

21 **S1: Actual Search Strategies**

22 The number of results from each database prior to removing duplicates is:

23 342 MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-

24 Indexed Citations

25 369 Embase

26 215 Cochrane Central Register of Controlled Trials

27 36 Scopus

28 962 Total

29 **516** In the Endnote file with duplicates removed.

30

31 Ovid

32 Database(s): EBM Reviews - Cochrane Central Register of Controlled Trials April 2022,

33 Embase 1974 to 2022 May 27, Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-

34 Data-Review & Other Non-Indexed Citations, Daily and Versions 1946 to May 27, 2022

35 Search Strategy:

#	Searches	Results
1	exp Spinal Cord Stimulation/ (("spinal cord" or spinal or epidural or "dorsal root" or "dorsal columnor DRGS" or	10044
2	DRG) adj3 (stimulat* or electrostimulat* or neuromodulat* or neurostimulat*).ti,ab,kf.	20597
3	1 or 2	22508
4	exp Pain/ ("Alice in Wonderland Syndrome*" or arthralgia* or "back ache*" or backache* or backpain* or cephalalgia* or cephalgia* or cephalodynia* or cranialgia* or dorsalgia* or glossalgia* or glossodynia* or glossopyroses or	1995671
5	glossopyrosis or "head ache*" or headache* or hemicrania* or lumbago or mammalgia* or mastalgia* or mastodynia* or metatarsalgia* or migraine* or migrainous or "Morton Neuroma*" or Myalgia* or neuralgia* or neurodynia* or pain* or "Piriformis Muscle Syndrome*" or polyarthralgia* or Sciatica* or "status hemicranicus" or "sunct syndrome").ti,ab,kf.	2456571
6	4 or 5	3184063
7	3 and 6 ("Bournemouth Questionnaire" or disability or functional or nODI or ODI or "Oswestry disability index" or "physical function*" or QBPDS or "Quebec Back	12725
8	Pain Disability" or RMDQ or "Roland-Morris disability" or "SF-36" or "short form-36" or "Waddell Disability Index" or WDI).ti,ab,kf.	3781067
9	7 and 8	2211
10	limit 9 to english language	2125
11	limit 9 to no language specified	14
12	10 or 11	2139
13	(exp animals/ or exp nonhuman/) not exp humans/ ((alpaca or alpacas or amphibian or amphibians or animal or animals or antelope or	11836635
14	armadillo or armadillos or avian or baboon or baboons or beagle or beagles or bee or bees or bird or birds or bison or bovine or buffalo or buffaloes or buffalos or "c	10114051

elegans" or "Caenorhabditis elegans" or camel or camels or canine or canines or carp or cats or cattle or chick or chicken or chickens or chicks or chimp or chimpanze or chimpanzees or chimps or cow or cows or "D melanogaster" or "dairy calf" or "dairy calves" or deer or dog or dogs or donkey or donkeys or drosophila or "Drosophila melanogaster" or duck or duckling or ducklings or ducks or equid or equids or equine or equines or feline or felines or ferret or ferrets or finch or finches or fish or flatworm or flatworms or fox or foxes or frog or frogs or "fruit flies" or "fruit fly" or "G mellonella" or "Galleria mellonella" or geese or gerbil or gerbils or goat or goats or goose or gorilla or gorillas or hamster or hamsters or hare or hares or heifer or heifers or horse or horses or insect or insects or jellyfish or kangaroo or kangaroos or kitten or kittens or lagomorph or lagomorphs or lamb or lambs or lemur or lemurs or llama or llamas or macaque or macaques or macaw or macaws or marmoset or marmosets or mice or minipig or minipigs or mink or minks or monkey or monkeys or mouse or mule or mules or nematode or nematodes or octopus or octopuses or orangutan or "orang-utan" or orangutans or "orang-utans" or ostrich or ostriches or oxen or parrot or parrots or pig or pigeon or pigeons or piglet or piglets or pigs or porcine or primate or primates or quail or rabbit or rabbits or rat or rats or reptile or reptiles or rodent or rodents or ruminant or ruminants or salmon or sheep or shrimp or slug or slugs or swine or tamarin or tamarins or toad or toads or trout or urchin or urchins or vole or voles or waxworm or waxworms or wildlife or worm or worms or xenopus or "zebra fish" or zebrafish) not (human or humans or patient or patients)).ti,ab,hw,kf.

15	12 not (13 or 14)	2011
16	(case adj3 report).mp,pt.	3374829
17	15 not 16	1738
18	review.pt.	5899972
19	17 not 18	1494
	limit 19 to (conference abstract or editorial or erratum or note or addresses or autobiography or bibliography or biography or blogs or comment or dictionary or directory or interactive tutorial or interview or lectures or legal cases or legislation or news or newspaper article or overall or patient education handout or periodical index or portraits or published erratum or video-audio media or webcasts) [Limit not valid in CCTR,Embase,Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) PubMed not MEDLINE,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	568
20		
21	19 not 20	926
22	remove duplicates from 21	586

36

37 Scopus

- 38 1 TITLE-ABS-KEY(("spinal cord" or spinal or epidural or "dorsal root" or "dorsal
39 column" or DRGS or DRG) W/3 (stimulat* or electrostimulat* or neuromodulat* or
40 neurostimulat*))
- 41 2 TITLE-ABS-KEY("Alice in Wonderland Syndrome*" OR arthralgia* OR "back ache*" OR
42 backache* OR backpain* OR cephalalgia* OR cephalea* OR cephalgia* OR
43 cephalodynia* OR cranialgia* OR dorsalgia* OR glossalgia* OR glossodynia* OR

