RPW Shockwave Therapy
Scientific Literature
Clinical Evidence

- Plantar Fasciitis
- Achilles Tendinopathy
- Hamstring Tendinopathy
- Patellar Tendinopathy
- Rotator Cuff Tendinopathy
- Lateral Epicondylitis
- Osgood-Schlatter Disease
- Medial Tibial Stress Syndrome
- Greater Trochanteric Pain Syndrome
- Bone Healing
- Trigger Point Relief
- Cellulite
For additional information, please contact Francine.vansteenkiste@DJOglobal.com
PLANTAR FASCIITIS


Key message
- Radial shock wave therapy is a good alternative choice for plantar fasciitis treatment because of its lower price and possible equal or better effectiveness than traditional focused shock wave.

More info
- Pubmed link
- MyDJO link
- DealerNet link

Chronic Plantar Fasciitis Treated with Two Sessions of Radial Extracorporeal Shock Wave Therapy.

RCT – 50 patients – RSWT versus placebo treatment

Key message
- RSWT was a safe, effective and easy treatment for patients with chronic PF and successful treatment can be achieved with only two sessions of RSWT which increases the attractiveness of this treatment method.
- The authors recommend considering RSWT treatment for every patient with chronic plantar fasciitis who is irresponsive to conventional treatment.

More info
- Pubmed link
- MyDJO link
- DealerNet link

Radial Extracorporeal Shock Wave Therapy Is Safe and Effective in the Treatment of Chronic Recalcitrant Plantar Fasciitis. Results of a Confirmatory Randomized Placebo-Controlled Multicenter Study.

RCT – 245 patients – RSWT versus placebo treatment

Key message
- Radial extracorporeal shock wave therapy significantly improves pain, function, and quality of life compared with placebo in patients with recalcitrant plantar fasciitis.
- Radial ESWT can be strongly recommended for patients with therapy-resistant plantar painful heel syndrome.

More info
- Pubmed link
- MyDJO link
- DealerNet link
Comparison of radial shockwaves and conventional physiotherapy for treating plantar fasciitis.
Randomized, prospective, comparative clinical study – 32 patients.
Key message
- Three sessions of shockwave treatment was equally effective as ten sessions of conventional physical therapy, providing faster immediate pain relief.

More info
- Pubmed link
- MyDJO link
- DealerNet link

ACHILLES TENDINOPATHY
Extra-corporeal pulsed-activated therapy ("EPAT" sound wave) for Achilles tendinopathy: a prospective study.
Prospective cohort study – 60 patients/78 tendons – baseline vs. 1 yr post-treatment
Key message
- Statistically and clinically significant improvements in 78.38% of tendons treated with the low-energy radial shockwave device at least 1 year after treatment.
- Improvement in activity level, which is beneficial not only for athletic individuals but also for anyone required to work on their feet.
- The authors conclude shockwave therapy serves as a safe, viable, and effective option for the treatment of Achilles tendinopathy.

More info
- Pubmed link
- MyDJO link
- DealerNet link

Eccentric loading versus eccentric loading plus shock-wave treatment for midportion achilles tendinopathy: a randomized controlled trial.
RCT – 68 patients
Key message
- The combined approach of eccentric loading plus repetitive low-energy SWT produced significantly better results (82% success rate) than eccentric calf muscle training alone.

More info
- Pubmed link
- MyDJO link
- DealerNet link
Eccentric Loading Compared with Shock Wave Treatment for Chronic Insertional Achilles Tendinopathy.
RCT – 50 patients
Key message
- Better results with radial shock wave therapy compared to eccentric training in patients with recalcitrant chronic insertional Achilles tendinopathy.
- The favorable results after shock wave therapy at four months were stable at the one-year follow-up evaluation.
More info
- Pubmed link
- MyDJO link
- DealerNet link

Shockwave therapy for chronic Achilles tendinopathy. A double-blind, randomized clinical trial of efficacy.
RCT – 48 patients – ESWT vs. sham treatment
Key message
- Treatment of Achilles tendinopathy with ESWT led to a clinically relevant effect, with significant improvement of the AOFAS score.
More info
- Pubmed link
- MyDJO link
- DealerNet link
HAMSTRING TENDINOPATHY

RCT – 40 athletes – RSWT vs. traditional conservative therapy.

Key message
- Significantly better results with radial shockwave therapy for Proximal Hamstring Tendinopathy than with traditional conservative (NSAID + PT) treatment.

More info
- Pubmed link
- MyDJO link
- DealerNet link

PATELLAR TENDINOPATHY

Retrospective study – 33 patients RPW versus 30 controls

Key message:
- SWT is safe and effective up to 12 months from the last application, and provides significantly better results than current conservative care.

More info:
- Pubmed link
- MyDJO link
- DealerNet link
**ROTATOR CUFF TENDINOPATHY**

Radial extracorporeal shock wave therapy in the treatment of shoulder calcific tendinitis.

Clinical trial (no control group) - 30 patients – baseline vs. post-treatment and 4-month follow-up.

**Key message**
- Radial ESWT applied to patients with shoulder calcific lesions of the rotator cuff resulted in pain relief, increase in the range of motion and increase in the muscular strength.
- X-ray showed results were associated with a decrease in the size of the rotator cuff calcifications.
- The beneficial effects remained for at least 6 months.

More info
- Pubmed link
- MyDJO link
- DealerNet link

---

Radial extracorporeal shock-wave therapy in rotator cuff calcific tendinosis.

