

Supplementary Table 1: MRS in MRS checklist**1. Hardware**

Field strength [T]	3.0T
Manufacturer	GE Healthcare
Model (software version)	GE Discovery MR750
RF coils: nuclei (transmit/receive), number of channels, type, body part	32 channel cardiac array by Invivo
Additional hardware	N/A

2. Acquisition

Pulse sequence	PROBE-P MRS sequence
Volume of interest (VOI) location	10 x 10 x 10 mm PROBE localization region, oblique orientation and positioned on the vastus lateralis muscle approximately one-third of the distance between the patella and the iliac crest
Nominal voxel size	10 x 10 x 10 mm ³
TR/TE [ms]	1500/28ms
Total number of excitations or acquisitions per spectrum	Water suppressed: 64 averages Non-water-suppressed: 16 averages
In time series for kinetic studies i. Number of averaged spectra (NA) per time point ii. Averaging method iii. Total number of spectra (acquired/in time series)	N/A
Additional sequence parameters (spectral width [Hz], number of spectral points, frequency offset), 2D FOV, matrix size, acceleration factors, sampling method	Spectral width: 5000Hz Number of spectral points: 4096 Frequency offset: 1ppm FOV: 240mm x 240mm Matrix size: 1x1
Water suppression method	AWS (Automatic Water Suppression)
Shimming method	GRE-shim method, i.e., the Siemens "Brain" shim mode
Triggering or motion correction method	N/A

3. Data analysis methods and outputs

Analysis software	FID-A for data processing in MATLAB and AMARES fitting tool in jMRUI for peak amplitude determination
Processing steps deviating from quoted reference or product	N/A
Output measure	IMCL and EMCL concentrations (A.U.), reported based on AMARES quantification.
Quantification references and assumptions, fitting model assumptions	For AMARES, an internal water reference was used for metabolite quantification. The unsuppressed water scan was used for eddy current correction.

4. Data quality

Reported variables (SNR, linewidth (with reference peaks))	IMCL and EMCL concentrations, water referenced.
Data exclusion criteria	Only healthy individuals were included in the study.
Quality measures of postprocessing model fitting (eg CRLB, goodness of fit, SD of residual)	AMARES fit uncertainty estimates.
Sample spectrum	Figure 1 (B)