44 glossopyroses OR glossopyrosis OR "head ache*" OR headache* OR hemicrania* OR
 45 lumbago OR mammalgia* OR mastalgia* OR mastodynia* OR metatarsalgia* OR
 46 migraine* OR migrainous OR "Morton Neuroma*" OR Myalgia* OR neuralgia* OR
 47 neurodynia* OR pain* OR "Piriformis Muscle Syndrome*" OR polyarthralgia* OR
 48 Sciatica* OR "status hemicranicus" OR "sunct syndrome")
 49 3 TITLE-ABS-KEY("Bournemouth Questionnaire" OR disability OR functional OR nODI
 50 OR ODI OR "Oswestry disability index" OR "physical function*" OR QBPDS OR
 51 "Quebec Back Pain Disability" OR RMDQ OR "Roland-Morris disability" OR "SF-36"
 52 OR "short form-36" OR "Waddell Disability Index" OR WDI)
 53 4 LANGUAGE(english)
 54 5 1 and 2 and 3 and 4
 55 6 TITLE-ABS-KEY((alpaca OR alpacas OR amphibian OR amphibians OR animal OR
 56 animals OR antelope OR armadillo OR armadillos OR avian OR baboon OR baboons OR
 57 beagle OR beagles OR bee OR bees OR bird OR birds OR bison OR bovine OR buffalo
 58 OR buffaloes OR buffalos OR "c elegans" OR "Caenorhabditis elegans" OR camel OR
 59 camels OR canine OR canines OR carp OR cats OR cattle OR chick OR chicken OR
 60 chickens OR chicks OR chimp OR chimpanze OR chimpanzees OR chimps OR cow OR
 61 cows OR "D melanogaster" OR "dairy calf" OR "dairy calves" OR deer OR dog OR dogs
 62 OR donkey OR donkeys OR drosophila OR "Drosophila melanogaster" OR duck OR
 63 duckling OR ducklings OR ducks OR equid OR equids OR equine OR equines OR feline
 64 OR felines OR ferret OR ferrets OR finch OR finches OR fish OR flatworm OR
 65 flatworms OR fox OR foxes OR frog OR frogs OR "fruit flies" OR "fruit fly" OR "G
 66 mellonella" OR "Galleria mellonella" OR geese OR gerbil OR gerbils OR goat OR goats
 67 OR goose OR gorilla OR gorillas OR hamster OR hamsters OR hare OR hares OR heifer
 68 OR heifers OR horse OR horses OR insect OR insects OR jellyfish OR kangaroo OR
 69 kangaroos OR kitten OR kittens OR lagomorph OR lagomorphs OR lamb OR lambs OR
 70 llama OR llamas OR macaque OR macaques OR macaw OR macaws OR marmoset OR
 71 marmosets OR mice OR minipig OR minipigs OR mink OR minks OR monkey OR
 72 monkeys OR mouse OR mule OR mules OR nematode OR nematodes OR octopus OR
 73 octopuses OR orangutan OR "orang-utan" OR orangutans OR "orang-utans" OR oxen
 74 OR parrot OR parrots OR pig OR pigeon OR pigeons OR piglet OR piglets OR pigs OR
 75 porcine OR primate OR primates OR quail OR rabbit OR rabbits OR rat OR rats OR
 76 reptile OR reptiles OR rodent OR rodents OR ruminant OR ruminants OR salmon OR
 77 sheep OR shrimp OR slug OR slugs OR swine OR tamarin OR tamarins OR toad OR
 78 toads OR trout OR urchin OR urchins OR vole OR voles OR waxworm OR waxworms
 79 OR worm OR worms OR xenopus OR "zebra fish" OR zebrafish) AND NOT (human OR
 80 humans or patient or patients))
 81 7 5 and not 6
 82 8 TITLE-ABS-KEY(case W/3 report)
 83 9 7 and not 8
 84 10 DOCTYPE(ab) OR DOCTYPE(ed) OR DOCTYPE(bk) OR DOCTYPE(er) OR
 85 DOCTYPE(no) OR DOCTYPE(sh)
 86 11 9 and not 10
 87 12 INDEX(embase) OR INDEX(medline) OR PMID(0* OR 1* OR 2* OR 3* OR 4* OR 5*
 88 OR 6* OR 7* OR 8* OR 9*)
 89 13 11 and not 12

90 **Table S2: Physical Function Questionnaires**

Disability Questionnaire	Score Range	Pain considered	Better Function With	MCID	Sensitivity	Specificity
ODI	0-100 (bed-bound)	Yes	Lower Score	12.88 ¹	88%	85%
RMDQ	0-24 (greater disability)	Yes	Lower Score	3-5 points ^{2,3}	75%	76%
SF-36 PCS	1 of 8 subscales, 0-100 (no disability)	Yes	Higher Score	4 ⁴	72.2%	68.1%
WHODAS 2.0	0-100% (full disability)	No	Lower Score	5% ⁵	NR	NR

91 MCID – minimal clinically important difference; NR – not reported; ODI – Oswestry Disability
 92 Index; RMDQ – Roland-Morris Disability Questionnaire; SF-36 PCS – 36 item short form
 93 survey Physical Component Summary; WHODAS 2.0 – world health organization disability
 94 assessment schedule.

