

Attached list 18a. Healing effect of physical therapy

Authors	Disease	Treatment schedule	Parameter	Groups	Number of participants	Before	After	Improve rate
Alfredo PP (2012)	knee osteoarthritis	3 times a week for 8 weeks		Laser	20	5.32	2.58	52%
				Sham laser	20	3.54	2.3	35%
Alayat MS (2014)	Lumbar Discopathy	3 times a week for 4 weeks	VAS	high-intensity laser + exercise	28	8.36	2.04	75.6%
				placebo laser plus exercise	24	8.21	3.21	60.9%
				high-intensity laser	20	8.35	4.15	50.3%
Barker KL(2008)	chronic back pain	twice a day, for 3 weeks.	chronic back pain	sensory discrimination training	32	6.3	5.5	12.7%
				TENS	28	6.6	5.9	10.6%
Boyratz I (2015)	chronic low back pain	5 sessions per week for 2 weeks	VAS	Laser + exercises	20	7.55	4	47.0%
				Ultrasound +exercises	25	7.52	3.4	54.8%
				Medicine + exercise	20	7.6	4.75	37.5%
Bennell KL (2005)	knee osteoarthritis	once weekly for four weeks, then fortnightly for eight weeks	VAS	Physiotherapy	73	5.3	3.1	41.5%
				sham ultrasound	67	5.2	3.2	38.5%
Bertalanffy A (2005)	Acute Low Back Pain	One time	VAS	TENS	36	79	49	38.0%
				Sham TENS	36	76	77	-1.3%

Buchmuller A (2012)	Low Back Pain	4 times per day for 3 months (by patients)		TENS	117			26.4%
				Sham TENS	119			25.0%
Corrêa JB (2016)	nonspecific low back pain	three times per week on alternate days for 4 weeks	Pain scale	Placebo	50	6.2	3.1	50.0%
				1 KHz interferential current	50	6.3	2.1	66.7%
				4 KHz interferential current	50	6.2	2.2	64.5%
Costa LO (2009)	Low Back Pain	2 sessions per week in the first month and 1 session per week in the second month		motor control exercise	77	6.8	4.5	33.8%
				detuned ultrasound therapy and detuned short-wave therapy	77	6.9	5.5	20.3%
Dailey DL (2013)	fibromyalgia	once a week over a three week period	Pain with movement	TENS	41	5	4	20.0%
				Sham TENS	41	5	4.7	6.0%
				waiting list	43	5.2	5	3.8%
Deyo RA (1990)	Chronic back pain	3 times a day, 2 times a week for 4 weeks	VAS	Sham TENS	60	37.9	24	36.7%
				TENS	65	39.9	21	47.4%
				TENS	62			
				TENS with exercise	63	43.1	19.8	54.1%
Djavid GE (2007)	chronic low back pain	twice a week for 6 weeks	VAS	Laser	16	7.3	4.4	39.7%
				Laser + exercise	19	6.2	2.4	61.3%
				Sham laser + exercise	18	6.3	4.3	31.7%
Dogan SK (2010)	subacromial impingement	5 times a week, once a day for 14 sessions.	VAS	Laser + cold pack therapy + exercise	30	7.16	3.76	47.5%

	syndrome			Sham laser + cold pack therapy + exercise	22	7.59	4.63	39.0%
Ekim A (2007)	Carpal tunnel syndrome	Once a day, five days a week for 10 days,	VAS	Laser	10	56	29	48.2%
				Sham Laser	9	55	42	23.6%
Fukuda VO (2011)	knee osteoarthritis	3 times a week for 9 times		Laser	41	6.1	4.4	28%
				Sham laser	38	6.2	5.3	15%
Facci LM (2011)	nonspecific chronic low back pain	10 sessions in 2 weeks	VAS	TENS (20 Hz)	50	1.95	0.5	74.4%
				interferential current	50	2.22	0.81	63.5%
				Waiting list (no treatment)	50	2.53	1.87	26.1%
Ghonomie EA (1999)	Low Back Pain	3 times a week for 3 weeks	VAS	Sham PENS (not inserted)		5.7	5.5	3.5%
				PENS		6.3	3.4	46.0%
				TENS (4 Hz)		6.2	5.6	9.7%
				Exercise		6.5	6.4	1.5%
Gossrau G (2011)	Painful Diabetic Neuropathy	3 times a week for 4 weeks	PDI	TENS	21	22.05	17.7	19.7%
				Sham TENS	19	21.79	18	17.4%
Hagstroem S (2009)	Urinary Urge Incontinence	Once a day for 4 weeks		TENS	13	13	5	62%
				Sham TENS	12	10	7.5	25%
Hawamdeh M (2015)	chronic low back pain	3 times a week for 6 weeks		TENS + exercise	10	7	2	71%
				Sham TENS + exercise	10	7	5	29%

Hegedus B (2009)	Knee Osteoarthritis	Twice a week for 4 weeks	VAS	Low-level laser therapy		5.75	1.71	70.3%
				Sham laser		5.62	4.13	26.5%
Itoh K (2008)	knee osteoarthritis	Once a week for 5 weeks	VAS	Control (no medication)	6	59.8	54.5	8.9%
				Acup	6	61.2	41.7	31.9%
				TENS	6	64.3	38.8	39.7%
				Acup + TENS	6	56.6	33.3	41.2%
de Jong LD (2013)	Post-stroke shoulder pain	5 days a week for 8 weeks	Shoulder flexion	neuromuscular electrical stimulation (NMES)	23	130	107	17.7%
				Sham NMES	23	122	100	18.0%
Kessler TM (2014)	Chronic pelvic pain	Twice a day for 12 weeks	Pain score	Sono-Electro-Magnetic Therapy (at home)	30	12.8	9.5	25.8%
				Sham (at home)	30	12.9	10.6	17.8%
Kim TH (2013)	Post-stroke chronic pelvic pain	5 times per week for 4 weeks	MAS score	TENS + Task related training	17	1.4	0.9	35.7%
				Sham TENS + Task related training	17	1.5	1.3	13.3%
Konstantinovic LM (2009)	Acute Low Back Pain with Radiculopathy	5 times weekly, for a total of 15 treatments	VAS	nimesulide + LLLT	182	66	35	47.0%
				nimesulide	182	67	50	25.4%
				nimesulide + placebo LLLT	182	65	45	30.8%

