

Transspinal Stimulation: From Neuro-Modulation to Neuro-Recovery

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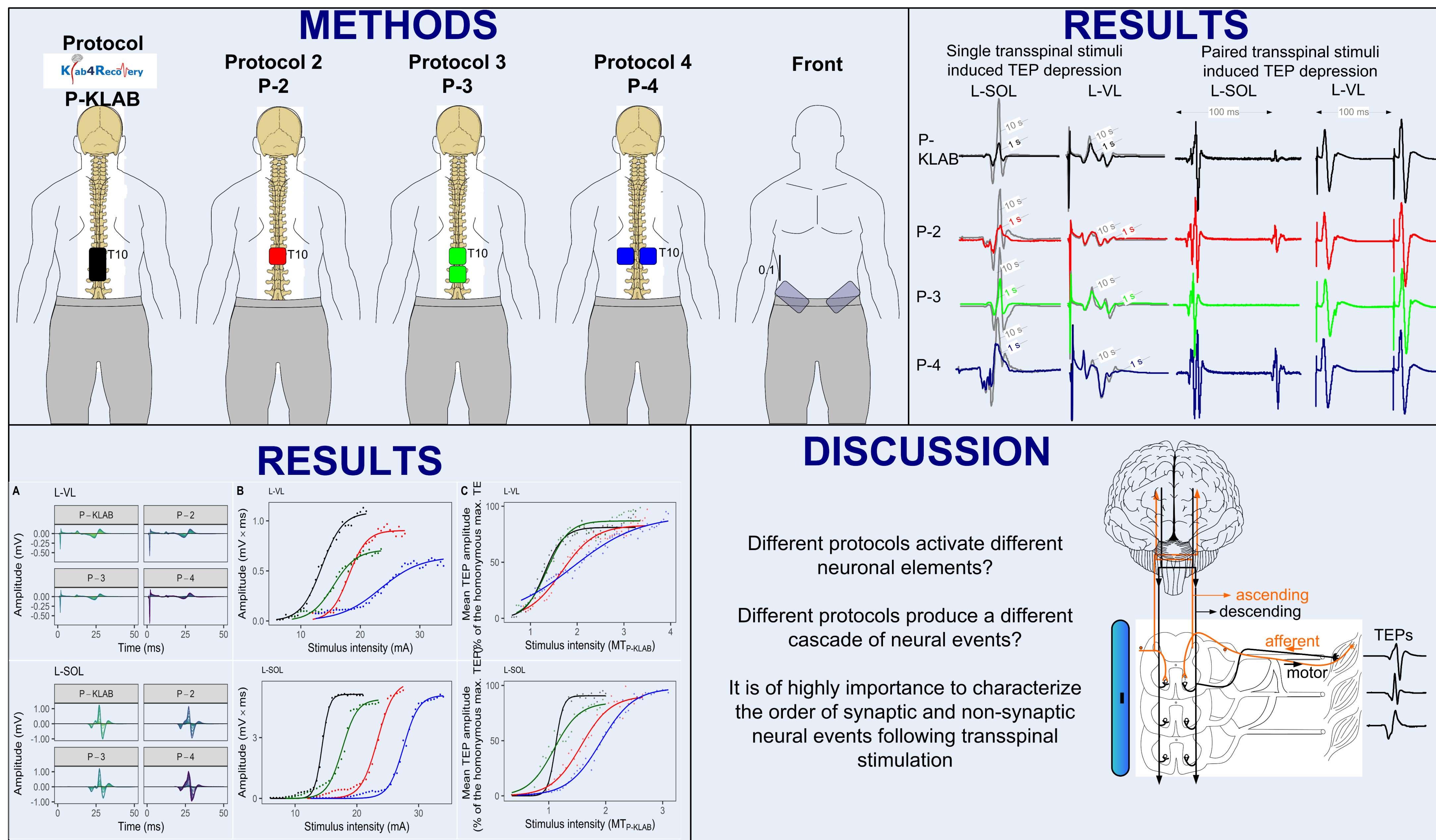
Symposium "Motor Control: Spinal Circuits & Beyond", St. Andrews, Scotland, UK,