¹ Johnsen LG, Hellum C, Nygaard OP, Storheim K, Brox JJ, Rossvoll I, Leivseth G, Grotle M. Comparison of the SF6D, the EQ5D, and the oswestry disability index in patients with chronic low back pain and degenerative disc disease. *BMC Musculoskelet Disord*. 2013 Apr 26;14:148. doi: 10.1186/1471-2474-14-148. PMID: 23622053; PMCID: PMC3648434.

² Stratford PW, Binkley J, Solomon P, Finch E, Gill C, Moreland J. Defining the minimum level of detectable change for the Roland-Morris questionnaire. *Phys Ther*. 1996 Apr;76(4):359-65; discussion 366-8. doi: 10.1093/ptj/76.4.359. PMID: 8606899.

³ Jordan K, Dunn KM, Lewis M, Croft P. A minimal clinically important difference was derived for the Roland-Morris Disability Questionnaire for low back pain. *J Clin Epidemiol*. 2006 Jan;59(1):45-52. doi: 10.1016/j.jclinepi.2005.03.018. Epub 2005 Nov 4. PMID: 16360560.

⁴ Badhiwala JH, Witiw CD, Nassiri F, Akbar MA, Jaja B, Wilson JR, Fehlings MG. Minimum Clinically Important Difference in SF-36 Scores for Use in Degenerative Cervical Myelopathy. *Spine (Phila Pa 1976)*. 2018 Nov 1;43(21):E1260-E1266. doi: 10.1097/BRS.0000000000002684. PMID: 29652783.

⁵ Mark A. Shulman, Jessica Kasza, Paul S. Myles; Defining the Minimal Clinically Important Difference and Patient-acceptable Symptom State Score for Disability Assessment in Surgical Patients. *Anesthesiology* 2020; 132:1362–1370 doi: <https://doi.org/10.1097/ALN.0000000000003240>

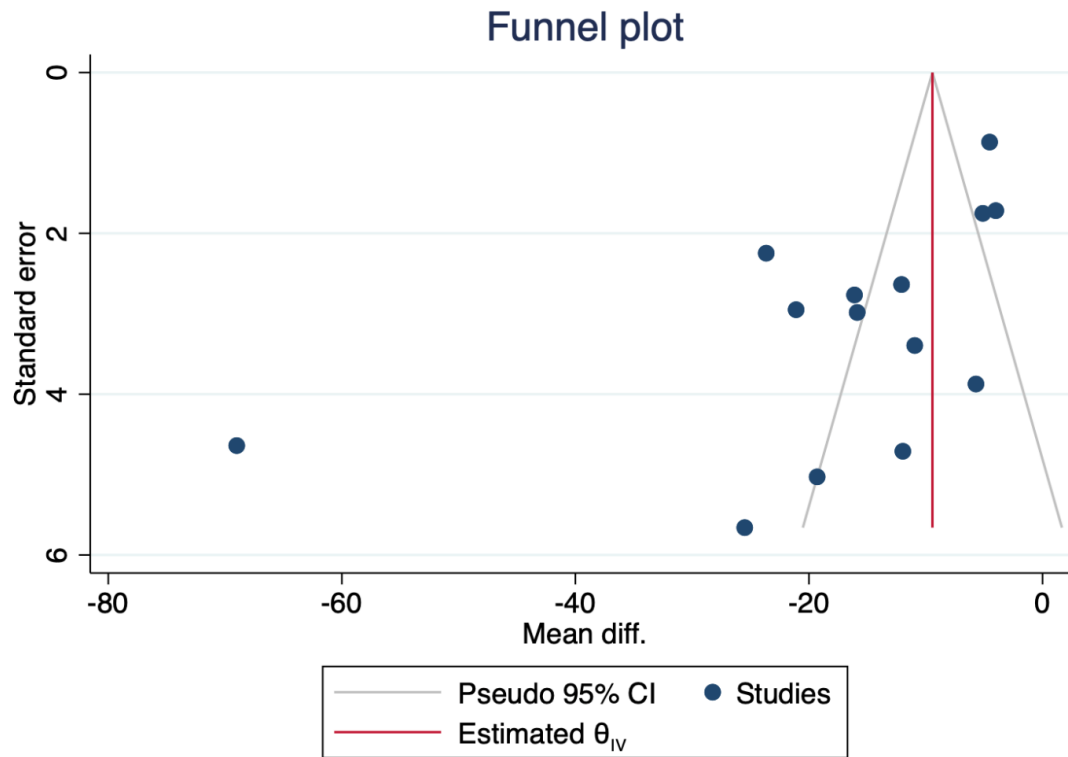
95 **Table S3: Newcastle Ottawa Scale (NOS); Observational Studies Quality Assessment**

