

**Table A: PRISMA Checklist**

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	1-2
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3-4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	5
<b>METHODS</b>			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	2
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	TABLE 1
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	SUPP MATERIAL TABLE B
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	5
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	SUPP MATERIAL TABLE C
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	6-7
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	N/A
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	N/A

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	6-8
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	8
<b>RESULTS</b>			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	FIGURE 1
Study	18	For each study, present characteristics for which data were extracted (e.g., study	TABLE 2

characteristics		size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	TABLE 3 & 4
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	TABLE 6
Synthesis of results	21	Present the main results of the review. If meta-analyses are done, include for each, confidence intervals and measures of consistency	10-17
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	9
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	TABLE 5
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	18-21
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	21-22
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	22
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	23

**Table B: Medline full search strategy: Ovid MEDLINE(R) 1946 to November 27, 2020**

#	Searches	Results
1	Ehlers-Danlos Syndrome/	3053
2	Ehlers Danlos Syndrome*.mp.	3464
3	Arthrochalasis Multiplex Congenita.mp.	4
4	Benign hypermobility syndrome*.mp.	14
5	Benign Joint Hypermobility Syndrome*.mp.	88
6	BJHS.mp.	51
7	Brittle cornea syndrome*.mp.	43
8	"connective tissue disorder?".mp.	3001
9	COL3A1 protein*.mp.	268
10	Cutis Elastica.mp.	2
11	Cutis Laxa.mp.	910
12	defective biosynthesis of Proteodermatan sulfate*.mp.	0
13	Dermatosparax*.mp.	75
14	(disorder? adj2 connective tissue?).mp.	3582
15	EDS IV.mp.	58
16	EDS IVA.mp.	0
17	EDS VI.mp.	25
18	EDS VIB.mp.	4
19	EDS VIIA.mp.	4
20	EDS VIIC.mp.	3
21	EDS VIII.mp.	7
22	EDS X.mp.	109
23	EDS XI.mp.	0
24	EDS10.mp.	2
25	EDS4A.mp.	0
26	EDS6.mp.	1
27	EDS6B.mp.	0
28	EDS7A.mp.	0
29	EDS7C.mp.	0
30	EDS8.mp.	4
31	EDS9.mp.	1
32	EDS-HT.mp.	70
33	EhlersDanlos*.mp.	1
34	Ehlers Danlos*.mp.	3531

35	Ehlers Danlos Disease*.mp.	45
36	Ehlers Danlos Syndrome*.mp.	3464
37	FKBP14-kEDS.mp.	1
38	Fragilitas oculi with joint hyperextensibility*.mp.	0
39	Galactosyltransferase 1 deficienc*.mp.	0
40	Galactosyltransferase I Deficienc*.mp.	2
41	hEDS.mp.	71
42	Hernandez Aguirre-Negrete syndrome*.mp.	0
43	"joint hypermobility".mp.	897
44	"joint hyper-mobility".mp.	4
45	kEDS.mp.	96
46	mcEDS.mp.	4
47	mcEDS-CHST14.mp.	1
48	Osteochondrodysplasi*.mp.	5211
49	SCDEDS.mp.	0
50	EDS-ZIP13.mp.	1
51	spEDS-ZIP13.mp.	1
52	Syndrome d-Ehlers-Danlos.mp.	0
53	vEDS.mp.	72
54	Xylosylprotein 4-beta-galactosyltransferase deficienc*.mp.	0
55	or/1-54 [ Ehlers Danlos Syndrome & related terms ]	13509
56	"Physical and Rehabilitation Medicine"/	3096
57	"Recovery of Function"/	47695
58	Acupressure/	676
59	Animal Assisted Therapy/	336
60	Breathing Exercises/	3234
61	Cardiac Rehabilitation/	1936
62	Dance Therapy/	332
63	Disability Evaluation/	45434
64	Drainage, Postural/	241
65	Electric Stimulation Therapy/	19783
66	Electroacupuncture/	3659
67	Endurance Training/	64
68	Equine-Assisted Therapy/	159
69	exp Activities of Daily Living/	96016
70	exp Exercise Movement Techniques/	7536

