**Supplementary materials**

Supplement 1. GRADE evidence for comparisons between rasagiline and placebo.

Supplement 2. GRADE evidence for comparisons between 1- and 2-mg rasagiline.

Supplement 3. Forest plot of rasagiline treatment compared with placebo. Outcome: risk ratio of adverse events. Subgroups: total adverse events, headache, back pain, and dizziness.

Supplement 4. Forest plot of 1mg rasagiline treatment compared with placebo between Eastern and Western countries. Outcome: mean difference of total UPDRS, part 1, part 2, and part 3. Subgroups: Eastern and Western groups.

Supplement 5. Forest plot of rasagiline treatment compared with placebo between east and west. Outcome: risk ratio of total adverse events, headache, back pain, and dizziness. Subgroups: Eastern and Western groups.

Supplement 1. GRADE evidence for comparisons between rasagiline and placebo.

| **Certainty assessment** | **No of patients** | **Effect** | **Certainty** | **Importance** |
| --- | --- | --- | --- | --- |
| **No of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **Rasagiline** | **placebo** | **Relative(95% CI)** | **Absolute(95% CI)** |
| **Total UPDRS - 1mg vs placebo** |
| 4  | randomised trials | not serious | not serious | not serious | not serious | none | 501 | 514 | -  | MD **3.05 lower**(3.76 lower to 2.34 lower)  | ⨁⨁⨁⨁HIGH  |  |
| **Total UPDRS - 2mg vs placebo** |
| 3  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 439  | 446  | -  | MD **3.24 lower**(3.96 lower to 2.53 lower)  | ⨁⨁⨁⨁HIGH  |  |
| **UPDRS part 1 - 1mg vs placebo** |
| 4  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 594  | 889  | -  | MD **0.33 lower**(0.57 lower to 0.1 lower)  | ⨁⨁⨁⨁HIGH  |  |
| **UPDRS part 1 - 2mg vs placebo** |
| 2  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 422  | 726  | -  | MD **0.12 lower**(0.29 lower to 0.06 higher)  | ⨁⨁⨁⨁HIGH  |  |
| **UPDRS Part 2 - 1mg vs placebo** |
| 5  | randomised trials  | not serious  | serious a | not serious  | not serious  | none  | 789  | 1084  | -  | MD **0.87 lower**(1.48 lower to 0.27 lower)  | ⨁⨁⨁◯MODERATE  |  |
| **UPDRS Part 2 - 2mg vs placebo** |
| 2  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 422  | 726  | -  | MD **0.98 lower**(1.28 lower to 0.68 lower)  | ⨁⨁⨁⨁HIGH  |  |
| **UPDRS Part 3 - 1mg vs placebo** |
| 4  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 594  | 889  | -  | MD **2.41 lower**(3.26 lower to 1.56 lower)  | ⨁⨁⨁⨁HIGH  |  |
| **UPDRS Part 3 - 2mg vs placebo** |
| 2  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 422  | 726  | -  | MD **2.05 lower**(2.64 lower to 1.46 lower)  | ⨁⨁⨁⨁HIGH  |  |

**CI:** Confidence interval; **MD:** Mean difference

#### Explanations

a. I-square: 79%

Supplement 2. GRADE evidence for comparisons between 1- and 2-mg rasagiline.

| **Certainty assessment** | **No of patients** | **Effect** | **Certainty** | **Importance** |
| --- | --- | --- | --- | --- |
| **No of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **Rasagiline 1mg** | **Rasagiline 2mg** | **Relative(95% CI)** | **Absolute(95% CI)** |
| Total UPDRS- 1mg vs 2mg |
| 3  | randomised trials  | not serious  | not serious  | not serious  | not serious  | none  | 437  | 439  | -  | MD **0** (0.82 lower to 0.81 higher)  | ⨁⨁⨁⨁HIGH  |  |

**CI:** Confidence interval; **MD:** Mean difference

Supplement 3. Forest plot of rasagiline treatment compared with placebo. Outcome: risk ratio of adverse events. Subgroups: total adverse events, headache, back pain, and dizziness.



Supplement 4. Forest plot of 1mg rasagiline treatment compared with placebo between Eastern and Western countries. Outcome: mean difference of total UPDRS, part 1, part 2, and part 3. Subgroups: Eastern and Western groups.

Supplement 5. Forest plot of rasagiline treatment compared with placebo between east and west. Outcome: risk ratio of total adverse events, headache, back pain, and dizziness. Subgroups: Eastern and Western groups