Study	Selection	Comparability	Exposure	Total Score
Al-Kaisy 2014	**	-	*	3
Barolat 2001	**	-	*	3
Benyamin 2020	**	-	-	2
Bolash 2022	**	-	*	3
Bondoc 2022	**	-	*	3
Brooker 2021	**	-	*	3
Burchiel 1995	*	-	*	2
Campwala 2021	**	-	**	4
Costantini 2010	**	-	**	4
De Jaeger 2021	**	-	*	3
Delmotte 2015	**	-	-	2
DiBenedetto 2018	***	-	**	5
Do 2021	**	-	*	3
Goudman 2021	**	-	*	3
Harman 2020	**	-	**	4
Jonsson 2020	**	-	*	3
Kallewaard 2021	**	-	*	3
Kamieniak 2019	***	-	**	5
Kinfe 2014	***	-	*	4
Mehta 2022	**	-	*	3
Mosiewicz 2015	**	-	*	3
Mullins 2022	**	-	*	3
Paul 2017	**	-	*	3
Perez 2021	***	-	*	4
Slavin 1999	**	-	-	2
Spincemaille 2004	**	-	*	3
Van Buyten 2013	**	-	*	3
Van Heteren 2022	**	-	**	4
Zucco 2015	**	-	*	3

96 The quality of observational studies was determined by the Newcastle-Ottawa scale. It includes three
97 categories: Selection (Maximum of 4 stars), Comparability (Maximum of 2 stars), and outcome
98 (Maximum of 3 stars). “*” signify star point for a given category. “-” signify no awarded stars in each
99 category. Total score is the sum of stars across all three categories.

100 **Table S4: Included study groups' key for the forest plots:**

• Al-Kaisy 2022
○ Al-Kaisy 2022: Group 1: Anatomic placement group
○ Al-Kaisy 2022 Group 2: Paresthesia mapping group
• Campwala 2021
○ Campwala 2021 Group 1: SCS for patients with no previous spine surgery
○ Campwala 2021 Group 2: SCS with history of previous spine surgery
• De Andres 2017
○ De Andres 2017 Group 1: Conventional frequency
○ De Andres 2017 Group 2: HF
• Paul 2017
○ Paul 2017 Group 1: Success
○ Paul 2017 Group 2: Failure
• Van Heteren 2022
○ Van Heteren 2022 Group 1: SCS
○ Van Heteren 2022 Group 2: SCS + PNFS

101 **Figure S5: Funnel Plot for 12-Months ODI Pre & Post SCS Outcome**

102

103 Table S6: Included Studies Outcomes and Trends

Study	Metric	Baseline Scores	Mean Scores after SCS	Overall Trend
Randomized Controlled Trials				
Al-Kaisy et al. 2022	ODI	G1: 59.4 (14.5) N=22 G2: 58.7 (9.7) N=21	G1: 3 months: 33.8 (22.6) N=21 6 months: 41.5 (23.5) N=19 12 months: 33.9 (21.5) N=19 G2: 3 months: 37.3 (20.5) N=21 6 months: 36.9 (20.2) N=21 12 months: 39.4 (20.8) N=20	Significant Improvement in ODI at 3,6,12 months ($p < 0.001$). No significant inter-group differences in ODI scores ($p = 0.66$). Baseline of G1 45% and G2 48% of patients in crippling disability reduced to 11% and 15% at 12-months followup.
De Andres et al. 2017	ODI	G1: 27.18 (5.21) N=29 G2: 26.96 (5.8) N=26	G1: 3 months: 31 (23.3) N=81 6 months: 21.07 (9.9) N=29 12 months: 22.07 (7.86) N=29 G2: 3 months: 21.85 (8.59) N=26 6 months: 22.92 (6.85) N=26 12 months: 22.96 (7.06) N=26	Significant mean reduction of 5–6 points in the ODI scores. A global average reduction of 4 points in both groups (conventional SCS v HF SCS) at the 12-month assessment.
Eldabe et al. 2010	SF-36	ODI: 56.4 (13.9) N=100 (SCS+CMM) SF-36: 27.4 (0.61) N=100 (SCS+CMM)	SF-36: 6 months: 32.3 (7.98) N=50	Significant improvements at 6 months after SCS across seven of ten ODI sub-dimensions (all $p < 0.05$). With the exception of personal care, these improvements were maintained at 24 months. Two subdimensions (personal care and sleeping) did not improve compared with baseline. Furthermore, continuing disability (score of 4 or more) remained with lifting and standing in 35–40% of SCS patients at 24 months. At 3 and 6 months PCS SF-36 were significantly improved ($p < 0.05$). Compared with baseline, significant SF-36 component score improvements were maintained at 24 months (both $p < 0.01$).
Hara et al. 2022	ODI	44.7 (95% CI: 41.4–47.9) N=47	3 months: 34.0 (95% CI: 30.0–38.1) N=91*	Mean change of -10.6 points (95% CI -14.1 to -7.2 points) for burst stimulation. * Post-SCS Total N was number of stimulation periods rather than number of patients.
Kapural et al.	ODI	ODI: 46.8	6 months: 24.1 (16.1)	The mean ODI score for patients in the 10-kHz SCS treatment group

