Supporting materials

**General changes in excitability: experiment 1 and 2**

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| **Table S1.** Descriptive statistics and results of one-sided t tests performed with the Baseline change in experiment 1 (N=20) | | | | | | | | | | | | | |
|  | *Full-view FDI* | | | | *Full-view ADM* | | | *Occluded FDI* | | | *Occluded ADM* | | |
|  | Reach | Grasp | Lift | Reach | | Grasp | Lift | Reach | Grasp | Lift | Reach | Grasp | Lift |
| mean | 0.26 | 0.28 | 0.25 | 0.08 | | 0.09 | 0.11 | 0.25 | 0.16 | 0.11 | 0.11 | 0.05 | 0.04 |
| SD | 0.21 | 0.26 | 0.24 | 0.28 | | 0.36 | 0.54 | 0.19 | 0.23 | 0.22 | 0.27 | 0.27 | 0.28 |
| p-value | **<.01** | **<.01** | **<.01** | .095 | | .131 | .047 | **<.01** | **.01** | **.019** | .04 | .22 | .26 |
| A value > 0 indicates that MEP amplitude measured during movement observation was higher than the baseline MEP amplitude. p-values that survived multiple comparisons correction are represented in bold. | | | | | | | | | | | | | |

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| **Table S2.** Descriptive statistics and results of one-sided t tests performed with the Baseline change in experiment 2 (N=29). | | | | | | | | | | | | | | | |
| **Informative cue** | | | | | | | | | | | | | | | |
|  | *Full-view FDI* | | | | *Full-view ADM* | | | | *Occluded FDI* | | | | *Occluded ADM* | | |
|  | Reach | Grasp | Lift | Reach | | Grasp | Lift | Reach | | Grasp | Lift | Reach | | Grasp | Lift |
| mean | 0.24 | 0.27 | 0.24 | 0.21 | | 0.17 | 0.13 | 0.21 | | 0.23 | 0.15 | 0.16 | | 0.17 | 0.21 |
| SD | 0.20 | 0.23 | 0.21 | 0.25 | | 0.23 | 0.22 | 0.18 | | 0.19 | 0.17 | 0.23 | | 0.20 | 0.22 |
| p-value | **<.01** | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** |
| **Uninformative cue** | | | | | | | | | | | | | | | |
|  | *Full-view FDI* | | | | *Full-view ADM* | | | | *Occluded FDI* | | | | *Occluded ADM* | | |
|  | Reach | Grasp | Lift | Reach | | Grasp | Lift | Reach | | Grasp | Lift | Reach | | Grasp | Lift |
| mean | 0.21 | 0.29 | 0.23 | 0.19 | | 0.17 | 0.14 | 0.20 | | 0.20 | 0.21 | 0.18 | | 0.17 | 0.18 |
| SD | 0.21 | 0.23 | 0.20 | 0.21 | | 0.27 | 0.24 | 0.20 | | 0.23 | 0.20 | 0.22 | | 0.23 | 0.19 |
| p-value | **<.01** | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** |
| A value > 0 indicates that MEP amplitude measured during movement observation was higher than the baseline MEP amplitude. p-values that survived multiple comparisons correction are represented in bold. | | | | | | | | | | | | | | | |

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| **Table S3** Experiment 1 and 2 (N=53):Descriptive statistics and results of one-sided t tests performed with the MEPmod | | | | | | | | | | | | | |
|  | *Full-view FDI* | | | | *Full-view ADM* | | | *Occluded FDI* | | | *Occluded ADM* | | |
|  | Reach | Grasp | Lift | Reach | | Grasp | Lift | Reach | Grasp | Lift | Reach | Grasp | Lift |
| mean | -0.03 | -0.1 | -0.11 | 0.06 | | 0.17 | 0.11 | -0.06 | -0.08 | -0.05 | 0.06 | 0.08 | 0.05 |
| SD | 0.13 | 0.19 | 0.22 | 0.17 | | 0.24 | 0.19 | 0.16 | 0.12 | 0.16 | 0.21 | 0.24 | 0.16 |
| p-value | **.045** | **<.01** | **<.01** | **<.01** | | **<.01** | **<.01** | **<.01** | **<.01** | **<.01** | **.016** | **.012** | **<.01** |
| Table shows the grip-specific motor resonance which is indicated by values >0 in the ADM muscle (i.e., a stronger facilitation during WHG than PG observation) and values <0 for the FDI muscle. p-values that survived multiple comparisons correction are represented in bold. | | | | | | | | | | | | | |

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**Figure S1.** MEP modulation for all participants in experiment 1 (N=24) during the observation of videos depicting a whole-hand grip (WHG) or a precision grip (PG);Panel A and B in this figure are analogous to Figure 4 in the main manuscript, but here all individual participant data are plotted as lines (gray) together with their means (black). **A:** MEP modulation data during the observation of full-view videos. **B:** MEP modulation data during the observation of occluded videos. Values > 0 indicate higher facilitation during WHG than PG observation, while values < 0 indicate increased facilitation during PG than WHG observation;

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**Figure S2.** MEP modulation for all participants in experiment 2 (N=29) during the observation of videos depicting a whole-hand grip (WHG) or a precision grip (PG);Panel A and B in this figure are analogous to Figure 5A, while panels B and C are analogous to Figure 5B in the main manuscript. Here all individual participant data are plotted as lines (gray) together with their means (black). **A:** MEP modulation data during the observation of full-view videos preceded by informative cues. **B:** MEP modulation data during the observation of occluded videos preceded by informative cues. **C:** MEP modulation data during the observation of full-view videos preceded by uninformative cues. **D:** MEP modulation data during the observation of occluded videos preceded by uninformative cues. Values > 0 indicate higher facilitation during WHG than PG observation, while values < 0 indicate increased facilitation during PG than WHG observation;