**Table 4. Excluded** **studies**

|  |  |  |
| --- | --- | --- |
| Excluded items | Reasons | Source of funding |
| The Effects of Transcranial Direct Current Stimulation (tDCS) on Balance Control in Older Adults: A Systematic Review and Meta-Analysis.Guo et al. | Other ouctomes | DB was supported by Key Research and Development Projects of the Ministry of Science and Technology (2018YFC2000602); BM and JZ were supported by a Hebrew Senior Life Marcus-Applebaum pilot grant, as well as grants from the National Institutes of Health (R21AG064575; R01AG059089-01), the Boston Claude D. Pepper Older Americans Independence Center (P30-AG013679), and the Boston Roybal Center for Active Lifestyle Interventions (P30AG048785) |
| Non-invasive brain stimulation in rehabilitationSerdar Kesikburun | No results | The authors received no financial support for the research and/or authorship of this article. |
| Transcranial Direct Current Stimulation for Motor Recovery Following Brain InjuryApril Pruski & Gabriela Cantarero | No results | No sources of funding indicated |

**Table 5.** Summary of the quality of evidence (GRADE)

| **Summary of results: Li et al.** (4) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with tDCS combined with physiotherapy** |
| Gait speedevaluated with: *10MWT* and Quantitative analysis | - | SMD **0.39 SD higher.**(0.06 lower to 0.85 higher). | - | 79 (5 Randomised Controlled Trials (RCTs)) | ⨁⨁◯◯Lowa,b | No significant differences are found between groups favouring the use of *tDCS* to improve walking speed.  |
| Functional mobilityassessed with: *TUG*, *FAC* and *Tinetti* | - | SMD **0.44 SD higher.**(0.01 higher. to 0.87 higher.) | - | 89 (5 Randomised Controlled Trials (RCTs)) | ⨁⨁⨁◯Moderateb | Significant between-group differences are found in favour of *tDCS* in combination with physiotherapy to improve functional mobility. |
| Resistanceevaluated with: *6MWT* | - | SMD **0.28 SD higher.**(0.24 lower than 0.84 higher). | - | 51 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | No significant differences are found between groups favouring the use of *tDCS* to improve gait endurance.  |
| Muscle strengthassessed with: *MI-LE* and *MRC* | - | SMD **1.54 SD higher.**(0.29 higher. to 2.78 higher.) | - | 84 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c | Significant differences are found in favour of using *tDCS* in combination with physiotherapy to improve muscle strength. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval; **SMD:** Standardised Mean Difference. |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The CI crosses the clinical decision threshold between recommending and not recommending treatment.

b. Low sample size

c. High inconsistency due to heterogeneity > 80% and low CI overlap.

| **Summary of results: De Paz et al.** (13) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with physiotherapy** |
| Walking speedevaluated with: *10MWT* | 1 study reported a reduction in test time of almost 10% (9.09% p=0.046). 2 studies showed no significant difference. |  | 67 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b,c | There is no clear evidence on the effect of *tDCS* on walking speed.  |
| Functional mobilityassessed with: *TUG* and *FAC* | 1 study showed a reduction in *TUG* time of 5.29% (p=0.026), and a final study showed an increase in FAC mobility at the 2nd assessment of 44.5% (p=0.03). One study showed no significant difference. |  | 91 (4 Randomised Controlled Trials [RCTs]) | ⨁⨁⨁◯Moderateb,c | There is no clear evidence on the effect of *tDCS* on functional mobility.  |
| Resistanceevaluated with: *6MWT* | 1 study showed an increase in resistance at assessment 3 of 60.35% (p=0.038). Another study showed no significant difference. |  | 37 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b,c | There is no clear evidence on the effect of *tDCS* on gait resistance.  |
| Muscle strengthassessed with: *MRC* and *MI-LE* | 1 study reported an increase in muscle strength in *MI-LE* of 6.9% (p=0.031). 2 studies showed no significant difference. |  | 60 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b,c | There is no clear evidence on the effect of *tDCS* on muscle strength. |
| Motor Functionalityassessed with: *FMA-LE* | A single study reported an increase in *AMF* of 6.27% (p=0.023). |  | (1 RCT (randomised controlled experiment)) | ⨁⨁⨁◯Moderateb,c | *tDCS* combined with physiotherapy is likely to result in a slight increase in motor function. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The direction and magnitude of the effect varies across studies.

