

# Multiple Sclerosis Evidence-Based Strategies and Treatment/Therapies for Rehabilitation (MSBEST): Overview and methodology of the **MSBEST** evidence-based review project

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## BACKGROUND

- > There has been a growth in multiple sclerosis (MS) rehabilitation research over time, signifying the increasing importance of evidence-based rehabilitation approaches for this clinical population
- > However, little evidence-informed clinical guidance regarding rehabilitative management exists for health care professionals
- > Effective rehabilitation approaches are important for optimizing outcomes in persons with MS
- > The **Multiple Sclerosis Best Evidence-Based Strategies and Treatment/Therapies for Rehabilitation (MSBEST)** evidence-based review project is a summary of research evidence for MS rehabilitation, formed by an interdisciplinary team of clinicians and researchers from North America
- > MSBEST was designed to identify research underlying best practices for MS rehabilitation, to help health care professionals select evidence-based rehabilitation strategies for persons with MS

## OBJECTIVE

**To provide a comprehensive, systematic synthesis of research evidence for rehabilitation interventions for MS**

## RESULTS

- > MSBEST covers a series of topics, summarized in individual modules that each focus on a particular area of MS rehabilitation
- > There is sufficient available evidence to provide guidance on a series of topics, including but not limited to: spasticity, team-based rehabilitation, bone health, cognitive impairment, walking and balance, neurogenic bladder and bowel, neuropsychiatric disorders, and upper limb function
- > **Having a clear and established methodology will allow for the addition of further topics over time while enhancing the ease of updating currently reviewed topics in the future**

The website is completely free and open-access, and can be found at:  
**[msbestrehab.ca](http://msbestrehab.ca)**

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## METHODS

- > MSBEST uses a systematic approach to review, evaluate, and summarize research evidence
- > A comprehensive literature search is conducted separately for each module

### Literature search strategy

- > Journal articles investigating rehabilitation interventions for MS
- > Multiple scientific databases: PubMed, MEDLINE, CINAHL, Scopus, EMBASE
- > Publication dates: 1970 – 2017 (version 1), and ongoing
- > Search terms are customized for each module
- > Limits: human adult studies, peer-reviewed journal articles, English language

### Study selection criteria

- (1) ≥ 3 adults (≥ 18 years) with MS were present in the study sample
- (2) ≥ 50% of included participants had a diagnosis of MS, unless the results were stratified by disorder
- > Case studies/reports, abstracts, editorials/commentaries, protocols, reviews, qualitative studies, and assessment tool evaluations were excluded

### Quality evaluation and data extraction

- > Methodological quality of RCTs was assessed using the Physiotherapy Evidence Database (PEDro) tool
- > Data from each included journal article were extracted to form evidence summary tables:
  - Study – author, year, title, country, research design, PEDro score, sample size
  - Methods
    - Population – study sample demographics (age, gender, disease course, disease severity, disease duration)
    - Intervention – nature/type of treatment provided
    - Outcomes/outcome measures – measurements/assessments of primary and/or secondary outcomes
  - Results – key results of the study

### Formulating levels of evidence and conclusions

- > Research findings were summarized by creating levels of evidence (LoEs) to determine the strength of the evidence for each rehabilitation intervention
- > LoEs were created according to the Modified Sackett Scale (2000):

Level	Description
1a	More than one RCT (PEDro score ≥6)
1b	One RCT (PEDro score ≥6)
2	RCT (PEDro score <6), prospective controlled trial, cohort
3	Case-control
4	Case series, pre-post test, post-test
5	Observational, case report, clinical consensus

Abbreviations:  
PEDro=Physiotherapy Evidence Database;  
RCT=randomized controlled trial