71	exp Exercise Therapy/	46320
72	exp Exercise/	179277
73	exp Health Education/	233103
74	exp Musculoskeletal manipulations/	15859
75	exp Occupational Therapy/	12591
76	exp Physical Exertion/	55802
77	exp Physical fitness/	27469
78	exp Physical Therapy Department, Hospital/	322
79	exp Physical Therapy Modalities/	143786
80	exp Physical Therapy Specialty/	2704
81	exp Physical Therapy Techniques/	143786
82	exp Rehabilitation Centers/	13967
83	exp Rehabilitation Nursing/	1386
84	exp Rehabilitation/	287599
85	exp Sports/	172143
86	exp Therapy, Computer-Assisted/	58319
87	Extracorporeal Shockwave Therapy/	219
88	Hospitals, Rehabilitation/	28
89	Hydrotherapy/	2494
90	Kinesiology, Applied/	297
91	Manipulation, Orthopedic/	3830
92	Manipulation, Osteopathic/	973
93	Manipulation, Spinal/	1497
94	Manual Lymphatic Drainage/	26
95	Massage/	5867
96	Motion Therapy, Continuous Passive/	668
97	Mouth Rehabilitation/	1420
98	Muscle Stretching Exercises/	1505
99	Musculoskeletal Manipulations/	1590
100	Myofunctional Therapy/	311
101	Neurological Rehabilitation/	623
102	Plyometric Exercise/	488
103	Sports For Persons With Disabilities/	144
104	Pulsed Radiofrequency Treatment/	394
105	Qigong/	135
106	Rehabilitation Research/	119

107	Rehabilitation, Vocational/	9308
108	Resistance Training/	7454
109	Spinal Cord Stimulation/	850
110	Stroke Rehabilitation/	11865
111	Tai Ji/	973
112	Telerehabilitation/	249
113	Therapeutic Irrigation/	17090
114	Therapy, Soft Tissue/	112
115	Transcutaneous Electric Nerve Stimulation/	4429
116	Treatment Outcome/	905669
117	Yoga/	2540
118	rh.fs. [ "Rehabilitation" floating subheading ]	190463
119	((treatment* or therap* or training or education* or healthcare) adj10 (program* or intervention* or approach*)).mp.	508427
120	(early adj1 (mobil* or discharg* or ambulat*)).mp.	8288
121	(exercis* adj3 therap*).mp.	40949
122	(exercis* adj5 (train* or physical* or activ*)).mp.	49500
123	(functional* adj2 outcome?).mp.	33384
124	(physical* adj5 (fit* or train* or activ* or endur*)).mp.	148104
125	(physical therap* or physiotherap* or physical stimulation*).mp.	77203
126	(physical* adj3 (fit* or train* or therap* or activit*)).mp.	171869
127	(QoL or HRQOL or HR-QOL).mp.	39770
128	(readmission? or re-admission?).mp.	25581
129	(readmit* or re-admit*).mp.	6053
130	(recover* adj4 function*).mp.	80312
131	(strength adj5 train*).mp.	6731
132	(train* adj3 (strength* or aerobic* or exercise*)).mp.	25819
133	(walk* or jog* or swim* or golf* or bicycl* or cycl*).mp.	1319648
134	(weight adj5 train*).mp.	3354
135	(weightlift* or weight lift* or resistance train*).mp.	14061
136	chiropract*.mp.	5198
137	exercis*.mp.	320343
138	fitness.mp.	71209
139	length of stay?.mp.	100697
140	manual therap*.mp.	1721
141	osteopath*.mp.	6605

