

SYMPTOMATIC TREATMENT TRIALS IN MULTIPLE SCLEROSIS

Updated May 2017. This list highlights notable symptomatic treatment trials but is not inclusive of all studies.

Abbreviations Key:

ACTRIMS -- Americas Committee for Treatment and Research in Multiple Sclerosis

AAN – American Academy of Neurology

COMP/ALT – interventions considered to be outside the realm of conventional medicine

MED – medical therapy, including medications and medical procedures

PP – primary progressive

REHAB – rehabilitation intervention

RR - relapsing-remitting

SP - secondary progressive

AGENT	Type of Intervention	PURPOSE OF STUDY	University/ Company	TYPE OF MS/NUMBER OF SUBJECTS	STATUS/RESULTS
Acupuncture	COMP/ALT	improve symptoms	Hunter College, New York, NY	All types/30	Ongoing, no further information available. Funded by the National MS Society.
Acupuncture vs. mindfulness-based stress reduction	COMP/ALT	reduce fatigue	Charite University, Berlin, Germany	All types/141	Completed; read more http://clinicaltrials.gov/show/NCT01864707
ADS-5102 (amantadine HCl, Adamas Pharmaceuticals, Inc.)	MED	improve walking	Adamas Pharmaceuticals, Inc.	All types/60	Completed; improvement in walking speed in treatment group; one serious adverse event (serotonin syndrome) reported as related to treatment (ACTRIMS 2017, Abstract #P207)

Aerobic exercise	REHAB	improve cognitive function	University of Washington, Seattle	All types/125	Recruiting; read more http://clinicaltrials.gov/show/NCT02106052 . Funded by the National MS Society.
Aerobic exercise	REHAB	improve cognitive function and sleep quality	University of Kansas Medical Center, Kansas City	RR, SP/20	Completed; improved sleep quality significantly; read more, http://cmscscholar.org/wp-content/uploads/2016/05/sc_whit_sleep_exercise_siengsu_kon.pdf
Arbaclofen (Osmotica Pharmaceutical Corporation)	MED	reduce spasticity	Osmotica Pharmaceutical Corporation	RR, SP/353	Completed; reduced spasticity and accepted for filing by FDA, according to company press release, September 28, 2015.
Atomoxetine	MED	improve memory	Icahn School of Medicine at Mount Sinai, New York, NY	All types/15	Ongoing, no further information available. Funded by the National MS Society.

Axona® (caprylic triglyceride)	MED	improve cognitive function	University of Miami; Accera, Inc.	All types/158	Recruiting; read more http://clinicaltrials.gov/show/NCT01848327 . Funded by the National MS Society through Fast Forward.
Balance and eye movement exercises	REHAB	Improve stability and reduce fatigue	University of Colorado, Denver	All types/88	Ongoing, not recruiting; read more http://clinicaltrials.gov/show/NCT01698086 . Funded by the National MS Society.
Balance training	REHAB	improve balance	Oregon Health & Science University, Portland	All types/24	Completed; improvements using feed-forward postural strategy; read more http://journals.sagepub.com/doi/abs/10.1177/1545968315619700 . Funded by National MS Society
Bisacodyl	MED	improve bowel function	University of Pittsburgh	All types/70	Recruiting; read more https://clinicaltrials.gov/show/NCT02609607
Cognitive behavior therapy vs. Exercise, vs. Combination of both	REHAB	reduce stress	Sunnybrook Health Sciences Centre, Toronto, Ontario, CA	RR/173	Completed (results not reported yet; read more http://clinicaltrials.gov/show/NCT01763983

Computerized cognitive exercise training	REHAB	improve cognitive function	New York University	All types/136	Completed; significant improvement in cognitive function; read more http://www.abstractsonline.com/pp8/#!/4046/presentation/7245
Dal-fampridine and physical therapy	REHAB/MED	improve gait problems	University of North Carolina, Chapel Hill	All types/10	Ongoing, no further information available. Funded by the National MS Society.
Dance intervention, ballet	REHAB	improve balance, agility, and smoothness of movement during walking	University of Illinois at Urbana-Champaign	All types/14	Ongoing, no further information available. Funded by the National MS Society.
Deprexis (internet-based cognitive behavioral therapy)	REHAB	reduce depression	Charite University, Berlin, Germany	All types/400	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02740361 . Funded by National MS Society
Diet	COMP/ALT	reduce fatigue	University of Iowa, Iowa City	RR/100	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02914964 . Funded by National MS Society

Direct current stimulation (brain)	MED	improve cognition	University Hospital of Mont-Godinne, Belgium	RR, SP/100	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02266121
D-mannose (nutritional supplement)	COMP/ALT	prevent urinary tract infections	University College, London	All types/20	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02490046
Dual task rehabilitation	REHAB	improve walking and cognitive function	University of Illinois at Urbana-Champaign	With significant mobility impairment/30	Completed (results not reported yet; read more https://clinicaltrials.gov/ct2/show/NCT02274935 . Funded by National MS Society
Emotional processing intervention	REHAB	improve emotional function	Kessler Foundation Research Center, West Orange, NJ	RR/50	Ongoing, no further information available. Funded by the National MS Society.
Estriol	MED	improve cognitive function	University of California, Los Angeles	RR, SP (women)/64	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT01466114
Exoskeleton	REHAB	improve walking	The University of Texas Health Science Center, Houston	All types/10	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02519244 . Funded by the National MS Society

