

**CLINICAL TRIALS FUNDED/COFUNDED BY THE NATIONAL MS SOCIETY**  
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**Abbreviations Key:**

AAN – American Academy of Neurology

ECTRIMS – European Committee for Treatment and Research in Multiple Sclerosis

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 MS

SP - secondary progressive MS

Progressive - any type of progressive MS such as primary progressive, secondary progressive or progressive relapsing

<b>Agent</b>	<b>TYPE OF INTERVENTION</b>	<b>RE-SEARCH STRATEGY</b>	<b>PURPOSE OF STUDY</b>	<b>INVESTIGATOR</b>	<b>UNIVERSITY/ COMPANY</b>	<b>TYPE OF MS/ NUMBER OF SUBJECTS</b>	<b>STATUS/RESULTS</b>
<b>Acceptance and commitment therapy</b>	REHAB	Restore	improve coping	Ivan Molton	University of Washington, Seattle	All types/50	Ongoing, no further information available.
<b>Acupuncture</b>	COMP/ALT	Restore	improve symptoms	Herbert Karpatkin	Hunter College, New York, NY	All types/30	Ongoing, no further information available.
<b>Aerobic exercise</b>	REHAB	Restore	improve cognitive function	Charles Bombardier	University of Washington, Seattle	All types/125	Recruiting; read more: <a href="http://clinicaltrials.gov/show/NCT02106052">http://clinicaltrials.gov/show/NCT02106052</a>
<b>Aerobic exercise</b>	REHAB	Restore	improve cognitive function and sleep quality	Catherine Siengsukon	University of Kansas Medical Center, Kansas City	RR, SP/20	Completed; improved sleep quality significantly; read more, <a href="http://cmscscholar.org/wp-content/uploads/2016/05/sc_whit_sleep_exercise_siengsukon.pdf">http://cmscscholar.org/wp-content/uploads/2016/05/sc_whit_sleep_exercise_siengsukon.pdf</a>
<b>Anticipatory postural control</b>	REHAB	Restore	improve balance	Alexander Aruin	University of Illinois at Chicago	RR/20	Ongoing, no further information available.

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<b>Axona® (caprylic triglyceride)</b>	MED	Restore	improve cognitive function	Melissa R. Ortega and Heather Katzen	University of Miami; Accera, Inc.	All types/158	Recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01848327">http://clinicaltrials.gov/show/NCT01848327</a>
<b>Atomoxetine</b>	MED	Restore	improve memory	James Sumowski	Icahn School of Medicine at Mount Sinai, New York, NY	All types/15	Ongoing, no further information available.
<b>Balance and eye movement exercises</b>	REHAB	Restore	improve stability and reduce fatigue	Jeffrey Hebert	University of Colorado, Denver	All types/88	Ongoing, not recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01698086">http://clinicaltrials.gov/show/NCT01698086</a>
<b>Balance training</b>	REHAB	Restore	improve balance	Geetanjali Dutta	Oregon Health & Science University, Portland	All types/24	Completed; improvements using feed-forward postural strategy; read more <a href="http://journals.sagepub.com/doi/abs/10.1177/1545968315619700">http://journals.sagepub.com/doi/abs/10.1177/1545968315619700</a>
<b>Behavioral pain intervention</b>	REHAB	Restore	reduce pain catastrophizing	K. Alschuler	University of Washington, Seattle	All types/40	Ongoing, no further information available.
<b>Compensatory step training</b>	REHAB	Restore	prevent falling	K. Bo Foreman	University of Utah, Salt Lake City	RR/10	Ongoing, no further information available.
<b>Computerized cognitive exercise training</b>	REHAB	Restore	improve cognitive function	Lauren Krupp	New York University	All types/136	Completed; significant improvement in cognitive function; read more <a href="http://www.abstractsonline.com/pp8/#!/4046/presentation/7245">http://www.abstractsonline.com/pp8/#!/4046/presentation/7245</a>
<b>Dal-fampridine and physical therapy</b>	MED/ REHAB	Restore	improve gait problems	Prudence Plummer	University of North Carolina, Chapel Hill	All types/10	Ongoing, no further information available.

