

### Appendix e-3: Complete search strategy

#### *Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R)* 1946 to Present

#	Searches	Results	Search Type
1	multiple sclerosis/ or multiple sclerosis, chronic progressive/ or multiple sclerosis, relapsing-remitting/ or neuromyelitis optica/ or myelitis, transverse/	41535	Advanced
2	("multiple sclerosis" or "chronic progressive multiple sclerosis" or "chronic progressive MS" or "relapse-remitting multiple sclerosis" or "relapse-remitting MS" or "neuromyelitis optica" or "transverse myelitis").mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	52220	Advanced
3	Demyelinating Diseases/ or myelitis/	11563	Advanced
4	(devic*1 adj (disease or syndrome)).tw.	234	Advanced
5	nmo.mp.	857	Advanced
6	(N-methylmorpholine-N-oxide or molybdenum or N-methyl morpholine- N- oxide).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	9433	Advanced
7	5 not 6	834	Advanced
8	*multiple sclerosis/ or *multiple sclerosis, chronic progressive/ or *multiple sclerosis, relapsing-remitting/ or *neuromyelitis optica/ or *myelitis, transverse/ or (multiple sclerosis/rh or multiple sclerosis, chronic progressive/rh or multiple sclerosis, relapsing-remitting/rh or neuromyelitis optica/rh or myelitis, transverse/rh) or 2 or 3 or 4 or 7	61417	Advanced

9	"loss of independence".mp. or disability evaluation/ or work capacity evaluation/	36620	Advanced
10	fatigue/	17548	Advanced
11	((pulmonary or respiratory) adj dysfunction).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	2449	Advanced
12	deglutition disorders/ or adaptation, psychological/ or adaptation, physiological/ or cognitive therapy/	147805	Advanced
13	"loss of swallowing".mp.	19	Advanced
14	respiratory insufficiency/ or airway obstruction/ or exp respiratory therapy/	113636	Advanced
15	(reduced adj (nutrition or hydration)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	57	Advanced
16	(decreased adj (nutrition or hydration)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	46	Advanced
17	tremor/	7668	Advanced
18	accidents/ or accidental falls/ or safety/	57162	Advanced
19	muscle weakness/	4880	Advanced
20	"loss of mobility".mp.	291	Advanced
21	activities of daily living/ or exp "rehabilitation of speech and language disorders"/ or quality of life/ or QOL.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading	153499	Advanced

	word, protocol supplementary concept, rare disease supplementary concept, unique identifier]		
22	exp sexual dysfunction, physiological/	22115	Advanced
23	exp sexual dysfunction, psychological/	25835	Advanced
24	"loss of intimacy".mp.	13	Advanced
25	employment/ or occupations/	49565	Advanced
26	work/ or work schedule tolerance/	12450	Advanced
27	"return to work".mp.	5284	Advanced
28	(social participation or social support* or support*).mp. or social work/ or interpersonal relations/ or exp social behavior/ [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	7071171	Advanced
29	adaptation, psychological/ or behavior/ or social adjustment/ or social distance/	111694	Advanced
30	exp recreation/ or exp sports/ or exp psychotherapy/ or energy metabolism/ or postural balance/ or balanc*.tw. or cooling*.mp. or physical fitness/ or physical endurance/ [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	513317	Advanced
31	ataxia/ or gait ataxia/	6388	Advanced
32	"work hardening".mp.	132	Advanced
33	(independent living or fatigue or pain or choking or dysarthria or ataxia or tremor? or fall\$3 or weakness or sexual dysfunction or employment or vocation\$2 or work or impairment or diabilit\$3 or handicap? or avocational or recreation or leisure activit\$3).tw.	1277668	Advanced
34	exp rehabilitation/	137884	Advanced

