

CLINICALLY PROVEN RESULTS → THE PEDro¹

ALL STUDIES HAVE BEEN PERFORMED WITH EXTERNAL COMPRESSORS

INDICATION	STUDY	PEDro SCORE	SCORE OUTCOME	DEVICE	ENERGY DENSITY	SESSIONS	INTERVAL	IMPULSES	COMMENTS	
Calcifying tendonitis of the shoulder	Kvalvaag et al. (2017) ³⁷	9	+ ⁴	Swiss DolorClast® (EMS)	Up to 0.24 (ED+) ⁵	4	7	2,000	The study by Kvalvaag et al. (2017) was performed with the Power+ handpiece, and the study by Kolk et al. (2013) with the Swiss DolorClast® Radial handpiece. The much higher energy applied by Kvalvaag et al. (2017) compared to Kolk et al. (2013) may explain the different outcomes of these studies.	
	Cacchio et al. (2006) ⁰⁶	9	+	Physio SW Therapy (Pagani)	0.10 (ED+)	4	7	2,500		
	Kolk et al. (2013) ³⁴	7	-	Swiss DolorClast® (EMS)	0.11 (ED+)	3	12	2,000		
Subacromial pain	Engebretsen et al. (2009) ¹⁵	8	-	Swiss DolorClast® (EMS)	0.1 – 0.16 (ED+)	4-6	7	2,000	In these studies, patients with rotator cuff rupture were also included. However, the latter is not an indication for the Swiss DolorClast®.	
	Engebretsen et al. (2011) ¹⁴	7	-	Swiss DolorClast® (EMS)	0.1 – 0.16 (ED+)	3	5	2,000		
Adhesive capsulitis of the shoulder	Hussein & Donatelli (2016) ²⁷	9	+	Swiss DolorClast® (EMS)	0.16 (ED+)	4	7	2,000		
Primary long bicipital tenosynovitis	Liu et al. (2012) ⁴³	5	+	Swiss DolorClast® (EMS)	0.12 (ED+)	4	7	1,500		
Lateral epicondylitis	Spacca et al. (2005) ⁴⁷	8	+	Physio SW Therapy (Pagani)	"1.2 bar" and "1.0 bar"	4	7	2,000		
	Gündüz et al. (2012) ²²	7	+	Not specified	"1.4 bar"	10	1	500		
	Yang et al. (2017) ⁸²	7	+	Swiss DolorClast® (EMS)	"2 – 3.5 bar"	3	1	2,000		
	Capan et al. (2016) ⁰⁷	6	-	ShockMaster 500 (Gymna)	"1.8 bar"	3	7	2,000		
	Sarkar et al. (2013) ⁴¹	5	+	Masterpuls MP 100 (Storz)	0.06 (?)	3	7	2,000		
	Lee et al. (2012) ³⁸	5	+	Swiss DolorClast® (EMS)	0.06 – 0.12 (ED+)	3	7	2,000		
	Mehra et al. (2003) ⁴⁸	4	+	Swiss DolorClast® (EMS)	0.10 (ED+)	3	14	2,000		
Carpal tunnel syndrome	Wu et al. (2016) ⁸¹	7	+	Physio SW Therapy (Pagani)	"4 bar"	3	7	2,000	A similar RCT with the Swiss DolorClast® is currently ongoing.	
Coccydynia	Lin et al. (2016) ⁴²	6	+	BTL-5000 (BTL)	"3 to 4 bar"	4	7	2,000		
Proximal hamstring tendinopathy	Cacchio et al. (2011) ⁰⁶	8	+	Swiss DolorClast® (EMS)	0.18 (ED+)	4	7	2,500		
Greater trochanteric pain syndrome	Weckström et al. (2016) ⁸⁰	6	(+)	Masterpuls MP 100 (Storz)	0.1 – 0.4 (ED _{total}) (2-4 bar)	3	7	3,200		
	Rompe et al. (2009b) ⁵⁸	5	+	Swiss DolorClast® (EMS)	0.12 (ED+)	3	7	2,000		
Knee osteoarthritis	Imamura et al. (2017) ²⁹	9	-	Swiss DolorClast® (EMS)	Up to 0.16 (ED+) ⁵	3	7	2,000	Another RCT performed with the Swiss DolorClast® and the Power+ handpiece (not yet listed in the PEDro database) showed positive outcome when treating knee osteoarthritis (Zhao et al., 2013).	
	Li et al. (2015) ⁴¹	4	+	Swiss DolorClast® (EMS)	0.04 – 0.16 (ED+)	7	?	600 ⁶		
Achilles tendinopathy	Rompe et al. (2007) ⁵⁵	8	+	Swiss DolorClast® (EMS)	0.10 (ED+)	3	7	2,000		
	Rompe et al. (2008) ⁶⁴	8	+	Swiss DolorClast® (EMS)	0.12 (ED+)	3	7	2,000		
	Rompe et al. (2009a) ⁵⁷	8	+	Swiss DolorClast® (EMS)	0.10 (ED+)	3	7	2,000		