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<b>Dance intervention, ballet</b>	REHAB	Restore	improve balance, agility, and smoothness of movement during walking	Citlali Lopez-Ortiz	University of Illinois at Urbana-Champaign	All types/14	Ongoing, no further information available.
<b>Deprexis (internet-based cognitive behavioral therapy)</b>	REHAB	Restore	reduce depression	Stefan Gold	Charite University, Berlin, Germany	All types/400	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02740361">https://clinicaltrials.gov/show/NCT02740361</a>
<b>Diet</b>	COMP/ ALT	Restore	improve health and wellness	Ilana Katz Sand	Icahn School of Medicine at Mount Sinai, New York, NY	All types/30	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02986893">https://clinicaltrials.gov/show/NCT02986893</a>
<b>Diet</b>	COMP/ ALT	Restore	reduce fatigue	Terry Wahls	University of Iowa, Iowa City	RR/100	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02914964">https://clinicaltrials.gov/show/NCT02914964</a>
<b>Diet (intermittent calorie restriction)</b>	COMP/ ALT	Stop	test safety and tolerability	Ellen Mowry	Johns Hopkins University School of Medicine, Baltimore, MD	All types/36	Ongoing, not recruiting; read more <a href="https://clinicaltrials.gov/ct2/show/NCT02647502">https://clinicaltrials.gov/ct2/show/NCT02647502</a>
<b>Diet (intermittent calorie restriction)</b>	COMP/ ALT	Stop	test safety and tolerability	Laura Piccio	Washington University School of Medicine, St. Louis	Relapsing/ 40	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02411838">https://clinicaltrials.gov/show/NCT02411838</a>
<b>Dual task rehabilitation</b>	REHAB	Restore	improve walking and cognitive function	Jacob Sosnoff	University of Illinois at Urbana-Champaign	With significant mobility impairment/ 30	Completed (results not reported yet); read more <a href="https://clinicaltrials.gov/show/NCT02274935">https://clinicaltrials.gov/show/NCT02274935</a>

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<b>Emotional processing intervention</b>	REHAB	Restore	improve emotional function	Helen Genova	Kessler Foundation Research Center, West Orange, NJ	RR/50	Ongoing, no further information available.
<b>Exoskeleton</b>	REHAB	Restore	improve walking	Shuo-Hsiu Chang	The University of Texas Health Science Center, Houston	All types/10	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02519244">https://clinicaltrials.gov/show/NCT02519244</a>
<b>Exoskeleton</b>	REHAB	Restore	improve walking	Allan Kozlowski	Icahn School of Medicine at Mount Sinai, New York, NY	All types/12	Ongoing, no further information available.
<b>Eye movement retraining</b>	REHAB	Restore	improve mobility	Jon Marsden	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 <a href="http://onlinelibrary.ectrims-congress.eu/ectrims/2016/32nd/146627/jonathan.marsden.oculomotor.re-training.in.people.with.progressive.multiple.html?f=m3">http://onlinelibrary.ectrims-congress.eu/ectrims/2016/32nd/146627/jonathan.marsden.oculomotor.re-training.in.people.with.progressive.multiple.html?f=m3</a>
<b>Feedback presentation</b>	REHAB	Restore	reduce fatigue	Ekaterina Dobryakova	Kessler Foundation Research Center, West Orange, NJ	All types/35	Ongoing, no further information available.

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<b>Functional electrical stimulation cycling</b>	REHAB	Restore	reduce fatigue	Deborah Backus	Shepherd Center, Atlanta, GA	Moderate to severe/20	Completed; significant improvements in cycling performance, fatigue, and pain. Read more <a href="http://www.nationalmssociety.org/About-the-Society/News/Two-Small-Studies-Find-Benefits-of-Exercise-for-Pe">http://www.nationalmssociety.org/About-the-Society/News/Two-Small-Studies-Find-Benefits-of-Exercise-for-Pe</a>
<b>Functional electrical stimulation cycling</b>	REHAB	Restore	reducing vascular conditions	Emerson Sebastião	University of Illinois at Urbana-Champaign	Mild to moderate/60	Ongoing, no further information available.
<b>Gait training</b>	REHAB	Restore	improve walking	Peter Altenburger	Indiana University, Indianapolis	SP,PP/20	Ongoing, no further information available.
<b>Glucose regulation</b>	MED	Stop	decrease relapse severity or improve recovery from relapse	Myla Goldman	University of Virginia, Charlottesville	CIS,RR/160	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT03004079">https://clinicaltrials.gov/show/NCT03004079</a>
<b>Ibudilast</b>	MED	Stop	protect nervous system and stop progression	Robert Fox	Cleveland Clinic Foundation, OH	SP, PP/250	Funded with the National Institutes of Neurological Diseases and Stroke, with added support by MediciNova, the supplier of ibudilast. Ongoing, not recruiting; <a href="http://clinicaltrials.gov/show/NCT01982942">http://clinicaltrials.gov/show/NCT01982942</a>
<b>Internet-based program to increase physical activity</b>	REHAB	Restore	improve physical activity, walking ability, quality of life, and reduce fatigue, pain, depression	Robert Motl	University of Alabama at Birmingham	RR/280	Ongoing, no further information available.