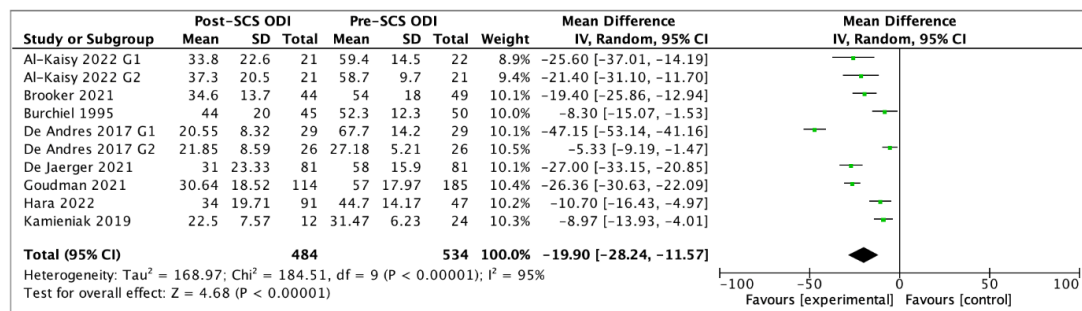
2022			12 months: 24.0 (17.0)	decreased significantly ($p < 0.001$) at the 3 and 6 month follow-ups.
Kumar et al. 2007	ODI SF-36	ODI: 57.4 (12.5) N=52 SF-36: 24.7 (16.4) N=52	ODI: 6 months: 44.9 (18.8) N=50 SF-36: 6 months: 38.1 (23) N=50	Compared with the CMM group, SCS group patients experienced enhanced health-related quality of life on seven of the eight dimensions of the SF-36 ($p < 0.02$) and superior function (ODI, $p < 0.001$).
Rigoard et al. 2019	ODI SF-36	ODI: 55.9 (14.6) SF-36: 24.08 (6.73)	ODI: 6 months: 43.9 (18.4) SF-36: 6 months: 31.58 (10.04)	Significant improvement at 6 mo ODI scores ($p < 0.001$) in the SCS+OMM "as treated" group as well as in the "ITT" and "completers" groups.
Non Randomized Controlled Trials				
Al-Kaisy et al. 2014	ODI	55 (1) N=72	24 months: 40 (2) N=65	Significant Improvement in ODI at 24 months ($p < 0.001$). Baseline 90% of patients were classified as crippled or severely disabled, and this reduced to 49% at 24 months.
Barolat et al. 2001	ODI	54.8 (12.2) N=41	6 months: 45.7 (14.9) N=24 12 months: 49.1 (14.5) N=15	Significant improvement in ODI at 6 ($p < 0.001$) and 12 months ($p < 0.05$).
Benyamin et al. 2020	ODI	51.5 (11.3) N=32	3 months: 32.1 N=32	Significant improvement in ODI at 3 months ($p < 0.01$). Baseline of 22% of patients in moderate disability, 63% in severe disability to 3-months outcome with 26% in minimal disability, 50% in moderate disability and 19% in severe disability.
Bolash et al. 2022	ODI	54 (18) N=49	1 month: 32.6 N=37 3 months: 34.2 N=39 6 months: 29.2 (18) N=39	Mean ODI decreased 46% indicating a reduction from severe to moderate disability.
Bondoc et al. 2022	ODI	24.32 (7.4) N=189	12 months: 19.79 (8.94) N=189	Mean ODI decreased significantly at 12 mo ($p < 0.001$).
Brooker et al. 2021	ODI	52.3 (12.3) N=50	3 months: 34.6 (13.7) N=44 12 months: 31.2 (16.1) N=43 24 months: 31.5 (20.7) N=38	Significant improvement in ODI scores at 3 mo ($p < 0.001$), 12 mo ($p < 0.001$), and 24 mo ($p < 0.001$).
Burchiel et al. 1995	ODI	ODI: 52.3 (12.3) N=50	3 months: 44 (20) N=45	Significant improvement in ODI ($p < 0.001$) and Sickness Impact Profile ($p < 0.001$)
Campwala et al. 2021	ODI	G1: 49.48 (14.9) N=45 G2: 49.56 (13.4) N=73	G1: 12 months: 38.54 (17.98) N=45 G2: 12 months: 37.49 (17.77) N=73	G1 & G2 showed significant improvement in ODI scores from baseline to 12 mo ($p < 0.001$).
Costantini et al. 2010	ODI	34.3 (7.6) N=28	Follow-up Average of 24 months: 15.7 (13.1) N=28	Significant improvement in ODI scores from 34.3 (7.6) at baseline to 15.7 (13.1) at follow-up ($p < 0.05$), with a mean improvement of 54% at follow-up.
De Jaeger et al. 2021	ODI	58 (15.92) N=81	3 months: 31 (23.33) N=81	Significant improvement in ODI scores at 3 mo ($p < 0.001$).
Delmotte et	ODI	60.27 (CI: 2.887) N=72	6 months: 33.43 (CI: 3.877) N=14	The "optimized lead positioning" patients (N=14) had significant

