Supplementary material

Table S1

Slopes of recruitment curves of tSCS-elicited spinal MEPs for each analysed muscle, intervention and timepoint. Indicated slopes correspond to the slope of the linear regression line through stimulation intensities (in %RMT) and sMEP values (in mV), multiplied *1000 to facilitate data visualization. Data correspond to mean ± SEM. MEP, motor evoked potential; APB, abductor pollicis brevis; ADM, abductor digiti minimi; FCU, flexor carpi ulnaris; ECR, extensor carpi radialis; BB, biceps brachii.

| Slope of recruitment curves | Spinal C3-C4 MEPs | Spinal C6-C7 MEPs |
|-----------------------------|-------------------|-------------------|
|                             | training          | eEmc              | training + eEmc | training          | eEmc              | training + eEmc |
| APB basal                   | 3.7 ± 1.4         | 5.4 ± 2.7         | 4.1 ± 1.6       | 3.9 ± 1.5         | 5.6 ± 2.4         | 4.0 ± 1.6       |
| 0' post                     | 3.7 ± 1.2         | 4.5 ± 2.7         | 4.3 ± 1.6       | 4.0 ± 1.4         | 4.5 ± 2.4         | 3.7 ± 1.4       |
| 60' post                    | 4.4 ± 1.6         | 4.4 ± 2.1         | 4.6 ± 1.4       | 4.0 ± 1.4         | 5.3 ± 2.3         | 3.8 ± 1.6       |
| ADM basal                   | 5.1 ± 1.7         | 4.9 ± 1.8         | 4.2 ± 1.7       | 5.0 ± 1.8         | 5.6 ± 2.0         | 5.3 ± 1.9       |
| 0' post                     | 4.6 ± 1.6         | 4.3 ± 1.6         | 4.6 ± 1.6       | 5.6 ± 2.3         | 4.6 ± 1.9         | 4.5 ± 2.1       |
| 60' post                    | 5.0 ± 2.0         | 5.4 ± 2.0         | 3.9 ± 1.6       | 5.1 ± 2.2         | 5.9 ± 2.0         | 4.4 ± 2.1       |
| FCU basal                   | 1.5 ± 0.3         | 1.7 ± 0.4         | 2.4 ± 0.6       | 1.7 ± 0.3         | 2.4 ± 0.5         | 2.5 ± 0.6       |
| 0' post                     | 1.9 ± 0.3         | 2.1 ± 0.6         | 2.0 ± 0.6       | 2.1 ± 0.3         | 1.6 ± 0.3         | 2.0 ± 0.4       |
| 60' post                    | 1.9 ± 0.4         | 1.8 ± 0.4         | 2.6 ± 0.5       | 1.6 ± 0.4         | 2.5 ± 0.6         | 3.0 ± 0.7       |
| ECR basal                   | 2.9 ± 0.7         | 1.9 ± 0.3         | 2.2 ± 0.4       | 2.3 ± 0.6         | 2.7 ± 0.5         | 2.0 ± 0.5       |
| 0' post                     | 3.1 ± 0.8         | 2.3 ± 0.3         | 2.2 ± 0.4       | 2.9 ± 0.9         | 2.5 ± 0.8         | 2.1 ± 0.4       |
| 60' post                    | 2.9 ± 0.7         | 1.5 ± 0.2         | 2.2 ± 0.5       | 2.5 ± 0.5         | 2.4 ± 0.7         | 2.4 ± 0.7       |
| BB basal                    | 1.2 ± 0.3         | 1.0 ± 0.2         | 1.9 ± 0.6       | 0.9 ± 0.2         | 1.0 ± 0.2         | 1.2 ± 0.3       |
| 0' post                     | 1.2 ± 0.3         | 1.0 ± 0.2         | 3.0 ± 1.6       | 1.0 ± 0.3         | 0.8 ± 0.2         | 1.3 ± 0.4       |
| 60' post                    | 1.0 ± 0.2         | 1.1 ± 0.2         | 1.7 ± 0.5       | 0.9 ± 0.2         | 0.9 ± 0.2         | 1.2 ± 0.3  |
Table S2

Slopes of recruitment curves of TMS-elicited cortical MEPs for each analysed muscle, intervention and timepoint. Indicated slopes correspond to the slope of the linear regression line through stimulation intensities (in %RMT) and cMEP values (in mV), multiplied *1000 to facilitate data visualization. Data correspond to mean ± SEM. *p<0.05 training vs eEmc with training, ††p<0.01 eEmc vs eEmc with training. MEP, motor evoked potential; APB, abductor pollicis brevis; ADM, abductor digiti minimi; FCU, flexor carpi ulnaris; ECR, extensor carpi radialis; BB, biceps brachii.

| Slope of recruitment curves | Cortical MEPs          |          |          |          |
|-----------------------------|------------------------|----------|----------|----------|
|                             | training               | eEmc     | training + eEmc |
| APB                         | basal                  | 31,3 ± 7,1| 30,0 ± 6,7 | 25,2 ± 4,8 |
|                            | 0' post                | 30,5 ± 4,2| 19,4 ± 4,2 | 55,8 ± 12,8 |
|                            | 60' post               | 27,3 ± 4,3| 30,7 ± 8,2 | 25,2 ± 4,8 |
| ADM                         | basal                  | 15,9 ± 3,4| 20,6 ± 3,9 | 19,9 ± 4,1 |
|                            | 0' post                | 22,8 ± 4,5| 20,4 ± 4,3 | 20,1 ± 3,5 |
|                            | 60' post               | 20,8 ± 4,1| 19,0 ± 4,8 | 17,2 ± 2,4 |
| FCU                         | basal                  | 10,5 ± 3,6| 8,1 ± 2,4  | 10,5 ± 3,6 |
|                            | 0' post                | 6,5 ± 1,6 | 10,5 ± 2,7 | 9,7 ± 3,6  |
|                            | 60' post               | 5,3 ± 1,0 | 8,9 ± 2,2  | 9,6 ± 2,8  |
| ECR                         | basal                  | 10,9 ± 3,0| 10,1 ± 2,2 | 9,1 ± 2,0  |
|                            | 0' post                | 9,8 ± 1,6 | 10,6 ± 2,1 | 8,9 ± 2,0  |
|                            | 60' post               | 11,1 ± 2,4| 11,3 ± 3,8 | 12,4 ± 2,4 |
| BB                          | basal                  | 1,8 ± 0,5 | 1,6 ± 0,6  | 3,6 ± 0,9  |
|                            | 0' post                | 5,3 ± 1,4 | 2,5 ± 0,6  | 2,8 ± 1,8  |
|                            | 60' post               | 4,0 ± 1,1 | 3,3 ± 1,4  | 4,3 ± 2,3  |