Konstantinovic LM (2010)	Acute Neck Pain with Radiculopathy	five times weekly for a total of 15 treatments	VAS-arm	Laser	30	74.06	44.29	40.2%
				Sham laser	30	72.52	47.84	34.0%
Kudo P (2006)	Plantar Fasciitis	One time?	Pain during the first few minutes of walking scored on VAS	Extracorporeal Shockwave Therapy (ESWT)	53	7.5	3.9	48.0%
				Sham ESWT	52	7.9	5.3	32.9%
Lazovic M (2014)	Carpal Tunnel Syndrome	5 times per week, once a day over 2 weeks, followed by 10 treatments every other day for 3 weeks	Mild pain to no pain	Laser	18	38	7	82%
				Sham laser	18	39	36	8%
Löfgren M (2009)	fibromyalgia.	Once a day for 3 weeks (by patients at home)	VAS	portable superficial warmth machine	24	77.5	62.5	19.4%
				TENS	28	80	62.5	21.9%
Mollasadeghi A (2013)	Tinnitus	Once every other day for 20 times		Laser	41	6.07	4.51	26%
				Sham laser	41	6.09	5.97	2%
Marchand S (1993)	chronic low back pain	Twice a week for 10 weeks	VAS	TENS		33	18	45.5%
				Sham TENS		33	27	18.2%
				No treatment group		32	30	6.3%
Murina F	vestibulodynia.	Twice a week for 20	VAS	TENS	20	6.2	2.1	66.1%

(2008)		sessions		Sham TENS (with electric)	20	6.7	5.7	14.9%
Nabi BN (2015)	Painful Diabetic Neuropathy	Once every other day for 10 sessions	NPS Scale	TENS (80 Hz)	30	6.46	2.76	57.3%
				pulsed radiofrequency	30	6.1	3.96	35.1%
Olaussen M (2015)	acute lateral epicondylitis	Twice a week for 6 weeks	VAS	naproxen	60	48	44	8.3%
				Sham injection + physiotherapy + naproxen	58	53	45	15.1%
				corticosteroid injection + physiotherapy + naproxen	59	56	29	48.2%
Oosterhof J (2006)	Chronic pain	10 days (by patients)	VAS	TENS	81	62.2	46	26.0%
				Sham TENS	82	62.5	43	31.2%
Palmer S (2014)	Knee Osteoarthritis:	6 weeks (by patients)	WOMAC pain	TENS + exercise	73	9	6	33.3%
				Sham TENS + exercise	74	9	8	11.1%
				Control + exercise	77	8	6	25.0%
Park J (2014)	Chronic stroke	5 days per week for 6 weeks	MAS	TENS + exercise	15	2.6	1.8	30.8%
				Sham TENS + exercise	14	2.5	2.36	5.6%
Pitangui AC (2014)	post- episiotomy pain	One time?	Pain intensity	high-frequency TENS	11	4.54	0.27	94.1%
				low-frequency TENS	12	4.5	1.16	74.2%
				placebo TENS	10	4.11	4.11	0.0%

Preyde M (2000)	subacute low-back pain	6 treatments within approximately 1 month	PRI score	comprehensive massage therapy	25	12.3	2.92	76.3%
				soft-tissue manipulation	25	10.6	5.24	50.6%
				remedial exercise with posture education	22	10.2	7.91	22.5%
				sham laser	26	11.1	8.31	25.1%
DeSantan JM (2008)	Postoperative pain	Twice		TENS	20	5.2	0	100%
				Sham TENS	20	5.3	3.4	36%
Snyder-Mackler L (1989)	neck or low back pain	3 sessions		Laser	13	42.5	22	48.2%
				Sham Laser	11	55	50	9.1%
Tascioglu F (2004)	knee osteoarthritis	once a day, five days a week for a total duration of 10 days.	VAS	Laser (3 J/point)	20	39.08	36.84	5.7%
				Laser (1.5 J/point)	20	41.55	38.12	8.3%
				Sham laser	20	37.92	39.95	-5.4%
Tsukayama H (2002)	Low Back Pain:	Twice a week for 2 weeks	VAS	E-Acup	10	100	56	44.0%
				TENS	10	100	72	28.0%
Vance CG (2012)	Knee Osteoarthritis	One time?	VAS	Low frequency TENS	25	17.7	10.32	41.7%
				High frequency TENS	25	29.5	16.14	45.3%
				Placebo TENS	25	21.2	16.84	20.6%
Warke K (2006)	Lower Back Pain	Twice a day for 6 weeks	Weekly LBP	Low-frequency TENS	25			50%
				High-frequency TENS	254			50%

				Sham TENS	27	20%		
Zizic TM (1995)	osteoarthritis of the knee	Once a day for 4 weeks		TENS	38	31.30%		
				Sham TENS	33	19.01%		
Yokoyama M (2004)	Chronic Low Back Pain	Twice a week for 8 weeks	VAS	PENS	18	55	32	41.8%
				PENS-TENS	18	56	44	21.4%
				TENS	18	57	48	15.8%