

# Fatigue: Pharmacologic Treatments

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- **RCTs** have conflicting results
  - Associated with significant improvement in fatigue in some MS trials but not others: **ALCAR**, **amantadine**, **dalfampridine**, **modafinil**
  - **Modafinil** ineffective in most studies; one small study (N = 21) found significant benefit
- Difficulty in distinguishing fatigue from depression

# Fatigue: Nonpharmacologic Treatments

Therapies associated with significant improvement in some measures of fatigue (including physical and cognitive fatigue) in clinical trials, in MS population:

## Exercise<sup>1</sup>

Aerobic exercise

Aquatic exercise

Physical therapist-led group exercise

Yoga

## Cold<sup>1</sup>

Whole body cryostimulation  
(-110°; 10x3 minute exposure)

Cooling vest

## Neuromodulation<sup>1</sup>

Functional Electrical Stimulation:

- Study 1: Bicep stimulation (N = 9)
- Study 2: Stimulation of leg muscles during cycling (N = 11)

Pulsed magnetic field therapy, delivered through portable device

Transcranial direct current stimulation

- Effective in multiple studies<sup>1,2</sup>
- Additional research necessary to determine optimal parameters<sup>2</sup>
- Effective as home therapy, with remote guidance<sup>3</sup>