b. Low sample size.

| **Summary of results: Vaz et al.** (14) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with tDCS combined with physiotherapy** |
| Walking speedevaluated with: *10MWT* | The average walking speed was **0.03** m/s. | MD **0.02 m/s higher.**(0.08 lower to 0.12 higher.) | - | 134 (7 Randomised Controlled Trials (RCTs)) | ⨁◯◯◯Very lowa,b,c | No significant differences are found between groups favouring the use of *tDCS* to improve walking speed.  |
| Functional mobilityassessed with: *FAC*Scale from: 0 to 5 | The average functional mobility was **0.64** | MD **0.13 higher.**(0.31 lower to 0.57 higher). | - | 104 (6 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | No significant differences are found between groups in favour of the use of *tDCS* to improve functional mobility.  |
| Muscle strengthassessed with: *MI-LE* | The average muscle strength was **11.2** | MD **1.66 higher.**(1.72 lower than 5.03 higher.) | - | 64 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e | No significant differences are found favouring the use of *tDCS* to improve muscle strength. |
| Cadenceevaluated with: Steps per minute | The average cadence was **7.1** steps per minute. | MD **3.19 steps per minute higher.**(6.72 lower to 13.09 higher.) | - | 156 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,f | No significant differences are found favouring the use of *tDCS* to improve gait cadence.  |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval; **MD:** Mean Difference |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. 60% of the studies were reported to be of low methodological quality. Three studies had unclear randomised sequencing, others a lack of blinding in randomisation and blinding of participants and assessors.

b. A low sample size is evident.

c. The CI crosses the clinical decision threshold between recommending and not recommending treatment.

d. Differences in effect estimates are observed. CIs do not overlap.

e. 2/3 of the studies have a low methodological quality.

f. Poor methodological quality in the most important study.

| **Summary of results: Elsner et al.** (12) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with physiotherapy** |
| MMII functionality at the end of treatment (absolute values)evaluated with: *10MWT, 6MWT and FAC* | - | SMD **0.28 SD higher.**(0.12 lower to 0.69 higher). | - | 204 (8 Randomised Controlled Trials (RCTs)) | ⨁⨁◯◯Lowa,b | No significant differences were found in favour of the use of *tDCS* to improve lower limb function. |
| MMII functionality at the end of treatment (change values)evaluated with: *10MWT, 6MWT and FAC* | - | SMD **0.46 SD higher.**(0.09 lower to 1.01 higher.) | - | 54 (4 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | No significant differences were found in favour of the use of *tDCS* to improve lower limb function. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval; **SMD:** Standardised Mean Difference. |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. Low sample size.

b. The CI overpasses the threshold between recommending and not recommending a treatment.

| **Summary of results: Tien et al.** (19) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with physiotherapy** |
| Gait speedevaluated with: *10MWT* and quantitative | - | SMD **0.189 SD higher.**(0.135 lower than 0.513 higher). | - | 154 (7 Randomised Controlled Trials (RCTs)) | ⨁◯◯◯Very lowa,b,c | There is no significant difference in favour of using *tDCS* to improve walking speed. |
| Functional mobilityassessed with: *FAC* | - | SMD **0.542 SD higher.**(0.142 higher. to 0.942 higher.) | - | 108 (5 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | Significant differences in favour of the use of *tDCS for* the improvement of functional mobility are evident. |
| Functional mobilityassessed with: *Tinetti* | - | SMD **0.441 SD higher.**(0.022 lower to 0.904 higher). | - | 75 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | No significant differences are evident in favour of the use of *tDCS* to improve functional gait mobility. |
| Functional mobilityassessed with: *RMI* | - | SMD **0.699 SD higher.**(0.18 higher. to 1.219 higher.) | - | 62 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | Significant differences in favour of the use of *tDCS for* the improvement of functional mobility are evident. |
| Functional mobilityassessed with: *TUG* | - | SMD **0.676 SD higher.**(0.293 higher. to 1.058 higher.) | - | 84 (5 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | Significant differences in favour of the use of tDCS for improving functional mobility are evident. |
| Resistanceevaluated with: *6MWT* | - | SMD **0.209 SD higher.**(0.338 lower to 0.756 higher). | - | 52 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | No significant differences are evident in favour of the use of tDCS to improve functional gait mobility. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval; **SMD:** Standardised Mean Difference. |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included studies have hidden allocation biases.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending and not recommending treatment.

