

Materials List for

Assessing Corticospinal Excitability During Goal-Directed Reaching Behavior

Isaac N. Gomez¹, Serena R. Orsinger¹, Hyosub E. Kim², Ian Greenhouse¹

¹Department of Human Physiology, University of Oregon ²Department of Physical Therapy/Psychological & Brain Sciences, University of Delaware

Corresponding Author	Citation	Citation		
Ian Greenhouse	Gomez, I.N., Orsinger, S.R., Kir	Gomez, I.N., Orsinger, S.R., Kim, H.E., Greenhouse, I. Assessing Corticospinal Excitability		
img@uoregon.edu	During Goal-Directed Reaching Behavior. <i>J. Vis. Exp.</i> (190), e64238, doi:10.3791/64238 (2022).			
Date Published	DOI	URL		
December 2, 2022	10.3791/64238	jove.com/video/64238		

Materials

Name	Company	Catalog Number	Comments
2-Port Native PCI Express	StarTech.com	RS232 Card with 16950 UART	Must be compatible with desktop computer
Adjustable 80-20 aluminum frame	any		
Alcohol prep pads	any		EMG preparation
Bagnoli Bipolar Electrodes	Delsys	DE 2.1	
Bagnoli Reference Electrode	Delsys	USX2000	2" (5cm) Round
Bagnoli-8 EMG System	Delsys		
Chair	any		
Computer monitor for EMG/TMS	n/a		
Desk	any		
Desktop Computer	Dell	xps 8930	RAM: 16 GB, Storage: 1TB, Graphics: 1060 6GB
EMG electrodes	Delsys	Sensor Adhesive Interface	
Fine grain sandpaper	any		EMG preparation
Graphics tablet	Wacom	Intuos-4 XL	
Handle of paint roller	any		to be used as stylus handle, hollowed out center must be large enough for stylus to sit securely inside
Medical tape	any		To secure EMG electrodes
PCI-6220 card DAQ	National Instruments		To interface EMG system
Photodiode Sensor	Vishay	BPW21R	To record timing of task events into EMG trace.
Rear TMS port	Magstim		Included with TMS machine
Right-handed polyethylene glove	any		Cut out thumb and index finger of glove to expose FDI muscle
Sensory Adhesive Interface, 2-slot	Delsys	SC-F01	
Stylus	Wacom	Intuos-4 grip pen	
Tablet-to-Computer USB cable	any		Included in Tablet purchase
Task Monitor	Asus	VG248	
TMS coil	Magstim	D70 Remote Coil	7cm diameter, figure-of-eight coil



TMS machine	Magstim	200-2	
TMS-to-Computer DB9 cable	any		Connects to PCIe Serial Card
Velcro	any		To be placed on glove and stylus handle