142	physical therap*.mp.	47482
143	physiotherap*.mp.	19826
144	physio-therap*.mp.	44
145	prehab*.mp.	290
146	rehab*.mp.	283405
147	sport*3.mp.	79667
148	telerehab*.mp.	555
149	tai chi.mp.	1195
150	tai ji.mp.	979
151	weighttrain*.mp.	0
152	or/56-151 [ Rehabilitation or Physical Therapy or Physiotherapy & Related term ]	3721998
<b>153</b>	<b>55 and 152 [ Ehlers-Danlos + Rehab ]</b>	<b>1414</b>
	<i>Limits applied:</i>	
154	limit 153 to english language	1293
155	exp animals/ not (exp animals/ and exp humans/)	4587692
156	154 not 155	1221
157	limit 154 to humans	1207
158	156 or 157	1221
159	limit 158 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)" or "newborn infant (birth to 1 month)" or "infant (1 to 23 months)" or "preschool child (2 to 5 years)" or "child (6 to 12 years)" or "adolescent (13 to 18 years)")	479
160	158 not 159	742
161	limit 158 to ("all adult (19 plus years)" or "young adult (19 to 24 years)" or "adult (19 to 44 years)" or "young adult and adult (19-24 and 19-44)" or "middle age (45 to 64 years)" or "middle aged (45 plus years)" or "all aged (65 and over)" or "aged (80 and over)")	651
162	160 or 161	941
163	remove duplicates from 162	940
164	Clinical Trial, Phase III.pt.	15110
165	Clinical Trial, Phase III/	15110
166	Clinical Trial.pt.	516143
167	Clinical Trials, Phase III as Topic/	8740
168	Comparative Study.pt.	1831657
169	Comparative Study/	1831657
170	Controlled Clinical Trial.pt.	93084

171	Controlled Clinical Trial/	93084
172	Controlled Clinical Trials as Topic/	5420
173	Cross-Sectional Studies/	295842
174	Double-Blind Method/	151644
175	Equivalence Trial.pt.	312
176	Equivalence Trial/	312
177	Equivalence Trials as Topic/	165
178	Evaluation Studies.pt.	243613
179	exp Case-Control Studies/	997479
180	exp Cohort Studies/	1864656
181	exp Randomized Controlled Trial/	483720
182	exp Randomized Controlled Trials as Topic/	126808
183	Longitudinal Studies/	123927
184	Meta-Analysis as Topic/	16986
185	Meta-Analysis/	101654
186	Multicenter Studies as Topic/	17581
187	Multicenter Study.pt.	251447
188	Multicenter Study/	251447
189	Placebos/	34368
190	Pragmatic Clinical Trial.pt.	1063
191	Pragmatic Clinical Trial/	1063
192	Pragmatic Clinical Trials as Topic/	305
193	Prospective Studies/	504522
194	Randomized Controlled Trial.pt.	483170
195	Retrospective Studies/	752566
196	Validation Studies.pt.	95269
197	("phase 3" or "phase3" or "phase III").mp.	47366
198	((multicenter* or multicentre*) adj2 (trial? or study or studies)).mp.	282745
199	((noninferiority or non-inferiority) adj4 (trial? or study or studies)).mp.	3319
200	((single or double or triple or treble) adj3 (blind* or mask*)).mp.	211113
201	(case control* adj2 (study or studies)).mp.	287179
202	(comparative adj2 (trial? or study or studies)).mp.	1878110
203	(conceal* adj2 allocat*).mp.	2322
204	(controlled adj1 clinical adj2 (trial? or study or studies)).mp.	122051
205	(cross-sectional* adj2 (study or studies)).mp.	315684
206	(equivalen* adj4 (trial? or study or studies)).mp.	3963



