERFUL 905 nm SUPERPULSED LASER FOR FAST PAIN-RELIEF AND LONG-LASTING HEALING

1. PROVIDE A FAST ANALGESIC EFFECT AND LONG-LASTING HEALING

► Tackle your patients' pain in as little as 5 minutes post-delivery of the laser GDT protocol, which acts by temporarily inhibiting the nociceptors in the treated area, thus reducing the need to recourse to any pain medication.

• Reduce acute inflammation from the 1st treatment session by decreasing the amount of Prostaglandin E_2 (key marker of inflammatory diseases), which mirror the effects of nonsteroidal anti-inflammatory drugs (NSAIDs), and hence avoiding where possible the recourse to such medication.

2. EASE PRACTICE WORKFLOW TO INCREASE YOUR PROFITABILITY

- ► Effectively treat more patients per day thanks to DolorClast[®] High Power Laser hands-free mode.
- Easily transport your laser everywhere thanks to its light weight (8 kg) and treat your patients wherever they are.
- ► Address most musculoskeletal pathologies and all types of patients thanks to its pre-set protocols:
 - ► 1 custom GDT protocol
 - ► 40 protocols by indications
 - ► 7 protocols by action (anti-inflammatory, anti-edema, hypersensitive patients etc.)

3. LASE WITH SAFETY

- ► Treat safely without risk of over-heating the tissues thanks to short duration impulses (100 ns) which allow the treated area to maintain below the thermal threshold.
- ► Deliver the right laser dose without risk of burns thanks to the wide laser beam size (1 cm in manual mode and 3 cm in hands-free mode).

► Save time without compromising patient safety thanks to the handsfree mode. The spacer clipped on the handpiece keeps the patient's skin at a safe distance, for a burn risk-free treatment.





DOLORCLAST

DOLORCLAST[®] RADIAL SHOCK WAVES

EMS"

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DEDICATED TO PRACTITIONERS WHO DO NOT COMPROMISE BETWEEN UNRIVALLED PERFORMANCES AND VERSATILITY

1. DELIVER THE HIGHEST ENERGY EVERYWHERE

Two integrated compressors coupled with optimized air management system to:

- ► Design the most powerful radial shock waves device on the market delivering impulses up to 25Hz.
- ► Treat anywhere anytime with your light weight transportable device (15 Kg).

2. IMPROVE PATIENT EXPERIENCE

▶ 5 Smart protocols and 3 modes of action to treat most musculoskeletal pathologies.

► A set of 7 applicators to adapt to your patients' pathology.

New modes of treatment:

- ► Analgesic to reduce the pain feeling even for sensitive patients or painful conditions.
- ► Burst, to deliver impulses at 2 frequencies and prevent patients from developing tolerance to certain mechanical stimuli.

3. BOOST YOUR PRACTICE PRODUCTIVITY

New Blue handpiece design with:

- ► Power buttons for an easy adjustment of energy settings while treating.
- Shock absorber to reduce the amount of refracted vibrations.
- ► Quick twist applicators for easy change between treatments.
- ► Easy maintenance control thanks to integrated RFID tag that records number of use and delivered impulses.

► Treat muscle injuries or large areas in no time thanks to the 25Hz setting enabling to deliver 5000 impulses in 3min20s always at maximum energy!



DOLORCLAST





DOLORCLAST[®] FOCUSED SHOCK WAVES

DEEP HEALING WITH THE PIEZOELECTRIC GENERATED FOCUSED SHOCK WAVES SOLUTION

1. DELIVER HIGH ENERGY

High performances piezoceramic technology to:

- Deliver as twice as high peak pressure than competitive devices.
- ▶ Treat even the deepest pathologies thanks to a penetration of 8 cm.
- ▶ Treat anywhere anytime with a transportable device and a weight of 10 Kg.

2. OVERCOME PAIN

 Piezoelectric generator avoids mechanical displacement to comfortably treat sensitive patients or pathologies such as enthesopathies.

3. LOW RUNNING MAINTENANCE COSTS

- ► Maintenance free console.
- ► Handpiece lifetime of >5M impulses.
- ► No water cooling system.