Plantar fasciopathy	Gerdesmeyer et al. (2008) ¹⁸	9	+	Swiss DolorClast® (EMS)	0.16 (ED+)	3	14	2,000	In this study by Rompe et al. (2010a) on newly diagnosed plantar fasciopathy, a certain plantar fascia-specific stretching program resulted in better clinical outcome than rESWT using the Swiss DolorClast®.	
	Ibrahim et al. (2010) ²⁸	9	+	Swiss DolorClast® (EMS)	0.16 (ED+)	2	7	2,000		
	Rompe et al. (2010) ⁸⁹	8	-	Swiss DolorClast® (EMS)	0.16 (ED+)	3	7	2,000		
	Lohrer et al. (2010) ⁴⁴	8	+	Duolith SD 1 radial part (Storz)	0.17 (ED _{total})	3	7	2,000		
	Chow & Cheing (2007) ⁰⁹	7	+	Swiss DolorClast® (EMS)	0.05 – max. tolerable ED+	3	7	1,000		
	Rompe et al. (2015) ⁴⁰	7	+	Swiss DolorClast® (EMS)	0.16 (ED+)	3	7	2,000		
	Eslamian et al. (2016) ¹⁷	7	+	Swiss DolorClast® (EMS)	0.2 (?) (ED+)	5	3	2,000		
	Shaheen (2010) ⁶⁶	6	+	Swiss DolorClast® (EMS)	0.06 – 0.14 (ED+)	3	7	2,000		
	Konjen et al. (2015) ³⁵	6	+	Swiss DolorClast® (EMS)	0.08 (ED+)	6	7	2,000		
	Ulusoy et al. (2017) ⁷¹	6	(+)	BTL-5000 (BTL)	"2.5 bar"	3	7	2,000		
	Grecco et al. (2013) ²⁰	5	+	Swiss DolorClast® (EMS)	0.12 (ED+)	3	7	2,000		
	Greve et al. (2009) ²¹	5	+	Swiss DolorClast® (EMS)	0.12 (ED+)	3	7	2,000		
	Marks et al. (2008) ⁴⁷	5	-	Swiss DolorClast® (EMS)	0.16 (ED+)	3	3	2,000		Potential reasons for the negative outcome of the study by Marks et al. (2008) were discussed in Schmitz et al. (2013).
	Akinoglu et al. (2017) ⁸²	5	+	Swiss DolorClast® (EMS)	"0.2 and 0.3 mJ/mm ^{2m} "	3	7	2,000		
Mehra et al. (2003) ⁴⁸	4	+	Swiss DolorClast® (EMS)	0.10 (ED+)	3	14	2,000			
Krukowska et al. (2016) ³⁶	4	+	BTL-5000 (BTL)	"2.5 bar"	4	3.5	2,000			
Trigger points / myofascial pain syndrome	Cho et al. (2012) ⁰⁸	5	+	JEST-2000 (Joeunmedical)	0.12 (?)	1	-	1,000	RCTs on trigger points / myofascial pain syndrome using the Swiss DolorClast® are currently ongoing.	
	Damian & Zalpour (2011) ¹²	4	+	Masterpuls MP 200 (Storz)	Not specified	5.5	7	?		
	Lee & Han (2013) ³⁹	4	-	JEST-2000 (Joeunmedical)	Not specified	1	-	1,000		
Spasticity	Dymarek et al. (2016) ¹⁴	6	+	BTL-5000 (BTL)	0.030 (?)	1	-	1,500		
	Vidal et al. (2011) ⁷³	4	+	Swiss DolorClast® (EMS)	0.10 (ED+)	3	7	2,000		

¹The PEDro database (www.pedro.org.au) is a freely available database of over 37,000 randomized controlled trials (RCTs), ²Evidence-Based Medicine Level 1. ³As of September 09, 2017, systematic reviews and clinical practice guidelines in physical and rehabilitation medicine. For each RCT, review or guideline, the PEDro database provides the citation details, the abstract, and a link to the full text, where possible. All RCTs listed in the PEDro database are independently assessed for quality (the assessment criteria are summarized in Schmitz et al., 2015). All but two of the PEDro scale items are based on the Delphi list (Verhagen et al., 1998). PEDro is currently the largest independent database on topics related to physical and rehabilitation medicine. It was developed by The George Institute for Global Health affiliated with the University of Sydney, Australia. ⁴Positive outcome in a subgroup of n=46 patients with calcifying tendonitis of the shoulder. ⁵Depending on what the patient tolerated. ⁶600 impulses per acupuncture point. ⁷500 impulses at "0.2 mJ/mm^{2m}" followed by 1,500 impulses at "0.3 mJ/mm^{2m}" (most probably ED_{total} provided in this study).