35	exp complementary therapies/  exp physical therapy modalities/ or "range of motion".mp. or flexibil*.mp. or exercise therapy/ or stretch*.mp. or walking.mp. or strengthen*.mp. or brace*.mp. or orthotic*.mp. or walker*.mp. or	164774	Advanced
36	cane*1.mp. or crutch*2.mp. or vocational*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]  (complementary therap\$3 or complementary medicine? or	343183	Advanced
37	complementary medication? or alternative therap\$3 or alternative medicine? or alternative medication?).mp.	20571	Advanced
38	("complementary and alternative medicine?" or "complementary and alternative medication?" or "complementary and alternative therap\$3").mp.	4285	Advanced
39	"equipment and supplies"/	17482	Advanced
40	exp self-help devices/	7861	Advanced
41	rehabilitation nursing/	1023	Advanced
42	(rehabilitat\$3 or medication? or modalit\$3 or medical device? or assistive technolog\$3 or assistive device? or therap\$3 or rehabilitation nursing or memory or attention or concentration).mp.	3374805	Advanced
43	or/9-42	10201434	Advanced
44	epidemiologic methods/ or case-control studies/ or cohort studies/ or longitudinal studies/ or follow-up studies/ or prospective studies/ or meta-analysis/	1085279	Advanced
45	research/ or research design/	238518	Advanced
46	Statistics as Topic/	80107	Advanced
47	case series.mp.	30276	Advanced
48	"n=20".ab.	6905	Advanced

49	47 and 48	18	Advanced
50	(randomized controlled trial? or cohort: or case control: or review? or metaanalysis? or meta-analysis? or metanalysis?).mp.	2788264	Advanced
51	or/44-46,49-50	3757303	Advanced
52	8 and 43	36054	Advanced
53	limit 52 to (clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or comparative study or controlled clinical trial or evaluation studies or meta analysis or multicenter study or randomized controlled trial or "review" or systematic reviews or validation studies)	12436	Advanced
54	51 and 52	12673	Advanced
55	53 or 54	16147	Advanced
56	limit 55 to yr="2007 - 2013"	6723	Advanced
57	(*multiple sclerosis/ or *multiple sclerosis, chronic progressive/ or *multiple sclerosis, relapsing-remitting/ or *neuromyelitis optica/ or *myelitis, transverse/) and 56	4464	Advanced
58	(*multiple sclerosis/rh, th or *multiple sclerosis, chronic progressive/rh, th or *multiple sclerosis, relapsing-remitting/rh, th or *neuromyelitis optica/rh, th or *myelitis, transverse/rh, th) and 57	536	

**Embase 1988 to 2013 Week 07**

#	Searches	Results	Search Type
1	Multiple Sclerosis/ or Myelo optic Neuropathy/ or Myelitis/ (multiple sclerosis or chronic progressive MS or chronic progressive multiple sclerosis or relapse remitting multiple sclerosis or relapse	61850	Advanced
2	remitting MS or neuromyelitis optica or devic disease or devic syndrome or devic?s disease or devic?s syndrome or transverse myelitis).tw.	51805	Advanced

3	nmo.tw.	1686	Advanced
4	N-methylmorpholine N-oxide.mp.	101	Advanced
5	3 not 4	1665	Advanced
6	or/1-2,5	67571	Advanced
7	"loss of independence".mp.	510	Advanced
8	fatigue/ or exhaustion/ or lassitude/	90543	Advanced
9	pulmonary dysfunction.tw.	1617	Advanced
10	exp respiratory failure/	43659	Advanced
11	dysphagia/	30358	Advanced
12	airway obstruction/	18945	Advanced
13	(decreased nutrition or decreased hydration).mp.	54	Advanced
14	(reduced nutrition or reduced hydration).mp.	65	Advanced
15	dysarthria/	7501	Advanced
16	exp interpersonal communication/	292418	Advanced
17	ataxia/	16714	Advanced
18	muscle weakness.mp. or exp tremor/ [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	54138	Advanced
19	falling/	21886	Advanced
20	weakness/	13048	Advanced
21	"loss of mobility".mp.	347	Advanced
22	patient mobility/	2600	Advanced
23	daily life activity/	47381	Advanced
24	exp sexual dysfunction/	48515	Advanced
25	"loss of intimacy".mp.	18	Advanced
26	vocation/ or exp employment/	38389	Advanced
27	work/ or job accommodation/ or "quality of working life"/ or work capacity/ or workload/ or workplace/ or work schedule/	72241	Advanced
28	work resumption/	2886	Advanced