GDT - BE THE GAME CHANGER IN YOUR PATIENT'S LIVES



PEDro SUPPORTS GDT

THE PHYSIOTHERAPY EVIDENCE DATABASE DEMONSTRATES GDT'S SUPERIORITY

► PEDro is a freely available database of over 37,000 randomized controlled trials (RCTs, evidence based medicine level 1), systematic reviews and clinical guidelines published in the field of physiotherapy.

It was developed by The George Institute for Global Health which is affiliated with the University of Sydney, Australia, and is currently the largest independent database on topics related to physical and rehabilitation medicine. Its goal is to provide meaningful insights into the scope of evidence that can be used to guide decisions about the effects of a therapy. The PEDro database is unique in that it offers an independent assessment (PEDro score) of the quality of the RCTs it indexes, thus helping practitioners to rely on best evidence to reach their therapeutic goals.

34 OUT OF 62 RANDOMIZED CONTROLLED TRIALS LISTED IN THE PEDro WERE PERFORMED WITH DOLORCLAST[®].



HERE YOU'LL FIND MORE TOP GDT PEDro RESULTS

GROUP 2

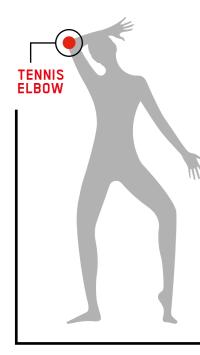
3 sessions per week

over 3 weeks.

► Physical Therapy (PT):

AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION

YANG ET AL. 2017



GOAL • Comparing the efficacy on Tennis Elbow of RSWT* combined with physical therapy versus physical PROTOCOLS

(average 3.1 bar).

GROUP 1

► RSWT®: 3 Weekly sessions

at 2000 impulses x 10 Hz x

► Physical Therapy (PT):

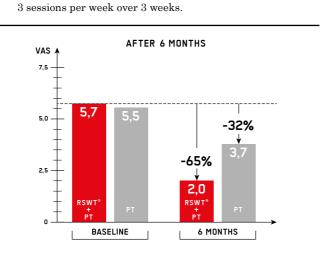
maximum tolerated pressure

RESULTS

therapy alone.

► RSWT[®] combined with physical therapy enables better and faster pain reduction, grip strength increase, functional improvement and tendon tear healing, than physical therapy alone.

► A significant pain reduction of 65%, more than 2x better than controlled group.



VS

THE JOURNAL OF SURGICAL RESEARCH

ZHAO, ZHE

ET AL. 2013

GOAL

► Demonstrating the efficacy on Knee Osteoarthritis of RSWT® versus placebo shock waves treatment.

RESULTS

 ▶ RSWT* is effective to significantly reduce pain and improve knee function over 3 months on patients suffering from Osteoarthritis (OA).

► A significant pain reduction of almost 50%, over 3x better than placebo group.

INTERNATIONAL JOURNAL OF SURGERY

ROMPE, JAN D. ET AL. 2015

KNEE

OSTEOARTHRITIS

PLANTAR FASCIOPATHY ► Comparing the efficacy on plantar fasciopathy of RSWT® combined with stretching exercises versus RSWT® alone.

RESULTS

GOAL

► A program of manual stretching exercises on the plantar fascia in combination with RSWT[®] provides better results than RSWT[®] alone on patients suffering from chronic plantar fasciopathy.

► Pain has decreased overall by almost 70%, 24 months after treatments, for patients who received GDT protocol.



PROTOCOLS GROUP 1 vs GROUP 2 ► RSWT[®]: 4 sessions ► RSWT[®] Placebo at 4000 impulses x sessions 6 Hz x 0.25mJ/mm². AFTER 3 MONTHS VAS 7,5 -15% 5.0 --49% 3.8 2.5 -BASELINE 3 MONTHS

PROTOCOLS

GROUP 1

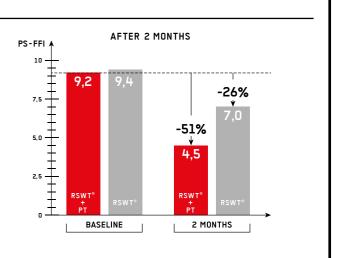
VS

► RSWT®: 3 weekly sessions at 2000 impulses x 8 Hz x 4 bar.