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<b>Leg cycling</b>	REHAB	Restore	reduce spasticity	Jacob Sosnoff	University of Illinois at Urbana-Champaign	All types/30	Completed (results not reported yet).
<b>Lung volume recruitment</b>	REHAB	Restore	improve respiratory function	Nadim Srouf	University of Ottawa, Ontario, CA	All types/35	Recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01891071">http://clinicaltrials.gov/show/NCT01891071</a>
<b>Light therapy</b>	REHAB	Restore	reduce fatigue	Farrah Mateen	Massachusetts General Hospital, Boston	RR/80	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT03060759">https://clinicaltrials.gov/show/NCT03060759</a>
<b>Lipoic acid and omega-3 fatty acids</b>	COMP/ ALT	Restore	improve cognitive function	Lynne Shinto	Oregon Health & Science University, Portland	RR, SP/53	Ongoing, not recruiting, per communication with primary investigator.
<b>Liothyronine</b>	MED	Restore	test safety and tolerability	Scott Newsome	Johns Hopkins University School of Medicine, Baltimore, MD	Mild to moderate/ 20	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02506751">https://clinicaltrials.gov/show/NCT02506751</a>
<b>Manualized cognitive rehabilitation program</b>	REHAB	Restore	improve memory and the ability to perform activities	Michael Basso	University of Tulsa, OK	All types/20	Ongoing, no further information available.
<b>Meditation</b>	COMP/ ALT	Restore	improve emotional function	Ruchika Prakash	Ohio State University, Columbus	RR/24	Ongoing, no further information available.

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<b>Meditation, neurofeedback, and/or self-hypnosis</b>	COMP/ ALT/ REHAB	Restore	reduce pain and fatigue	Mark Jensen	University of Washington, Seattle	All types/30	Completed; findings indicate that reductions in pain (large) and fatigue (small) were enhanced by training in neurofeedback or meditation before hypnosis (Abstract #P233, World Congress Integrative Medicine & Health 2017)
<b>Methylphenidate</b>	MED	Restore	reduce cognitive fatigue	John DeLuca	Kessler Foundation Research Center, West Orange, NJ	All types/36	Recruiting; read more <a href="http://www.nationalmssociety.org/Research/Participate-in-Research-Studies/Participate-in-Clinical-Trials/Clinical-Trials/Clinical-Trial-Methylphenidate">http://www.nationalmssociety.org/Research/Participate-in-Research-Studies/Participate-in-Clinical-Trials/Clinical-Trials/Clinical-Trial-Methylphenidate</a>
<b>MS SMART (three therapies with nerve-protecting potential: fluoxetine, amiloride, and riluzole)</b>	MED	Stop	slow or stop MS progression	MS Clinical Trials Network established by the MS Society in the United Kingdom	University College and others, London, UK	SP/440	Funded with the U.K. MS Society. Ongoing, not recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01910259">http://clinicaltrials.gov/show/NCT01910259</a>
<b>Multi-modal exercise program</b>	REHAB	Restore	reduce progression of mobility disability	Robert Motl	University of Alabama at Birmingham	All types/40	Completed (results not reported yet).