Exoskeleton	REHAB	improve walking	Icahn School of Medicine at Mount Sinai, New York, NY	All types/12	Ongoing, no further information available. Funded by the National MS Society.
Eye movement retraining	REHAB	improve mobility	Plymouth University, United Kingdom	SP, PP/30	Funded by the National MS Society jointly with other International Progressive MS Alliance members. Completed, Oculomotor training can improve eye hand co-ordination but not clinical functional measures. Read more http://onlinelibrary.ectrims-congress.eu/ectrims/2016/32nd/146627/jonathan.marsden.oculomotor.re-training.in.people.with.progressive.multiple.html?f=m3
Feedback presentation	REHAB	reduce fatigue	Kessler Foundation Research Center, West Orange, NJ	All types/35	Ongoing, no further information available. Funded by the National MS Society.
Functional electrical stimulation cycling	REHAB	reduce fatigue	Shepherd Center, Atlanta, GA	Moderate to severe/20	Completed; significant improvements in cycling performance, fatigue, and pain. Read more http://www.nationalmssociety.org/About-the-Society/News/Two-Small-Studies-Find-Benefits-of-Exercise-for-Pe . Funded by the National MS Society
Gait training	REHAB	improve walking	Indiana University, Indianapolis	SP,PP/20	Ongoing, no further information available. Funded by the National MS Society.

Internet-based program to increase physical activity	REHAB	improve physical activity, walking ability, quality of life, and reduce fatigue, pain, depression	University of Alabama at Birmingham	RR/280	Ongoing, no further information available. Funded by the National MS Society.
Leg cycling	REHAB	reduce spasticity	University of Illinois at Urbana-Champaign	All types/30	Completed (results not reported yet. Funded by the National MS Society.
Lung volume recruitment	REHAB	improve respiratory function	University of Ottawa, Ontario, CA	All types/69	Recruiting; read more http://clinicaltrials.gov/show/NCT01891071 . Funded by the National MS Society.
Manualized cognitive rehabilitation program	REHAB	improve memory and the ability perform activities	University of Tulsa, Oklahoma	All types/20	Ongoing, no further information available. Funded by the National MS Society.
Meditation	COMP/ALT	improve emotional function	Ohio State University, Columbus	RR/24	Ongoing, no further information available. Funded by the National MS Society.

Meditation (mindfulness based intervention)	COMP/ ALT	improve depression	University of Turin, Italy	RR,SP/88	Recruiting; read more https://clinicaltrials.gov/show/NCT02611401
Meditation, neurofeedback, and/or self-hypnosis	COMP/ ALT /REHAB	reduce pain and fatigue	University of Washington, Seattle	All types/30	Ongoing, not recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02474940 . Funded by the National MS Society.
Methylphenidate	MED	improve balance and walking	Oregon Health & Science University, Portland	All types/24	Completed; no more effective than placebo; read more http://journals.sagepub.com/doi/pdf/10.1177/1352458517692421
Physiotherapy, endurance training and resistance training vs. Physiotherapy in private practice	REHAB	improve walking	Hôpitaux de Paris, France	EDSS \leq 5/240	Recruiting; read more http://clinicaltrials.gov/show/NCT01871818

Positive airway pressure therapy	REHAB	improve cognitive function	University of Michigan, Ann Arbor	All types/175	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02544373 . Funded by the National MS Society.
Positive airway pressure therapy	REHAB	reduce fatigue	McGill University, Montreal, Quebec, CA	All types/65	Recruiting; read more http://clinicaltrials.gov/show/NCT01746342
Self management	REHAB	reduce pain	University of Washington, Seattle	All types/144	Ongoing, not recruiting; read more http://clinicaltrials.gov/show/NCT01800604
Speed of processing training	REHAB	improve cognitive function	Kessler Foundation Research Center, West Orange, NJ	All types/20	Ongoing, no further information available. Funded by the National MS Society.
Stylistic memory enhancement	REHAB	improve learning and memory	Kessler Foundation Research Center, West Orange, NJ	All types/30	Completed (results not reported yet. Funded by the National MS Society.

Telehealth self-management intervention	REHAB	manage fatigue and increase physical activity	Case Western Reserve University, Cleveland, OH	All types/215	Ongoing, not recruiting; read more http://clinicaltrials.gov/show/NCT01572714 . Funded by the National MS Society.
Transcranial direct current stimulation	MED	improve cognition, fatigue	New York University	All types/60	Recruiting; read more https://clinicaltrials.gov/ct2/show/NCT02746705 . Funded by National MS Society
Video-game exercise	REHAB	improve mobility and brain plasticity	Ohio State University, Columbus	RR/34	Completed; self-reported fatigue decreased significantly, motor speed did not significantly improve, large change in perceived quality of arm use for daily activities, per report from primary investigator.
Virtual reality intervention	REHAB	improve balance	Sheba Medical Center, Ramat Gan, Israel	RR/30	Completed; shown to be effective method of balance training, read more https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4772661/
Virtual reality-treadmill intervention	REHAB	improve mobility and cognitive function	Tel Aviv Sourasky Medical Center, Tel Aviv, Israel	RR/144	Ongoing, no further information available. Funded by the National MS Society.

VSN16R (Canbex Therapeutics Ltd)	MED	reduce spasticity	Canbex Therapeutics Ltd	All types/160	Recruiting; read more https://clinicaltrials.gov/show/NCT02542787
Working memory training	REHAB	improve memory	State University of New York, Buffalo	RR/24	Ongoing, no further information available. Funded by the National MS Society.