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NEUROMODULATION

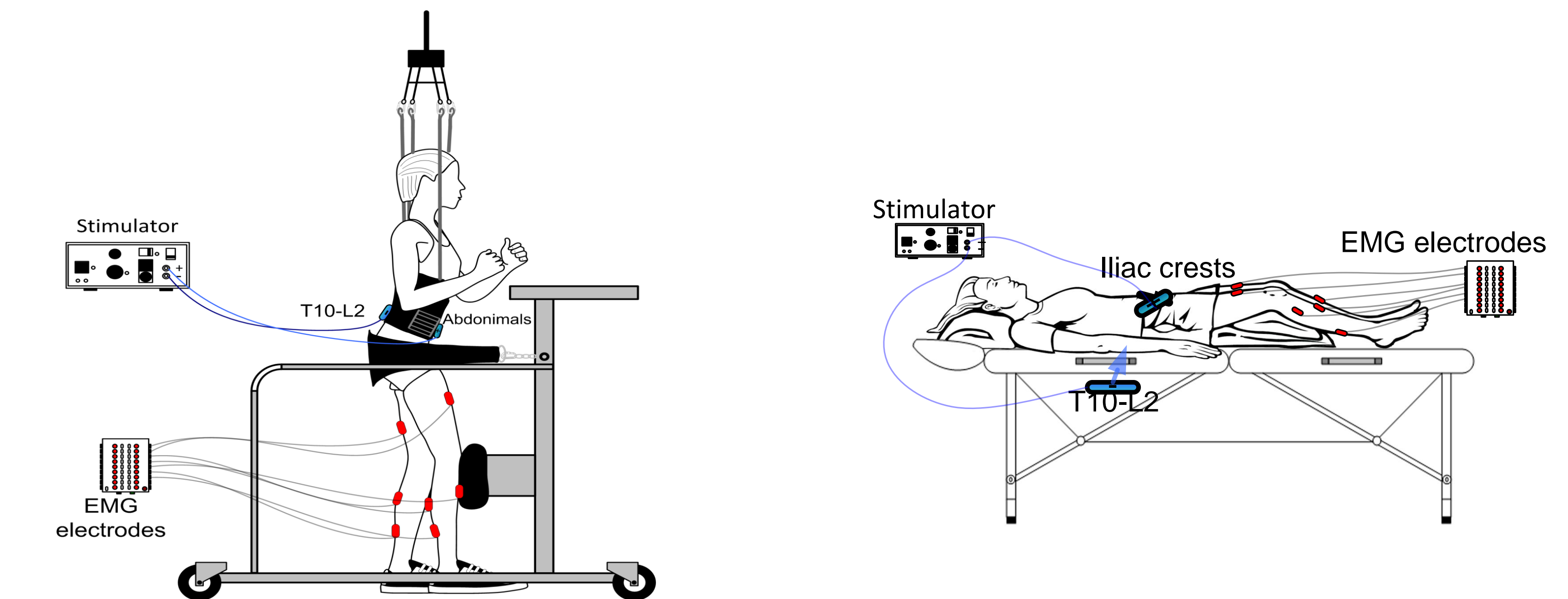
Transspinal stimulation with different size, position, and number of cathode electrode: spinal inhibition and recruitment of motor pools