al. 2015				functional improvement from 60.67% baseline ODI to 33.43% ODI at 6 months.
DiBenedetto et al. 2018	RMDQ WHODAS 2.0	RMDQ: 13.9 (4.5) N=21 WHODAS 2.0: 1.97 (0.42) N=19	RMDQ: 12 months: 10.8 (4.8) N=21 WHODAS 2.0: 12 months: 1.92 (0.64) N=19	After 12 mo, there was significant "within-group change" for RMDQ-m scores in the SCS + CMM group (p<0.02). There was no significant "within-group change" for WHODAS 2.0 in the SCS+CMM group at 12 mo follow-up.
Do et al. 2021	ODI	ODI: 54	ODI: 42	Significant improvement in ODI scores at 24 mo follow-up (p<0.0001)
Goudman et al. 2021	ODI	57 (17.97) N=185	1 month: 31.26 (17.58) N=130 3 months: 30.64 (18.52) N=114 12 months: 33.34 (16.86) N=92	Significantly improvement in ODI at 1 month (P < 0.001), 3 months (P < 0.001), and 12 months (P < 0.001) (F = 133.14, P < 0.001)
Harman et al. 2020	ODI	85 (8.9) N=16	12 months: 16 (16.3) N=16	Significant improvement in ODI at 12 mo follow-up (p<0.001).
Jonsson et al. 2020	ODI	48 (15) N=239		At 1,2, and 5 years there was no significant difference in "To-be SCS patients" for ODI scores. However, there was significant difference in ODI for "All patients" at 1,2, and 5 year follow up. Both groups reported "severe disability" for ODI at baseline, while the "All patients" group had improvement to "moderate disability" by 5 years and the "To-be SCS patients" remained at the "severe disability" mark.
Kallewaard et al. 2021	ODI	52.4 (1.6) N=58	1 month: 33.3 (2.5) N=58	Patients' level of disability as per ODI scores had an average reduction of 19.1 +/- 2.0 points at 1 mo, 19.7 +/- 2.3 at 6 mo and 25.3 +/- 2.3 at 12 months of treatment. After 12 months of treatment, 62% of patients were reclassified as per ODI categories from severely disabled or crippled to moderately or minimally disabled.
Kamieniak et al. 2019	ODI	31.47 (6.23) N=24	1 month: 26.15 (7.87) N=17 3 months: 22.5 (7.57) N=12	Significant improvement in ODI scores from baseline to 3 and 6 months (p<0.02).
Kinfe et al. 2014	ODI	Cylindrical lead: 49.5 (12.3) Paddle lead: 38.6 (16.3)	Cylindrical lead (43.3) Paddle lead 37.3 (13.6)	Evaluation of the ODQ suggested gradual amelioration in both groups (cylindrical lead group and paddle lead group).
Mehta et al. 2022	ODI	53.13 N=19	1 month: 35.33 N=17 3 months: 33.64 N=17 12 months: 37.4 N=16	Significant improvement in ODI scores at 1, 3, and 12 months; (p = 0.003), (p = 0.004), and (p = 0.011), respectively. The number of patients who experienced "crippling" pain sustained at less than 50% at 1, 3, and 12 months
Mosiewicz et	ODI	36.75 (5.11) N=36	6 months: 30.08 (8.4) N=36	There is a statistically significant correlation between a decrease in

al. 2015				lower limb pain and level of disability according to the ODI (P<0.04).
Mullins et al. 2022	ODI	30.78 (10.15) N=25	6 months: 9.74 (6.94) N=25	Significant improvement in ODI at 6 mo (p < 0.001).
Paul et al. 2017	ODI	G1: 52 (15.1) N=35 G2: 51.2 (16.2) N=13	G1: 6 months: 40/5 (15.9) N=35 G2: 6 months: 53.8 (15.2) N=13	At 6 mo, patients who were satisfied with SCS therapy had an average improvement of 11.5 points on the ODI compared to an average decline of 1.8 points in the patients who were not satisfied (P = .06)
Perez et al. 2021	ODI	59.37 N=39	3 months: 39.64 N=38 6 months: 36.4 N=36 12 months: 38.48 N=34 24 months: 35.4 N=33	Significant improvement in ODI only at 6 months (P = 0.0368). SCS patients maintained a moderate disability from 3 months follow-up to the last monitoring visit. The SCS arm reported reduced symptoms from baseline to 3 months and remained relatively stable thereafter.
Slavin et al. 1999	ODI	49.8 N=9	1 month: 47.9 N=9	No significant improvement in ODI at 1 month (p = 0.46; paired t test).
Spincemaille et al. 2004	RMDQ	RDQ: 16.9 (3.5) N=105	RDQ: 12.4 (4.8) N=96	At 12 mo follow up there was statistically significant improvement (p<0.05) for scores in SCS patients.
Van Buyten et al. 2013	ODI	55 N=72	3 months: 37 N=70 6 months: 38 N=72	Significant improvement in ODI at 6 mo follow up (p< 0.001).
van Heteren et al. 2022	ODI SF-36	ODI: G1: 49.1 (14.1) N=21 G2: 57.37 (10.8) N=54 SF-36: G1: 36.67 (21.17) N=21 G2: 25 (14.18) n=54	ODI: G1: 12 months: 37.14 (15.98) N=21 G2: 12 months: 41.5 (18.98) N=54 SF-36: G1: 12 months: 52.14 (26.30) N=21 G2: 12 months: 41.94 (20.20) N=54	Patients in both groups had less disability at 12 months, as shown by the total score of the ODI (SCS + PNFS, p < 0.01 and SCS-only, p = 0.004). Significant reduction in SF-36 scores at 12 months following SCS (p<0.001).
Zucco et al. 2015	ODI	61.6 (15) N=80	6 months: 45.6 (20.1) N=80 12 months: 45.5 (19.6) N=79 24 months: 42.4 (20.1) N=78	Significant improvement in ODI at 6 and 24 months (p < 0.0001). The proportion of patients classified as “severe,” “crippled” or “serious” according to the ODI classes (91% at baseline) decreased significantly (z = 5.754, p < 0.0001) 24 months post-SCS treatment (47.5%).