| **Summary of results: Santos et al.** (20) |
| --- |
| ***tDCS* combined with motor training compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with motor training**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with motor training** |
| Walking speedevaluated with: *10MWT* | 4 studies reported no significant differences in favour of the experimental group. Only 1 study showed significant differences in favour of the use of *tDCS*. |  | 109 (5 Randomised Controlled Trials (RCTs)) | ⨁◯◯◯Very lowa,b,c | There is no clear evidence on the effect of tDCS on walking speed.  |
| Functional mobilityassessed with: *TUG* | 1 study showed significant differences in favour of the use of *tDCS*. Another study found no significant differences between treatments.  |  | 39 (2 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | There is no clear evidence on the effect of tDCS on functional mobility.  |
| Gait resistancetested with: *6MWT* | 2 studies reported that the experimental group was significantly larger than the control group (p<0.05). 1 study showed no significant difference between groups.  |  | 107 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | There is no clear evidence on the effect of tDCS on resistance.  |
| Motor functionassessed with: FMA | 1 study showed significant differences between groups in favour of the experimental group. Another study showed no difference for the use of *tDCS*. |  | 54 (2 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | There is no clear evidence on the effect of tDCS on motor function.  |
| Spatio-temporal parameters of gait | 1 study evaluated the parameters stride length, stride length and cadence, but found no significant differences between groups.  |  | 24 (1 RCT (randomised controlled experiment)) | ⨁◯◯◯Very lowa,b,c | There is no evidence on the effect of *tDCS* on the improvement of spatio-temporal parameters. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. Risk of bias in blinding during randomisation.

b. Low sample size (<400)

c. Narrative synthesis, vague.

d. The direction of effect varies across studies.

| **Summary of results: Mitsutake et al.** (21) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with tDCS combined with physiotherapy** |
| *Online* running speedtested with: *10MWT* | - | SMD **0.48 SD higher.**(0.01 higher. to 0.94 higher.) | - | 73 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | Significant differences in favour of the use of online *tDCS* to improve gait speed in post-stroke patients are evident.  |
| *Offline* running speedtested with: *10MWT* | - | SMD **0.08 SD higher.**(0.41 lower to 0.58 higher). | - | 62 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c | There is no significant difference in favour of the use of offline *tDCS for* the improvement of gait speed in post-stroke patients. |
| Total walking speedevaluated with: *10MWT* | - | SMD **0.29 SD higher.**(0.05 lower to 0.64 higher.) | - | 135 (5 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,d | There is no significant difference in favour of the use of *tDCS for* the improvement of walking speed in post-stroke patients. |
| Functional mobility assessed with: *FAC* | - | SMD **0 SD** (1.82 lower to 1.81 higher.) | - | 41 (2 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e,f | There is no significant difference in favour of the use of *tDCS* for functional gait speed mobility in post-stroke patients. |
| Functional mobilityassessed with: *TUG* | - | SMD **0.26 SD higher.**(0.2 less than 0.73 higher.) | - | 71 (2 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e | There is no significant difference in favour of the use of *tDCS* for functional gait speed mobility in post-stroke patients. |
| *Online* gait resistancetested with: *6MWT* | - | SMD **1.08 SD higher.**(0.42 higher. to 1.77 higher.) | - | 40 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,e | Significant differences are evident in favour of the use of online *tDCS* to improve gait endurance in post-stroke patients.  |
| *Offline* gear resistance | - | SMD **0.25 SD lower** (0.76 lower than 0.25 higher.) | - | 62 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c | There is no significant difference in favour of the use of offline *tDCS for* gait speed endurance in post-stroke patients. |
| Total running resistancetested with: *6MWT* | - | SMD **0.4 SD higher.**(0.38 lower than 1.18 higher.) | - | 102 (4 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e,f | There is no significant difference in favour of the use of *tDCS for gait* speed endurance in post-stroke patients. |
| Cadenceevaluated with: *Gait analysis* | - | SMD **0.67 SD higher.**(0.6 lower than 1.93 higher.) | - | 40 (2 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e | There is no significant difference in favour of the use of *tDCS for gait* speed cadence in post-stroke patients. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval ; **SMD:** Standardised Mean Difference |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. No studies performed concealed allocation.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending and not recommending treatment.