207	(evaluation adj1 (study or studies)).mp.	368829
208	(longitudinal* adj2 (study or studies)).mp.	154344
209	(meta-anal* or metanal* or metaanal*).mp.	149397
210	(overview? adj4 (review or reviews)).mp.	12768
211	(pragmatic adj2 (trial? or study or studies)).mp.	2776
212	(prospective* adj2 (study or studies)).mp.	582174
213	(retrospective* adj2 (study or studies)).mp.	781209
214	(superiority adj4 (trial? or study or studies)).mp.	2513
215	(systematic adj4 (review or reviews or overview or overviews)).mp.	131451
216	(validation adj1 (study or studies)).mp.	104785
217	cohort*.mp.	528099
218	placebo*.mp.	199820
219	random*.mp.	1120373
220	or/164-219 [ Studies - alphabetical ]	5387053
<b>221</b>	<b>163 and 220 [ Ehlers-Danlos + Exercise or Physiotherapy or Rehab + Studies ]</b>	<b>338</b>
	<b>**NIH Librarian additional terms **</b>	
222	exp "Rehabilitation of Speech and Language Disorders"/	10272
223	exp Language Therapy/	1719
224	exp Recreation Therapy/	112
225	exp Rehabilitation, Vocational/	10047
226	exp Social Support/	67107
227	exp Speech Therapy/	6147
228	exp Speech, Alaryngeal/	1746
229	exp Telerehabilitation/	249
230	exp Voice Training/	1437
231	cognitive therap*.mp.	2614
232	language therapy.mp.	2262
233	neuropsych.mp.	4
234	neuropsychological.mp.	104111
235	neuropsychologies.mp.	1
236	neuropsychology.mp.	5800
237	occupational therap*.mp.	16347
238	physiatr*.mp.	1374
239	pre-habilitation.mp.	15

240	recreation* therap*.mp.	238
241	rehabilit*.jw.	63771
242	social support.mp.	78037
243	speech therap*.mp.	7692
244	tele-rehab*.mp.	87
245	voice training.mp.	1498
246	or/222-245 [ Rehab 25 Potentially New Terms from NIH Librarian ]	281072
247	152 or 246 [ Marina Rehab or NIH Librarian new Rehab Terms ]	3876371
<b>248</b>	<b>55 and 247 [ EDS + (Marina OR NIH Lib) ]</b>	<b>1445</b>
	<i>Limits applied:</i>	
249	limit 248 to english language	1322
250	exp animals/ not (exp animals/ and exp humans/)	4587692
251	249 not 250	1250
252	limit 249 to humans	1236
253	251 or 252	1250
254	limit 253 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)" or "newborn infant (birth to 1 month)" or "infant (1 to 23 months)" or "preschool child (2 to 5 years)" or "child (6 to 12 years)" or "adolescent (13 to 18 years)")	496
255	253 not 254	754
256	limit 253 to ("all adult (19 plus years)" or "young adult (19 to 24 years)" or "adult (19 to 44 years)" or "young adult and adult (19-24 and 19-44)" or "middle age (45 to 64 years)" or "middle aged (45 plus years)" or "all aged (65 and over)" or "aged (80 and over)")	671
257	255 or 256	963
258	remove duplicates from 257	962
259	220 and 258 [ EDS + (Marina OR NIH Lib) + Studies ]	342
260	259 not 221	4

Bottom line:

221	163 and 220 [ Ehlers-Danlos + Exercise or Physiotherapy or Rehab + Studies (Marina) ]	338
259	220 and 258 [ EDS + (Marina OR NIH Lib) + Studies ]	342
260	259 not 221	4

**Table C:** List of extracted parameters

<b>Cluster</b>	<b>Data Abbreviation</b>	<b>Data Description</b>
Study reference	Author	Primary author of reference
	Full title	Full title
	YoP	Year of publication
	YoE	Year of execution
Study design	Design	Design of study
	Country	Country where study was performed
	Funding	Was the study funded?
	C.o.I reported	Have the authors reported a conflict of interest?
	Objective	Description of the main objective.
Method	Inclusion Criteria	All inclusion criteria as reported in the original study
	Exclusion Criteria	All exclusion criteria as reported in the original study
	Exercise intervention	Program length, duration of 1 session, frequency per week, intensity (max heart rate), type
Patient Characteristics	Total number randomized	Number of patients that are randomized in the study
	Total number completed	Number of patients completing the study
	Significant difference in baseline	Are there significant differences at baseline? Describe differences.
	Number of randomized for IG and CG	Number of patients in intervention group and control group after randomization
	Male %	Percentage of men in study
	Age: IG and CG	Mean age, range and standard deviation of intervention group and control group.
Outcomes	Definition	Report of the outcome as described by authors
	Assessment Method	How is outcome measured?
	Endpoint	When is the outcome measured?
	Results	Statistically significant findings
Other	Limitations	Limitations as mentioned by the authors
	Conclusion	Conclusions as mentioned by the authors
	Comments	Relevant/notable comments