

Study Protocol

Participants

Sample size:	12
Age:	18–35 years
Sex:	Male and female (aim for 50/50 split)
Status:	Healthy, as defined locally

MRS

VOI

Region:	Medial parietal lobe
Placement/orientation:	Refer to “Voxel Placement Instructions”
Voxel size:	30 × 30 × 30 mm ³

PRESS

No. of data points:	2048
Spectral bandwidth:	2000 Hz (or if not, acquisition duration ~1.024 s)
TR:	2000 ms
TE:	35 ms
No. of averages/transients:	64
Water-suppressed reference scan:	Parameters as above except 8 averages

MEGA-PRESS (standard GABA+ editing)

(NB: also refer to “Vendor-Specific Instructions”)

No. of data points:	2048
Spectral bandwidth:	2000 Hz (or if not, acquisition duration ~1.024 s)
TR:	2000 ms
TE:	68 ms
No. of averages/transients:	320 (i.e., 160 ONs, 160 OFFs)
Editing pulses:	
ON edit frequency:	1.9 ppm
OFF edit frequency:	7.46 ppm
Pulse duration:	15 ms (see Siemens-specific notes)
Water-suppressed reference scan:	Parameters as above except 8 averages

MEGA-PRESS (symmetric MM suppression)

(NB: also refer to “Vendor-Specific Instructions”)

No. of data points:	2048
Spectral bandwidth:	2000 Hz (or if not, acquisition duration ~1.024 s)

TR:	2000 ms
TE:	80 ms (Philips/GE); 68 ms (Siemens)
No. of averages/transients:	320 (i.e., 160 ONs, 160 OFFs)
Editing pulses:	
ON edit frequency:	1.9 ppm
OFF edit frequency:	1.5 ppm
Pulse duration:	20 ms (see Siemens-specific notes)
Water-suppressed reference scan:	Parameters as above except 8 averages

MRI

Structural scan

Sequence:	Site standard (i.e., MPRAGE, FSPGR or equivalent)
Contrast:	T ₁ -weighted
Voxel resolution:	1 × 1 × 1 mm ³

Data formats

Philips	SDAT/SPAR (or DATA/LIST and SPAR/SDAT) for MRS; PAR/REC or nifti (<i>not</i> FSL-nifti) for T ₁ image
Siemens	TWIX for MRS; dicom or nifti for T ₁ image
GE	P-files for MRS; dicom or nifti for T ₁ image