

Materials List for:

Bilateral Assessment of the Corticospinal Pathways of the Ankle Muscles Using Navigated Transcranial Magnetic Stimulation

Charalambos C. Charalambous^{1,2}, Jing Nong Liang^{3,4}, Steve A. Kautz^{2,5}, Mark S. George^{5,6}, Mark G. Bowden^{2,5,7}

¹Department of Neurology, New York University School of Medicine

²Department of Health Sciences and Research, Medical University of South Carolina

³Department of Physical Therapy, University of Nevada Las Vegas

⁴Department of Health Professions, Medical University of South Carolina

⁵Ralph H. Johnson VA Medical Center

⁶Department of Psychiatry, Medical University of South Carolina

⁷Division of Physical Therapy, Medical University of South Carolina

Correspondence to: Charalambos C. Charalambous at cccharalam@gmail.com

URL: <https://www.jove.com/video/58944>

DOI: [doi:10.3791/58944](https://doi.org/10.3791/58944)

Materials

Name	Company	Catalog Number	Comments
2 Magstim stimulators (Bistim module)	The Magstim Company Limited; Whitland, UK		Used to elicit bilateral motor evoked potentials in tibialis anterior and soleus muscles.
Adaptive parameter estimation by sequential testing (PEST) for TMS	http://www.clinicalresearcher.org/software.htm		Used to determine motor thresholds.
Amplifier	Motion Lab Systems; Baton Rouge, LN, USA	MA-300	Used to amplify EMG data.
Data Acquisition Unit	Motion Lab Systems; Baton Rouge, LN, USA	Micro 1401	Used to acquire EMG data.
Double cone coil	The Magstim Company Limited; Whitland, UK	PN: 9902AP	Used to elicit bilateral motor evoked potentials in tibialis anterior and soleus muscles.
Polaris	Northern Digital Inc.; Waterloo, Ontario, Canada		Used to track the reflective markers located on subject tracker and coil tracker.
Signal	Cambridge Electronics Design Limited; Cambridge, UK	version 6	Used to collect motor evoked potentials during rest and TVA.
Single double differential surface EMG electrodes	Motion Lab Systems; Baton Rouge, LN, USA	MA-411	Used to record EMG signals.
TMS Frameless Stereotaxy Neuronavigation Sytem	Brainsight 3, Rouge Research, Montreal, Canada		Used to navigate coil position during TMS assessment.
Walker boot	Mountainside Medical Equipment, Marcy, NY		Used to stabilize ankle joint.