► Physical Therapy (PT): stretching exercises 3x daily over 8 weeks.

GROUP 2

► RSWT[®]: 3 weekly sessions at 2000 impulses x 8 Hz x 4 bar.



JOIN THE ACADEMY

EDUCATING TOMORROW'S **EXPERTS IN ESWT**

▶ The Swiss DolorClast[®] Academy offers training programs globally to spread knowledge about the Guided DolorClast[®] Therapy with a view to improving patient care. Whether you are working from a remote location, a small town or a big city, you can still access our high-quality metailored courses in your area and in your language.

▶ The SDCA has a large network of experts encouraging users and future trainers to popularize the Guided DolorClast[®] Therapy worldwide.

▶ The SDCA is the perfect organization to keep you up to date on the latest clinical advances.

INCREASING YOUR EXPOSURE

► After becoming certified, the SDCA helps you increase your exposure and drive business to your practice by adding you to the online directory of certified shock wave centers.



CHANGE THE GAME

GDT TAKES PAIN THERAPY TO A WHOLE **NEW LEVEL, BE THE GAME-CHANGER IN YOUR PATIENT'S LIVES**



100 MILLION PATIENTS CAN'T BE WRONG

EVERYONE WHO'S INTO SPORTS AND GOT TO KNOW THE ADVANTAGES OF GDT WILL APPROVE.



AKSEL LUND SVINDAL ALPINE SKIER. OLYMPIC GOLD MEDALIST

"THIS TREATMENT HELPED ME TO BE ABLE TO TAKE PART IN THE WORLD CUP **RACES... THANKS** FOR THE HELP.

IT WAS WORTH ITS WEIGHT IN GOLD!"

Photo credit: "Aksel Lund Svindal" by Kristin Danielsen used under CC-BY-SA-3.0 Unported (https://fr.wikipedia.org/wiki/Aksel_Lund_Svindal#/media/File:Aksel2.jpg)



KRISTIN STØRMER STEIRA NORWEGIAN CROSS-COUNTRY SKIER

"Thank you for helping me keep my World Championship dreams alive!"

Photo credit: "Kristin Størmer Steira" by Slawek used under CC-BY-SA-2.0 Unported (https://en.wikipedia.org/wiki/Kristin St%C3%B8rmer Steira#/media/ File:Kristin_St%C3%B8rmer_Steira_2012-02-18.jpg)



ZANE ROBERTSON OLYMPIC LONG DISTANCE RUNNER

"After 3 sessions I had recovered from my Plantar Fasciitis, and could train again."

Photo credit: "Zane Robertson Rio 2016" by Tim Hipps used under CC-BY-SA-2.0 Unported (https://commons.wikimedia.org/wiki/File: Zane_Robertson_Rio_2016.jpg)



STUART APPELBY PGA GOLF PLAYER, WINNER OF A MAJOR CHAMPIONSHIP

"I was struggling with my back... On my third and fourth treatments with the shock wave I was seeing real big improvements!"



SUZANN PETTERSEN TOP NORWEGIAN GOLFER

"This treatment is an important tool as it allows me to recover quickly in between hard training sessions and competitions."

Photo credit: "Suzann Pettersen" by Keith Allison used under CC-BY-SA-2.0 $\,$ Unported (https://fr.wikipedia.org/wiki/Suzann Pettersen#/media/File:2009 LPGA_Championship_-_Suzann_Pettersen_(2)_cropped.jpg)





"I HAD THE **CHANCE TO BE** TREATED WITH THE DOLORCLAST® FOR MY **SUPRASPINATUS TENDINOPATHY.** AFTER 5 **SESSIONS I WAS** PAIN FREE AND COULD CONTINUE COMPETITION."



MARIE DESANDRE NAVARRE **PROFESSIONAL KITE SURFER**



GOOD-BYE PAIN, HELLO FREEDOM



O SwissDolorClastint WWW.EMS-DOLORCLAST.COM

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