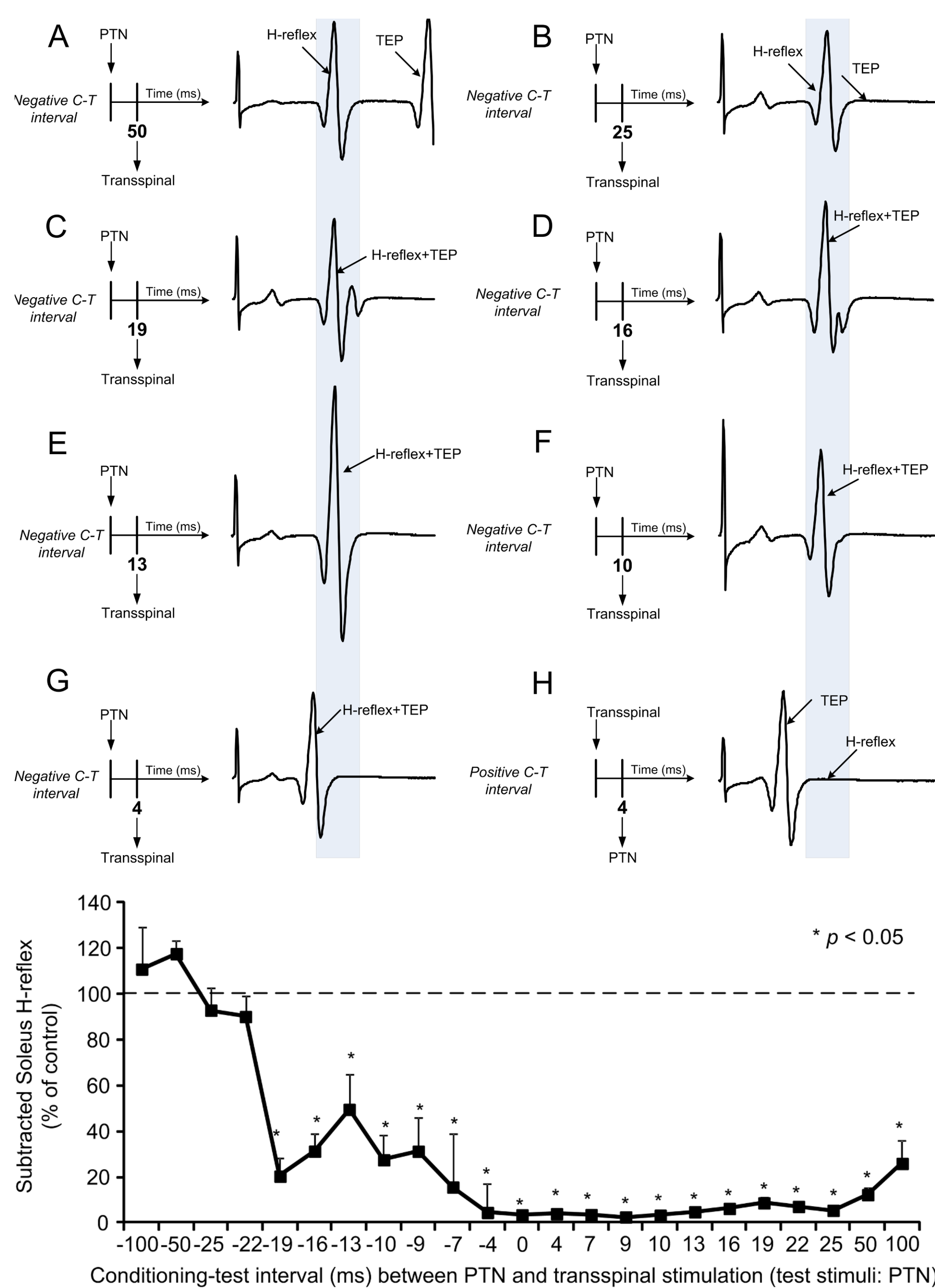
NEURORECOVERY

Priming locomotor training with transspinal stimulation in people with spinal cord injury: study protocol of a randomized clinical trial