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<b>Positive airway pressure therapy</b>	REHAB	Restore	improve cognitive function in people with sleep apnea	Tiffany Braley	University of Michigan, Ann Arbor	All types/175	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02544373">https://clinicaltrials.gov/show/NCT02544373</a>
<b>Progressive resistance training</b>	REHAB	Restore	predict improvement in functional movement	Kathleen Zackowski	Johns Hopkins University School of Medicine, Baltimore, MD	All types/60	Completed; significantly improved strength; read more <a href="https://www.ncbi.nlm.nih.gov/pubmed/26863451">https://www.ncbi.nlm.nih.gov/pubmed/26863451</a>
<b>Rituximab</b>	MED	Stop	evaluate safety and effectiveness	Peter Calabresi	Johns Hopkins University School of Medicine, Baltimore, MD	SP,PP/12	Funded jointly with other International Progressive MS Alliance members. Recruiting, read more <a href="https://clinicaltrials.gov/show/NCT02253264">https://clinicaltrials.gov/show/NCT02253264</a>
<b>Rituximab with cerebral microdialysis</b>	MED	Stop	test safety and effectiveness, and study immune messenger chemicals inside the brain	Anders Svenningsson	Umeå University, Sweden	SP,PP/20	Funded by the National MS Society jointly with other International Progressive MS Alliance members. Completed (results not reported yet). Read more <a href="https://clinicaltrials.gov/show/NCT01719159">https://clinicaltrials.gov/show/NCT01719159</a>
<b>Simvastatin</b>	MED	Stop	test ability to protect nervous system	Jeremy Chataway	University College and others, London, UK	SP/1180	Funded jointly with National Institute for Health Research (U.K.) and MS Society (U.K.). Trial begins Spring 2017; read more <a href="http://www.nationalmssociety.org/About-the-Society/News/Multi-million-Dollar-Trial-to-Investigate-if-Stat">http://www.nationalmssociety.org/About-the-Society/News/Multi-million-Dollar-Trial-to-Investigate-if-Stat</a>



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<b>Speed of processing training</b>	REHAB	Restore	improve cognitive function	Nancy Chiaravalloti	Kessler Foundation Research Center, West Orange, NJ	All types/20	Ongoing, no further information available.
<b>Speed of processing training</b>	REHAB	Restore	improve cognitive function	Bonnie Glanz	Brigham and Women's Hospital, Boston, MA	All types/30	Ongoing, no further information available.
<b>Stylistic memory enhancement</b>	REHAB	Restore	improve learning and memory	Nancy Chiaravalloti	Kessler Foundation Research Center, West Orange, NJ	All types/30	Completed (results not reported yet).
<b>Telehealth self-management intervention</b>	REHAB	Restore	reduce fatigue and increase physical activity	Matthew Plow	Cleveland Clinic Foundation, OH	All types/215	Ongoing, not recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01572714">http://clinicaltrials.gov/show/NCT01572714</a>
<b>Tissue selective estrogen complex</b>	MED	Stop	to improve menopause and MS symptoms	Riley Bove	University of California, San Francisco	Women ages 40-62/24	Recruiting; read more <a href="https://clinicaltrials.gov/show/NCT02710214">https://clinicaltrials.gov/show/NCT02710214</a>
<b>Transcranial direct current stimulation</b>	REHAB	Restore	improve cognition, fatigue	Leigh Charvet	New York University	All types/60	Recruiting; read more <a href="https://clinicaltrials.gov/ct2/show/NCT02746705">https://clinicaltrials.gov/ct2/show/NCT02746705</a>
<b>Video game based treatment</b>	REHAB	Restore	improve arm strength	Lynne Gauthier	Ohio State University, Columbus	PP/16	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.

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<b>Virtual reality intervention</b>	REHAB	Restore	improve balance	Alon Kalron	Sheba Medical Center, Ramat Gan, Israel	RR/30	Completed; shown to be effective method of balance training, read more <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4772661/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4772661/</a>
<b>Virtual reality-treadmill intervention</b>	REHAB	Restore	improve mobility and cognitive function	Jeffrey Hausdorff	Tel Aviv Sourasky Medical Center, Israel	RR/144	Ongoing, no further information available.
<b>Vitamin d + glatiramer acetate (copaxone®, Teva Pharmaceutical Industries, LTD.)</b>	MED	Stop	test safety and effectiveness in reducing disease activity	Ellen M. Mowry	Johns Hopkins University School of Medicine, Baltimore, MD	RR/172	Recruiting; read more <a href="http://clinicaltrials.gov/show/NCT01490502">http://clinicaltrials.gov/show/NCT01490502</a>
<b>Whole-body vibration training</b>	REHAB	Restore	prevent falls	Feng Yang	The University of Texas at El Paso	All types/20	Completed; improved factors that lead to falls, read more <a href="https://www.ncbi.nlm.nih.gov/pubmed/27976932">https://www.ncbi.nlm.nih.gov/pubmed/27976932</a>
<b>Working memory training</b>	REHAB	Restore	improve memory	Janet Shucard	State University of New York, Buffalo	RR/90	Ongoing, no further information available.