

**Table e-1 - Reaction time: FMD baseline vs HC**

| Group               | Congruence | Cue type         | Natural logarithm of reaction time |                                                  | P-value |
|---------------------|------------|------------------|------------------------------------|--------------------------------------------------|---------|
|                     |            |                  | Mean [95% CI]                      | Difference "congruous cues": 50% vs 95% (95% CI) |         |
| <b>HC</b>           | 50%        | Incongruous      | 6.243 [6.086, 6.4]                 | -0.058 [-0.112, -0.005]                          | 0.032   |
|                     |            | <b>Congruous</b> | <b>6.162 [6.006, 6.319]</b>        |                                                  |         |
|                     | 95%        | Incongruous      | 6.246 [6.089, 6.403]               |                                                  |         |
|                     |            | <b>Congruous</b> | <b>6.104 [5.947, 6.261]</b>        |                                                  |         |
| <b>FMD Baseline</b> | 50%        | Incongruous      | 6.421 [6.301, 6.542]               | -0.027 [-0.07, 0.015]                            | 0.206   |
|                     |            | <b>Congruous</b> | <b>6.314 [6.194, 6.435]</b>        |                                                  |         |
|                     | 95%        | Incongruous      | 6.402 [6.281, 6.523]               |                                                  |         |
|                     |            | <b>Congruous</b> | <b>6.287 [6.166, 6.408]</b>        |                                                  |         |

Non-transformed, overall median RTs were 502 ms (IQR 443-555) for HC subjects and 539 ms (IQR 469-600) for FMD patient (p= 0.015, Mann-Whitney U test).

**Table e-2 - Beta power: FMD baseline vs HC**

| Group               | Congruence | Laterality | "End of preparation" beta power |                                   |         | Beta desynchronization slope |                                   |         |
|---------------------|------------|------------|---------------------------------|-----------------------------------|---------|------------------------------|-----------------------------------|---------|
|                     |            |            | Mean [95% CI]                   | Difference Contra / Ipsi (95% CI) | P-value | Mean [95% CI]                | Difference Contra / Ipsi (95% CI) | P-value |
| <b>HC</b>           | 50%        | Ipsi       | -0.403 [-0.748, -0.058]         | 0.044 [-0.121, 0.209]             | 0.602   | -0.044 [-0.056, -0.032]      | 0.001 [-0.005, 0.008]             | 0.664   |
|                     |            | Contra     | -0.359 [-0.704, -0.014]         |                                   |         | -0.043 [-0.055, -0.031]      |                                   |         |
|                     | 95%        | Ipsi       | -0.328 [-0.673, 0.016]          | -0.154 [-0.319, 0.012]            | 0.069   | -0.033 [-0.046, -0.021]      | -0.11 [-0.018, -0.005]            | <0.001  |
|                     |            | Contra     | -0.482 [-0.827, -0.137]         |                                   |         | -0.045 [-0.057, -0.033]      |                                   |         |
| <b>FMD Baseline</b> | 50%        | Ipsi       | 0.001 [-0.270, 0.272]           | 0.026 [-0.104, 0.156]             | 0.696   | -0.026 [-0.035, -0.016]      | -0.001 [-0.006, 0.004]            | 0.777   |
|                     |            | Contra     | 0.027 [-0.244, 0.298]           |                                   |         | -0.026 [-0.036, -0.017]      |                                   |         |
|                     | 95%        | Ipsi       | 0.04 [-0.231, 0.311]            | -0.069 [-0.199, 0.061]            | 0.300   | -0.025 [-0.035, -0.016]      | -0.001 (-0.006, 0.004)            | 0.801   |
|                     |            | Contra     | -0.029 [-0.300, 0.242]          |                                   |         | -0.026 [-0.036, -0.017]      |                                   |         |

**Table e-3 - Reaction time: FMD baseline vs follow-up**

| Group     | Congruence | Cue type    | Natural logarithm of reaction time |                                                  |         |
|-----------|------------|-------------|------------------------------------|--------------------------------------------------|---------|
|           |            |             | Mean [95% CI]                      | Difference "congruous cues": 50% vs 95% (95% CI) | P-value |
| Baseline  | 50%        | Incongruous | 6.429 [6.288, 6.570]               | -0.027 [-0.093, 0.04]                            | 0.430   |
|           |            | Congruous   | 6.321 [6.180, 6.463]               |                                                  |         |
|           | 95%        | Incongruous | 6.409 [6.267, 6.55]                |                                                  |         |
|           |            | Congruous   | 6.295 [6.153, 6.436]               |                                                  |         |
| Follow-up | 50%        | Incongruous | 6.446 [6.305, 6.588]               | -0.044 [-0.113, 0.024]                           | 0.203   |
|           |            | Congruous   | 6.313 [6.171, 6.455]               |                                                  |         |
|           | 95%        | Incongruous | 6.43 [6.288, 6.572]                |                                                  |         |
|           |            | Congruous   | 6.269 [6.127, 6.410]               |                                                  |         |

Non-transformed, overall median RTs were 539 ms (IQR 469-600) at baseline and 550 ms (IQR 458-660) at follow-up ( $p = 0.962$ , Wilcoxon sign-rank test).

**Table e-4 - Beta power: FMD baseline vs follow-up**

| FMD Group        | Congruence | Laterality | "End of preparation" beta power |                                   |         | Beta desynchronization slope |                                   |         |
|------------------|------------|------------|---------------------------------|-----------------------------------|---------|------------------------------|-----------------------------------|---------|
|                  |            |            | Mean [95% CI]                   | Difference Contra / Ipsi (95% CI) | P-value | Mean [95% CI]                | Difference Contra / Ipsi (95% CI) | P-value |
| <b>Baseline</b>  | 50%        | Ipsi       | 0.001 [-0.244, 0.246]           | 0.026 [-0.202, 0.253]             | 0.823   | -0.026 [-0.036, -0.015]      | -0.001 [-0.009, 0.007]            | 0.859   |
|                  |            | Contra     | 0.027 [-0.217, 0.272]           |                                   |         | -0.026 [-0.037, -0.015]      |                                   |         |
|                  | 95%        | Ipsi       | 0.04 [-0.205, 0.284]            | -0.069 [-0.296, 0.159]            | 0.553   | -0.025 [-0.036, -0.015]      | -0.001 [-0.009, 0.007]            | 0.874   |
|                  |            | Contra     | -0.029 [-0.274, 0.216]          |                                   |         | -0.026 [-0.037, -0.015]      |                                   |         |
| <b>Follow-up</b> | 50%        | Ipsi       | -0.015 [-0.259, 0.23]           | -0.042 [-0.269, 0.185]            | 0.717   | -0.023 [-0.033, -0.012]      | -0.005 [-0.013, 0.003]            | 0.208   |
|                  |            | Contra     | -0.057 [-0.301, 0.188]          |                                   |         | -0.028 [-0.038, -0.017]      |                                   |         |
|                  | 95%        | Ipsi       | 0.146 [-0.1, 0.390]             | -0.214 [-0.441, 0.014]            | 0.065   | -0.021 [-0.032, -0.011]      | -0.004 (-0.012, 0.004)            | 0.302   |
|                  |            | Contra     | -0.068 [-0.313, 0.176]          |                                   |         | -0.026 [-0.036, -0.015]      |                                   |         |