105 **Figure S7-9: Forest plot diagrams of baseline ODI scores compared with ODI Scores at**
 106 **3,6,24 months**

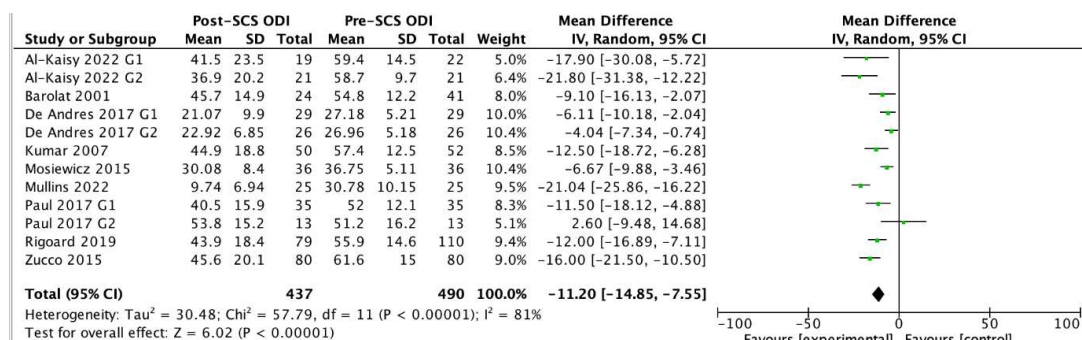
107 **Figure S7: Forest plot of comparison: 1 ODI Pre & Post SCS, outcome: ODI 3 month.**



108

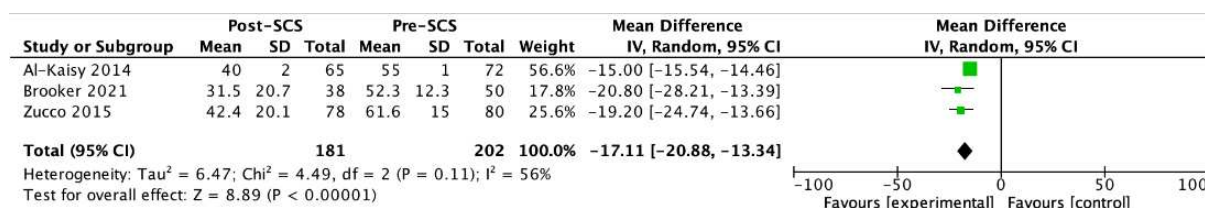
109 *For Hara et al. Post-SCS ODI Total N was number of stimulation periods rather than
 110 number of patients.

111 **Figure S8: Forest plot of comparison: 1 ODI Pre & Post SCS, outcome: ODI 6 month.**



112

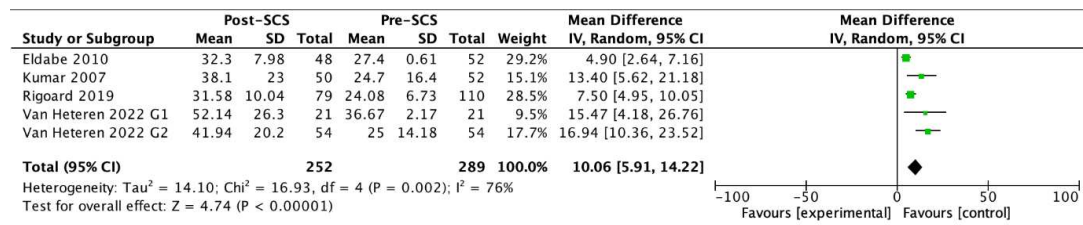
113 **Figure S9: Forest plot of comparison: 1 ODI Pre & Post SCS, outcome: ODI 24 months.**



