1. Date of test:
2. Technique (choose all that apply):

Single-pulse TMS

Paired-pulse TMS

Repetitive TMS

Other, specify:

1. TMS equipment (manufacturer and model):
2. Stimulation frequency: Hz
3. Stimulus waveform (choose one):  Biphasic  Monophasic  Other, specify:
4. Motor/Phosphene Threshold: %
5. Stimulation intensity (Choose one):

% of Motor Threshold

% of Phosphene Threshold

Other, Specify:

1. Duration of stimuli (include units):
2. Intertrial interval duration (include units):
3. Intertrain interval duration (include units):(e.g. 30 trains of 40 pulses [2 seconds] separated by 28 second intertrain intervals)
4. Pulse frequency (in Hz):
5. Total number of pulses: (pulses)
6. Current direction (choose all that apply):  Posterior to anterior  Anterior to posterior  Other,specify:
7. Coil type (choose all the apply):  Figure 8  Circular  Double-cone  Other, specify:
8. Stimulation target:
9. Method of determining coil placement (e.g. 10-20 international EEG system, stereotactic neuronavigation):
10. Did participant/subject have multiple (i.e. daily or weekly applications) TMS applications?  Yes  No
    1. If Yes, please specify for how long and total amount of TMS sessions participant/subject received:
11. Timing of TMS in relation to headache:  ictal  inter-ictal  peri-ictal
    1. If ictal, pain intensity at time of recordings:
    2. If ictal, duration of time since onset of headache (include units):
    3. If inter-ictal or peri-ictal, duration of time since end of last headache (include units):
    4. If inter-ictal or peri-ictal, duration of time until start of next headache (include units):
12. TMS effect measure:  Electrophysiological  Functional Imaging  Behavioral  Therapeutic

Other, Specify:

## General Instructions

This CRF contains questions that should be answered when Transcranial Magnetic Stimulation (TMS) is used in headache research. Inclusion of standardized instructions to subject should be in the included in the CRF instructions module.

Headache or migraine specific elements/measures that are not captured on this form but are important to the imaging analysis should be collected on other study-specific source documentation (e.g. Headache Diary, Concomitant Medications, delay between and next headache, and TMS).

Important note: All elements on this CRF are considered Supplemental and should only be collected if the research team considers them appropriate for their study.

## Specific Instructions

Please see the Data Dictionary for definitions for each of the data elements included in this CRF Module.

* Date of test – Record the date/time according to the ISO 8601, the International Standard for the representation of dates and times ([Click here for International Standard for Dates and Times](http://www.iso.org/iso/home.html)). The date/time should be recorded to the level of granularity known (e.g., year, year and month, complete date plus hours and minutes, etc.).
* Technique – Choose all that apply
* TMS equipment (manufacturer and model) – Indicate equipment manufacturer and model
* Stimulation frequency – No additional instructions
* Motor/Phosphene Threshold – No additional instructions
* Stimulation intensity – Choose one
* Duration of stimuli – Include units
* Intertrial interval duration – Defined as the intervals between TMS sessions. Include units.
* Intertrain interval duration – Defined as the intervals between trains of pulses during a TMS session. Include units.
* Pulse frequency – Defined as the frequency of single pulses within a train
* Total number of pulses– No additional instructions
* Interstimulus intervals duration– Include units
* Current direction – Choose all that apply
* Coil type – Choose all that apply
* Stimulation target – No additional instructions
* Method of determining coil placement – No additional instructions
* Did participant/subject have multiple (i.e. daily or weekly applications) TMS application? – If Yes, please specify total amount of TMS sessions participant/subject received.
* Timing of TMS in relation to headache – report the timing of imaging in relation the headache. The precise time windows for peri-ictal and inter-ictal vary with headache type. For episodic migraine, an interval of at least 72h from the last and before the next attack is generally accepted for “inter-ictal”.
* Stimulus waveform – Choose one

## References

Rossi S, Hallett M, Rossini PM, et. al. and The Safety of TMS Consensus Group. Safety, ethical considerations, and application guidelines for the use of transcranial magnetic stimulation in clinical practice and research. Clinical Neurophysiology 2009;120:2008-2039.

Wassermann EM. Risk and safety of repetitive transcranial magnetic stimulation: report and suggested guidelines from the International Workshop on the Safety of Repetitive Transcranial Magnetic Stimulation, June 5-7, 1996. Electroencephalography and Clinical Neurophysiology 1998;108:1-16.