29	work disability/ or adl disability/	4163	Advanced
30	exp disability/	80911	Advanced
31	social behavior/ or social attitude/ or social interaction/ or social adaptation/ or social evolution/	81673	Advanced
32	exp recreation/	28099	Advanced
33	(independent adj living).mp.  (fatigue or respiratory dysfunction or pain or choking or "loss of swallowing" or Dysarthria or Ataxia or tremor\$1 or fall\$3 or	2217	Advanced
34	weakness or sexual dysfunction\$1 or employment or vocation\$2 or work or impairment or disabilit\$3 or handicap\$1 or avocational or recreation or leisure activit\$3 or social participation).mp.	1874382	Advanced
35	(work adj hardening).mp.	160	Advanced
36	communication\$1.tw.	139459	Advanced
37	exp rehabilitation/	170953	Advanced
38	exp alternative medicine/	30048	Advanced
39	cryotherapy/ or hyperthermic therapy/	19631	Advanced
40	assistive technology/	600	Advanced
41	rehabilitation nursing/  (rehabilitation or medication\$1 or therap\$3 or medical device\$1 or assistive technolog\$3 or modalit\$3 or rehabilitation nursing or	940	Advanced
42	compl?mentary therap\$3 or compl?mentary medic\$7 or alternative therap\$3 or alternative medic\$6 or "compl?mentary and alternative therap\$3" or "compl?mentary and alternative medic\$6").mp.	2322137	Advanced
43	or/7-42  longitudinal study/ or prospective study/ or retrospective study/ or	4247965	Advanced
44	case control study/ or controlled clinical trial/ or meta analysis/ or randomized controlled trial/ or "systematic review"/	1102347	Advanced
45	cohort analysis/	139841	Advanced
46	case study/	16503	Advanced
47	"n=20".ab.	10266	Advanced
48	46 and 47	18	Advanced

49	review/	1740052	Advanced
50	(random: or cohort: or case control: or review\$1 or metaanalys?s or meta analys?s or metanalys?s).mp.	3397105	Advanced
51	or/44-45,48-50	3838929	Advanced
52	cognitive defect/ or cogniti*.mp.	310812	Advanced
53	cold treatment/ or cooling/	9626	Advanced
54	aerobic exercise/	5003	Advanced
55	assistive technology device/ or wheelchair/ or powered wheelchair/	5255	Advanced
56	(conserv\$3 energy or energy efficiency or adaptive aid\$1 or pacing or cooling device\$1 or cooling or conditioning or aerobic conditioning or power wheelchair mobility or wheelchair\$1 or scooter\$1).tw.	95285	Advanced
57	psychotherapy/ or behavior therapy/	76591	Advanced
58	group psychology/	2468	Advanced
59	support group/	6312	Advanced
60	pulmonary rehabilitation/	1950	Advanced
61	intermittent mandatory ventilation/ or intermittent positive pressure ventilation/ or positive end expiratory pressure/	27239	Advanced
62	(respiratory rehabilitation or bipap or cpap).mp.	7633	Advanced
63	(inexuflator or positive pressure ventilation or intermittent ventilation).tw.	4097	Advanced
64	tracheostomy/	11036	Advanced
65	(tracheostomy or respiratory trainer\$1 or respiratory strengthening or inspiratory muscle strengthening exercise\$1 or expiratory muscle strengthening exercise\$1 or inspiratory strengthening exercise\$1 or expiratory strengthening exercise\$1 or quad cough).tw.	8618	Advanced
66	ice/	4042	Advanced
67	heat treatment/	6125	Advanced
68	pain clinic/	1759	Advanced
69	cognitive therapy/	29103	Advanced



70	(pain adj management).mp.	16540	Advanced
71	69 and (68 or 70)	443	Advanced
72	(ice: or heat:).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	231970	Advanced
73	feeding apparatus/	1997	Advanced
74	gastrostomy/ or percutaneous endoscopic gastrostomy/	8469	Advanced
75	6 and (73 or 74)	42	Advanced
76	athletic rehabilitation/ or bladder training/ or cognitive rehabilitation/ or community based rehabilitation/ or community reintegration/ or muscle training/ or occupational therapy/ or psychosocial rehabilitation/ or recreational therapy/ or sociotherapy/ or vocational rehabilitation/	22588	Advanced
77	training/	49611	Advanced
78	exp exercise/	151508	Advanced
79	stretching/	2515	Advanced
80	"range of motion"/	13074	Advanced
81	brace/ or orthopedic shoe/ or walking aid/	8041	Advanced
82	orthotics/	2569	Advanced
83	treadmill exercise/	10084	Advanced
84	daily life activity/	47381	Advanced
85	exp hand function/	22492	Advanced
86	vocational education/	5352	Advanced
87	(physical therapy or physiotherapy or physical training or exercise or stretching or "range of motion" or strengthening or aerobic exercise\$1 or cooling garment\$1 or brace\$1 or orthotic\$1 or walking pole\$1 or "pole striding" or "pole walking" or walker\$1 or cane\$1 or crutch\$2 or functional stimulation or robotic training or treadmill training).tw.	246343	Advanced
88	("activities of daily living" or "higher level activities of daily living" or "instrumental activities of daily living" or hand function or	23350	Advanced