d. 2 of 4 included studies did not perform concealed allocation.

e. 1 study did not perform concealed allocation.

f. CIs do not overlap. High heterogeneity.

| **Summary of results: Dong et al.** (22) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with physiotherapy** |
| Walking speedevaluated with: *10MWT* | The average walking speed was **-0.93** | MD **0.93 lower** (2.68 lower to 0.82 higher.) | - | 79 (4 Randomised Controlled Trials (RCTs)) | ⨁◯◯◯Very lowa,b,c | There is no significant difference in favour of the use of *tDCS for gait* speed improvement. |
| Functional mobility assessed with: *TUG* | The average functional mobility was **-0.92** | MD **2.18 lower** (4.51 lower than 0.15 higher.) | - | 130 (5 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,d | No significant differences are evident in favour of the use of *tDCS for* the improvement of functional gait mobility. |
| Functional mobilityassessed with: *FAC* | The average functional mobility was **0.7** | MD **0.34 higher.**(0.14 lower than 0.82 higher). | - | 122 (5 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,e,f | No significant differences are evident in favour of the use of *tDCS for* the improvement of functional gait mobility. |
| Motor functionassessed with: *FMA-LE* | The mean motor function was **1.85** | MD **0.43 lower** (1.7 lower to 0.84 higher.) | - | 115 (4 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowb,c,g | No significant differences were found in favour of the use of *tDCS for* the improvement of lower limb motor function. |
| Gait resistancetested with: *6MWT* | The average march endurance was **27.65** | MD **2.55 lower** (18.34 lower to 13.23 higher.) | - | 101 (4 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c,h | No significant differences are evident in favour of the use of *tDCS for* the improvement of gait endurance. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval; **MD:** Mean Difference |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. 3 of the included studies have a moderate risk of bias in randomisation and concealed allocation.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending and not recommending treatment.

d. 4 of the included studies were at moderate risk of bias in randomisation and concealed allocation.

e. 4 of the included studies were at high and moderate risk of bias in randomisation and concealed allocation.

f. Low overlap in CI. High heterogeneity.

g. 2 of the included studies are at moderate risk of allocation bias and concealed allocation.

h. 1 study had a high risk of bias in concealed allocation, but this was not significant enough to downgrade the result by one level.

| **Summary of results: Navarro-López et al.** (15) |
| --- |
| ***tDCS* combined with physiotherapy compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combined with physiotherapy**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combined with physiotherapy** |
| Gait speedevaluated with: *10MWT* and quantitative systems. | Two studies showed improvements in both groups, but no significant improvements were found between groups.  |  | 53 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowa,b | Evidence suggests that *tDCS* combined with physiotherapy does not increase walking speed. |
| Functional mobilityassessed with: *FAC* | 2 studies evaluated FAC data. None found significant differences between groups.  |  | 35 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Functional mobilityassessed with: *TUG* | 3 studies found improvements in both groups at the end of treatment. Only 1 found significant differences between groups (p=0.018). |  | 44 (3 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Functional mobilityassessed with: *RMI* | Only 1 study evaluated data for this outcome. It showed no significant differences between groups. |  | 11 (1 RCT (randomised controlled experiment)) | ⨁⨁◯◯Lowa,b | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Motor Functionalityassessed with: *FMA-LE* | 1 study evaluated data for this outcome. This study found significant differences from the control group (P=0.023). |  | 24 (1 RCT (randomised controlled experiment)) | ⨁⨁◯◯Lowa,b | Evidence suggests that *tDCS* combined with physiotherapy results in a slight increase in functional mobility. |
| Functional mobilityassessed with: *Tinetti* | 1 study showed significant differences in the two groups. Only 1 study found significant differences between groups (p=0.049) at 4 weeks of treatment.  |  | 45 (2 Randomised Controlled Trials [RCTs]) | ⨁⨁◯◯Lowb,d | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Gait resistancetested with: *6MWT* | 1 study showed improvements in both groups. 2 studies found significant differences between groups (p=0.038). |  | 89 (3 Randomised Controlled Trials (RCTs)) | ⨁⨁◯◯Lowb,e | Evidence suggests that *tDCS* combined with physiotherapy results in a slight increase in gait endurance. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The study was at high and moderate risk of bias in blinding of participants, therapists and assessors.

b. Low sample size (<400).

c. Included studies were at high and moderate risk of bias in randomisation, concealed allocation and blinding of participants, therapists and assessors.

d. One study had moderate risk of bias.

e. 2 studies were at moderate risk of bias.