114

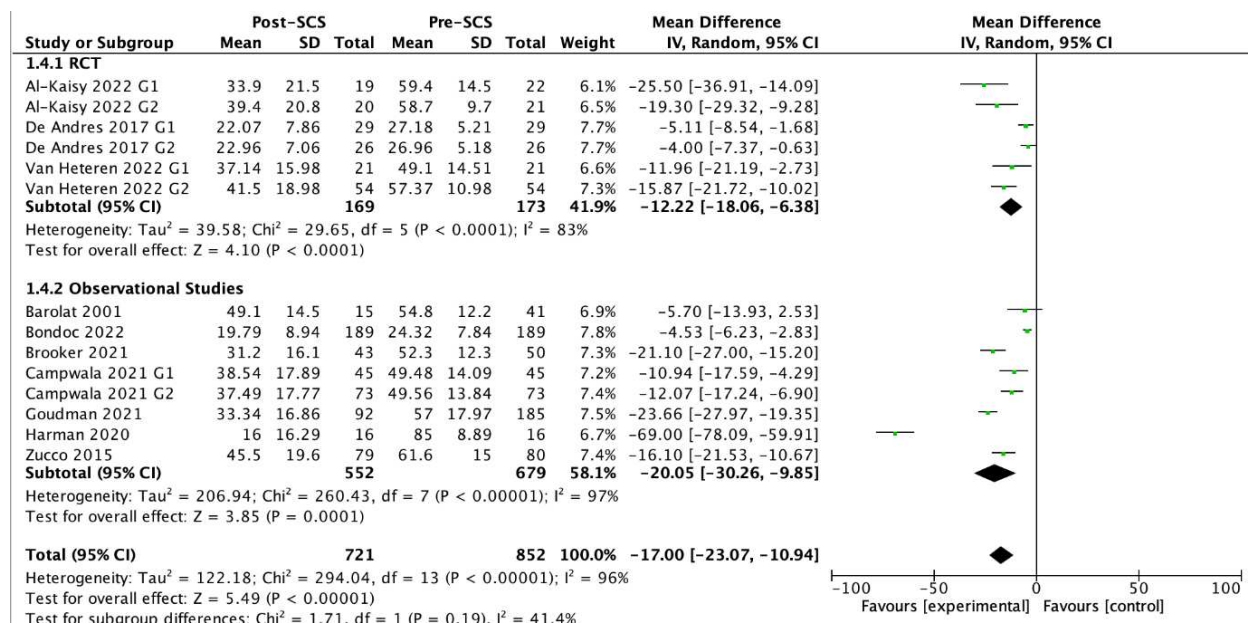
115

116 **Figure S10: Forest plot of comparison: 1 SF-36 Pre & Post SCS, outcome: SF-36 6-**
 117 **months.**



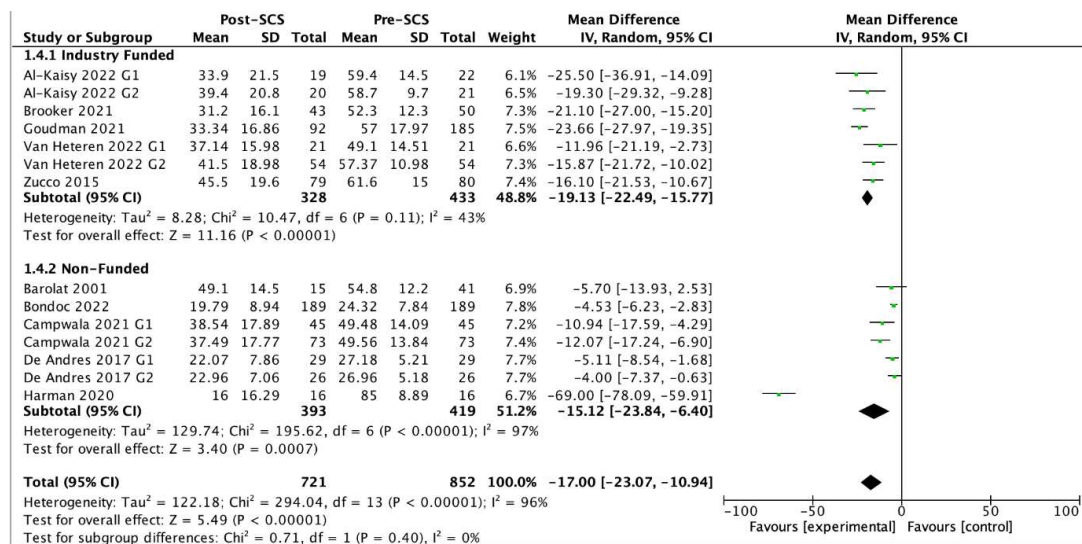
118
 119

120 **Figure S11: Study Type Subgroup Forest Plot Comparison: ODI Pre & Post SCS, Outcome:**
 121 **ODI 12 Months**



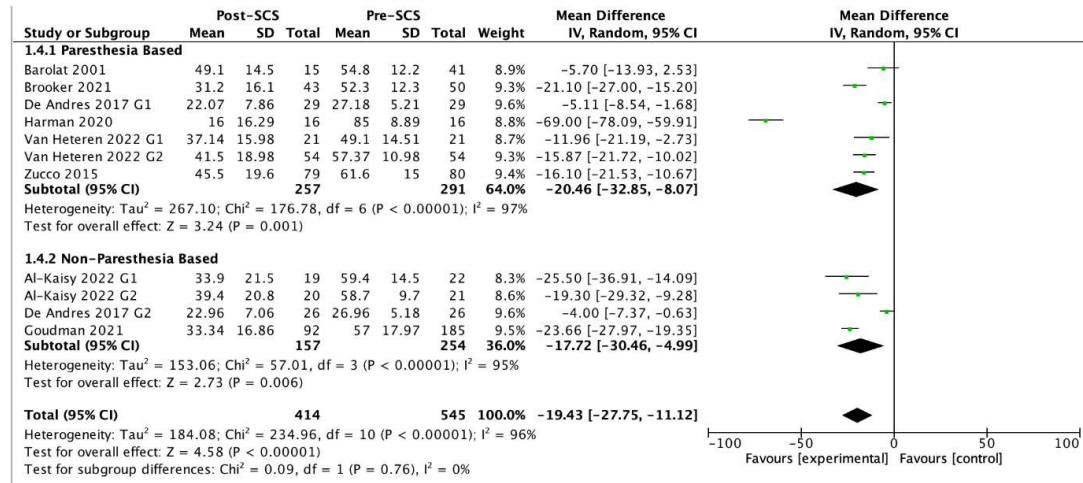
122
123

124 **Figure S12: Funding Type Subgroup Forest Plot Comparison: ODI Pre & Post SCS, Outcome:**
 125 **ODI 12 Months**



126
127

128 **Figure S13: Stimulation Type Subgroup Forest plot Comparison: ODI Pre & Post SCS,**
 129 **Outcome: 12 Months**



130