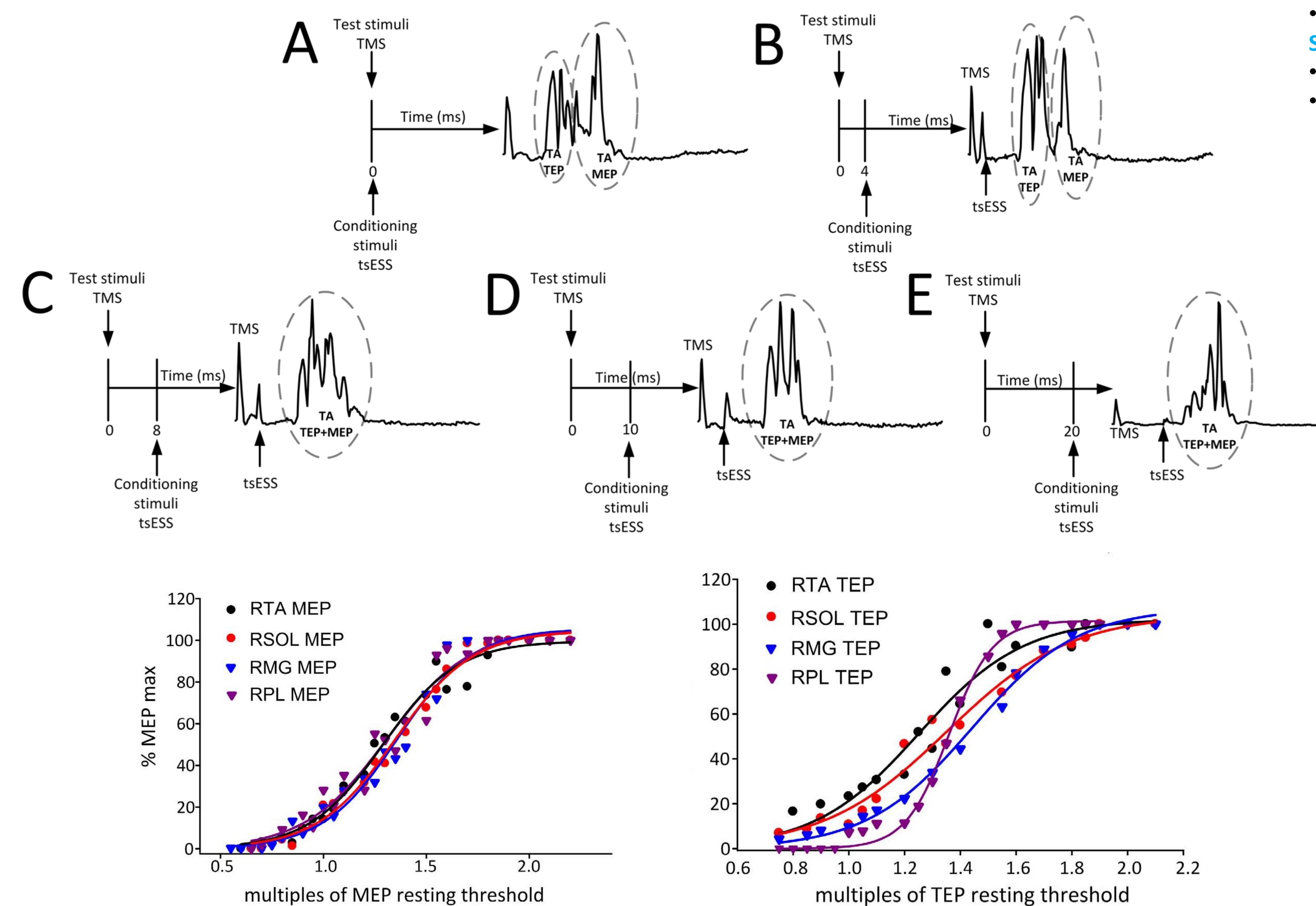
ClinicalTrials.gov: NCT04807764



Summation and/or occlusion of soleus H-reflexes and soleus transspinal evoked potentials (TEPs) on surface EMG



Summation of motor evoked potentials (MEPs) and transspinal evoked potentials (TEPs) on surface EMG



STAND TRAINING w/ BWS

- BWS with NO knee buckling
- Knees fully extended
- BWS progressive overload

STIMULATION

- 30 Hz tonic stim (1ms pulses)
- 30 min total (for active)
 - 10 min @ paresthesia threshold
 - 10 min @ supra-paresthesia threshold
 - 10min @ paresthesia threshold
- Or (for sham)
 - 1 min @ paresthesia threshold
 - 28 min @ 0 mA
 - 1 min @ paresthesia threshold

STIMULATION

- 30 Hz tonic stim (1ms pulses)
- 30 min total
 - 10 min @ paresthesia threshold
 - 10 min @ supra-paresthesia threshold
 - 10 min @ paresthesia threshold

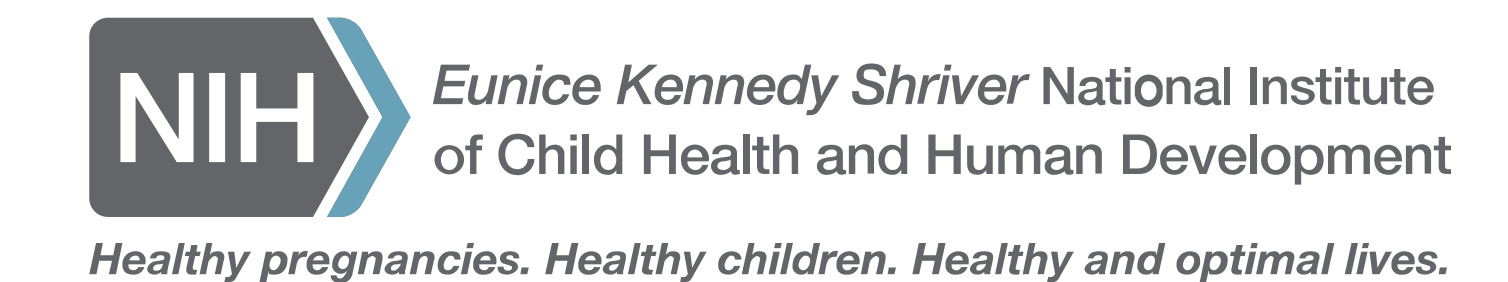
ALL FOLLOWED BY

LOCOMOTOR TRAINING w/ BWS

- BWS with NO knee buckling
- Minimum LFG needed
- Minimum toe strap for toe clearance
- Progressive overload

KLAB4RECOVERY SPINAL CORD INJURY RESEARCH PROGRAM IS SUPPORTED BY:

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