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* applying anode on ipsilesional hemisphere compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* applying anode on ipsilesional hemisphere**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* applying anode on ipsilesional hemisphere** |
| Functionality of lower limbsassessed with: Balance, gait and motor function |  | Effect size **0.34 higher.**(0.38 lower than 1.08 higher). | - | 195 (7 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | *tDCS* applying anode over ipsilesional hemisphere may result in little to no difference in lower limb functionality. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included studies are at risk of blinding bias.

b. The CI exceeds the threshold between recommending treatment and not recommending treatment.

c. Low sample size (<400)

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* or *tACS* bilaterally compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* or *tACS* bilaterally**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* or *tACS* bilaterally** |
| Functionality of lower limbsassessed with: Balance, gait and motor function |  | Effect size **1.15 higher.**(0.27 higher. to 2.04 higher.) | - | 135 (5 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | *tDCS* bilaterally could result in a large increase in lower limb functionality. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included studies are at risk of blinding bias.

b. Heterogeneity of 80%.

c. Low sample size (<400)

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* in the contralesional hemisphere using the anode compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* in the contralesional hemisphere applying the anode**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* in the contralesional hemisphere with anode application** |
| lower limb functionalityassessed with: Balance, gait and motor function |  | effect size **0.06 higher.**(0.65 lower to 0.78 higher). | - | 15 (1 RCT (Randomised Controlled Trial)) | ⨁◯◯◯Very lowa,b,c | The evidence is very unclear on the effect of *tDCS* on the contralesional hemisphere applying the anode on lower limb functionality. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included study is at risk of blinding bias.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending treatment and not recommending treatment.

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* in the contralesional hemisphere with cathode application compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* on the contralesional hemisphere applying the cathode**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS in the* contralesional hemisphere with cathode application** |
| Functionality of lower limbsassessed with: Balance, gait and motor function |  | effect size **3.11 higher.**(1.97 higher. to 4.24 higher.) | - | 60 (1 RCT (Randomised Controlled Trial)) | ⨁⨁◯◯Lowa,b | *tDCS* in the contralesional hemisphere applying the cathode could result in a large increase in lower limb functionality. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included study is at risk of blinding bias.

b. Low sample size (<400)

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* combining anode in SM1 and cathode in cerebellum compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combining anode in SM1 and cathode in cerebellum**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combining anode in SM1 and cathode in cerebellum** |
| lower limb functionalityassessed with: Balance, gait and motor function |  | effect size **0.03 lower** (0.66 lower to 0.67 higher.) | - | 30 (1 RCT (Randomised Controlled Trial)) | ⨁◯◯◯Very lowa,b,c | The evidence is very unclear on the effect of *tDCS* combining anode in SM1 and cathode in cerebellum on lower limb functionality. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included study has a risk of bias in blinding.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending treatment and not recommending treatment.

| **Summary of results: Veldema et al.** (25) |
| --- |
| ***tDCS* combining anode in SM1 and cathode in cerebellum compared to placebo to improve gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* combining anode in SM1 and cathode in cerebellum**Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS* combining anode in SM1 and cathode in cerebellum** |
| lower limb functionalityassessed with: Balance, gait and motor function |  | effect size **0.03 lower** (0.66 lower to 0.67 higher.) | - | 30 (1 RCT (Randomised Controlled Trial)) | ⨁◯◯◯Very lowa,b,c | The evidence is very unclear on the effect of *tDCS* combining anode in SM1 and cathode in cerebellum on lower limb function. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included study is at risk of blinding bias.

b. Low sample size (<400)

c. The CI exceeds the threshold between recommending treatment and not recommending treatment.