	vocational training or vocational rehabilitation or prevocational training or environmental control:).tw.		
89	air conditioning/ or room ventilation/	11034	Advanced
90	splinting/	2443	Advanced
91	penis prosthesis/	2205	Advanced
92	counseling/ or directive counseling/ or marital therapy/ or patient counseling/ or patient guidance/ or sexual counseling/	60048	Advanced
93	(counsel* or sexual rehabilitation or erection device*1 or adaptive sexual aid?).tw.	70909	Advanced
94	exp sport/	70891	Advanced
95	(avocational activit\$3 or kayaking or wheelchair athletic\$1 or adaptive leisure or adaptive biking or basketball).tw.	2250	Advanced
96	social support/ or social work/	60607	Advanced
97	community care/ or community program/	36385	Advanced
98	(social work or family support: or caregiver support: or caregiver assessment or care partner\$1 support: or care partner\$1 support: or care partner\$1 assessment or social support\$1).tw.	29820	Advanced
99	"construction work and architectural phenomena"/ or architectural barrier/	4398	Advanced
100	(accessible transportation or accessible housing or accessible communit\$3 or accessible building\$1).tw.	90	Advanced
101	speech therapy.tw.	1565	Advanced
102	(serial casting or resting splint\$1 or splint\$3 or heat modalit\$3 or cold modalit\$3 or heat therapy or cold treatment).tw.	8530	Advanced
103	or/52-68,71-72,75-102	1355644	Advanced
104	6 and 103	7937	Advanced
105	6 and 43	30938	Advanced
106	*Multiple Sclerosis/ or *Myelo optic Neuropathy/ or *Myelitis/ or (Multiple Sclerosis/rh or Myelo optic Neuropathy/rh or Myelitis/rh)	42078	Advanced
107	104 and 105 and 106	4529	Advanced

108	51 and 107	1798	Advanced
109	limit 108 to (human and yr="2007 - 2013")	923	Advanced
	limit 109 to (book or book series or conference abstract or conference		
110	paper or conference proceeding or editorial or letter or note or short	158	Advanced
	survey or trade journal)		
111	109 not 110	765	Advanced
112	111 not (*Multiple Sclerosis/dt or *Myeloptoptic Neuropathy/dt or *Myelitis/dt)	547	Advanced

Cochrane CENTRAL – all duplicates

*CINAHL*

S3 S1 AND S2 (250) .

S2 random\* or systematic or study or studies or outcome\* (857,133) .

S1 (MM "Multiple Sclerosis/DH/PC/PF/RH/SS")

Limiters - Published Date from: 20070901-20131231; Peer Reviewed

*WOS*

526 #5 AND #4

Refined by: Languages=( ENGLISH ) AND Document Types=( ARTICLE ) AND  
Topic=(therap\* OR activit\* OR rehab\*)

Databases=SCI-EXPANDED Timespan=2007-09-01 - 2013-02-22 Select to combine sets.  
Select to delete this set.

# 7 951 #5 AND #4

Refined by: Languages=( ENGLISH ) AND Document Types=( ARTICLE )

Databases=SCI-EXPANDED Timespan=2007-09-01 - 2013-02-22 Select to combine sets.  
Select to delete this set.

# 6 1,004 #5 AND #4

Databases=SCI-EXPANDED Timespan=2007-09-01 - 2013-02-22 Edit Select to combine sets.  
Select to delete this set.

# 5 4,636 TI=("multiple sclerosis") AND TS=(rehab\* OR "physical therap\*" OR "physical  
activit\*" OR mobility OR work OR occupation\* OR physiother\* OR training OR stretch\* OR  
strength\* or exercise OR assistive OR recreation\* OR leisure or communicat\* OR social OR  
fatigue OR adl OR "activities of daily living" OR counsel\* OR employment OR unemployment  
OR retrain\* OR swallow\* OR fitness OR ambulat\* or impair\* or disabl\* OR disability OR  
"quality of life" OR qol OR community OR function\*OR "range of motion" OR step OR balance  
OR fall OR falls OR falling OR weakness OR orthotics OR brace OR orthoses OR mood OR  
"social participation" OR anxiety OR wheelchair\* OR pool OR hydrotherap\*)

Databases=SCI-EXPANDED Timespan=2007-09-01 - 2013-02-22