Observational study – 62 patients – RSWT versus Laser

**Key message**
- Patients treated with Radial ESWT have shown an improvement at the end of the treatment as well as 3 months post-treatment.
- Radiography and echography showed disappearance (31%) or decrease (19%) of calcification in 50% of the shoulders treated with ESWT.

More info
- Pubmed link
- MyDJO link
- DealerNet link

---

Effectiveness of Radial Shock-Wave Therapy for Calcific Tendinitis of the Shoulder: Single-Blind, Randomized Clinical Study.

RCT – 90 patients – active versus placebo treatment

**Key message**
- RSWT effectively reduces pain (improvement of VAS scores) and increases shoulder function (improvement of UCLA Shoulder Rating Scale scores) without device-related adverse effects.
- The results seen after the treatment were maintained over the following 6 months.
- RSWT was unexpectedly better in dissolving calcifications of the shoulder than focused shock wave therapy in the literature: calcifications disappeared completely in 86.6% of the subjects in the treatment group and partially in 13.4% of subjects.

More info
- Pubmed link
- MyDJO link
- DealerNet link
Radial shock wave therapy in calcifying tendinitis of the rotator cuff - a prospective study.
Prospective study – 35 patients - 1/3/6/12-months follow-up

Key message
- Radial shock wave treatment produced significant improvement of pain and shoulder function and induced resorption of the calcific deposit.

More info
- Pubmed link
- MyDJO link
- DealerNet link

LATERAL EPICONDYLITIS

Radial shock wave therapy in patients with lateral epicondylitis.
Prospective study - 16 patients – baseline vs. post-treatment and 3/6/12-months follow-up.

Key message
- Significant improvement of pain and function with RPW treatment of recalcitrant lateral epicondylitis.

More info
- Pubmed link
- MyDJO link
- DealerNet link

Radial shock wave therapy for lateral epicondylitis: a prospective randomised controlled single-blind study.
RCT – 62 patients – active versus placebo treatment

Key message
- The use of radial shock wave therapy allowed a decrease of pain and functional impairment, and an increase of the pain-free grip strength test, in patients with tennis elbow, without device related adverse effects.
- 87% of patients were satisfied with the treatment.

More info
- Pubmed link
- MyDJO link
- DealerNet link
**OSGOOD-SCHLATTER**

Extracorporeal Shock Wave Therapy for Patients Suffering from Recalcitrant Osgood-Schlatter Disease.
Retrospective study – 14 patients.

**Key message**
- 75% of patients became free of symptoms following RPW treatment.
- Radial ESWT is a safe and promising treatment for adolescent athletes with recalcitrant Osgood-Schlatter disease.

**More info**
- Pubmed link
- MyDJO link
- DealerNet link

---

**MEDIAL TIBIAL STRESS SYNDROME**

Low-Energy Extracorporeal Shock Wave Therapy as a Treatment for Medial Tibial Stress Syndrome.
Cohort study with matched control group – 94 patients – RSWT vs. standard home training

**Key message**
- This cohort study on running athletes demonstrates that low-energy radial SWT is safe and effective for treating subjects with chronic MTSS
- Satisfactory improvement is maintained for at least 1 year.

**More info**
- Pubmed link
- MyDJO link
- DealerNet link
GREATER TROCHANTERIC PAIN SYNDROME

Low-Energy Extracorporeal Shock Wave Therapy as a Treatment for Greater Trochanteric Pain Syndrome.
Retrospective case control study – 66 patients – RSWT vs. standard conservative care

Key message
- Shock wave therapy is an effective and safe treatment for greater trochanteric pain syndrome;
- The satisfactory improvement is maintained for at least 1 year.

More info
- Pubmed link
- MyDJO link
- DealerNet link

---

Home Training, Local Corticosteroid Injection, or Radial Shock Wave Therapy for Greater Trochanter Pain Syndrome.
RCT – 229 patients

Key message
- The significant short-term superiority of a single corticosteroid injection over home training and shock wave therapy declined after 1 month.
- At 4-month follow-up, radial shockwave therapy was significantly more successful than home training or corticoid injections.
- At 15-month follow-up corticosteroid injection was significantly less successful than was home training or shock wave therapy.

More info
- Pubmed link
- MyDJO link
- DealerNet link
**BONE HEALING**

Radial Extracorporeal Shock Wave Therapy (rESWT) Induces New Bone Formation in vivo: Results of an Animal Study in Rabbits.


Animal laboratory study – 13 rabbits

*Key message*
- rESWT has proven effectiveness to induce new bone formation in normal bone and might be advantageous in the clinical setting because of its distribution to larger treatment areas.

*More info*
- Pubmed link
- MyDJO link
- DealerNet link

---

**TRIGGER POINT RELIEF**

Orthopedic trigger point shock wave therapy with focused and radial shock waves: a review of the current situation.


*Key message*
- Shockwave therapy, ideally combined radial and focused, has proven to be effective for a variety of myofascial pain syndromes in the authors' experience.

*More info*
- MyDJO link
- DealerNet link
CELLULITE

Controlled, randomized study evaluating the effects of treating cellulite with AWT/EPAT.

Key message
- Radial shockwave therapy significantly improves the visual appearance of cellulite.

More info
- Pubmed link
- MyDJO link
- DealerNet link

Acoustic Wave Treatment for Cellulite - A New Approach
Russe-Wilflingseder K et al. AIP Conf Proc;1226:25-30

Key message
- Radial acoustic waves are effective and safe to treat cellulite with high patient satisfaction and acceptance.

More info
- AIP link
- MyDJO link
- DealerNet link