| **Summary of results: Corominas-Teruel et al.** (26) |
| --- |
| ***tDCS* compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS***Comparison:** placebo |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk** | **Risk with *tDCS*** |
| Walking speed | Results are shown as effect size (cohen's d):3 studies showed no effect (< 0.20). 5 studies had small effect sizes of 0.2, 0.23, 0.39, 0.4 and 0.42. Finally, one study showed a large effect size of 1.33. |  | 684 (14 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | Evidence suggests that *tDCS* combined with physiotherapy does not increase walking speed. |
| Functional mobilityassessed with*: TUG* | Results are shown as effect size (cohen's d):3 studies showed no effect (<0.20). 3 studies showed a small effect of 0.4 and 0.5. |  | 237 (8 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Functional mobility assessed with: *Tinetti* | Results are shown as effect size (cohen's d):1 study reported a moderate effect size of 0.7, while 2 studies showed large effect sizes of 0.94 and 1.21.  |  | 150 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Walking resistance | Results are shown as effect size (cohen's d):We found that 3 studies had a small effect of 0.3, 0.28 and 0.28. 1 study had a moderate effect with 0.6 and 1 study had a large effect of 1.1. while 5 studies had insufficient data to calculate the effect size. |  | 572 (10 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c,d | Evidence suggests that *tDCS* combined with physiotherapy does not increase gait endurance. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. The included studies are at risk of blinding bias.

b. Narrative explanations are considered inaccurate.

c. Low sample size (<400)

d. The direction of effect varies across studies.

| **Summary of results: Bressi et al.** (27) |
| --- |
| ***tDCS* in combination with gait-assisted robot compared to placebo for improving gait in post-stroke patients** |
| **Patient or population:** improving gait in post-stroke patients**Configuration:** **Intervention:** *tDCS* in combination with gait-assisted walking robot**Comparison:** placebo  |
| Links | **Anticipated absolute effects\*** (95% CI) | Relative effect (95% CI) | of participants (studies) | Certainty of evidence (GRADE) | Comments  |
| **Placebo risk**  | **Risk with *tDCS* in combination with gait-assisted robot** |
| Walking speedevaluated with: *10MWT* | 1 study showed no significant difference, although it did favour the treatment group (p=0.19). 2 studies also found no difference in favour of the use of *tDCS*. |  | 48 (3 Randomised Controlled Trials [RCTs]) | ⨁◯◯◯Very lowa,b,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase walking speed. |
| Functional mobility assessed with: *TUG* | 1 study showed significant differences between groups (p=0.066). |  | 8 (1 RCT (Randomised Controlled Trial)) | ⨁◯◯◯Very lowa,b,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Functional mobilityassessed with: *RMI* | 1 study found no significant improvement. |  | 20 (1 RCT (Randomised Controlled Trial)) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Functional mobility assessed with: *FAC* | 1 study showed significant differences between groups (p=0.026). Another study found no significant improvement between groups. 1 study found significant differences in the group receiving anode stimulation during follow-up (p=0.024). |  | 48 (3 Randomised Controlled Trials (RCTs)) | ⨁◯◯◯Very lowa,b,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase functional mobility. |
| Gait resistancetested with: *6MWT* | 1 study found no significant improvement. |  | 20 (1 RCT (Randomised Controlled Trial)) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase gait endurance. |
| Motor functionassessed with: *FMA-LE* | 1 study found no significant improvement. |  | 20 (1 RCT (Randomised Controlled Trial)) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase motor function. |
| Muscle strength assessed with: *MRC* | 1 study found no significant improvement. |  | 20 (1 RCT (Randomised Controlled Trial)) | ⨁⨁◯◯Lowb,c | Evidence suggests that *tDCS* combined with physiotherapy does not increase muscle strength. |
| **The risk in the intervention group** (and its 95% confidence interval) is based on the risk assumed in the comparison group and the **relative effect** of the intervention (and its 95% confidence interval).**CI:** Confidence Interval  |
| **GRADE Working Group Degrees of Evidence****High certainty:** We are very confident that the true effect is close to the effect estimate.**Moderate certainty:** We have moderate confidence in the effect estimate: the true effect is likely to be close to the effect estimate, but there is a possibility that it could be substantially different.**Low certainty:** We have limited confidence in the effect estimate: the actual effect may be substantially different from the effect estimate.**Very low certainty:** We have very low confidence in the effect estimate: The actual effect is likely to be substantially different from the effect estimate. |

#### Explanations

a. Risk of bias in the randomisation process in a study

b. Low sample size (<400)

c. Narrative explanations are considered inaccurate.