

Supplementary Material

Search strategy

| | |
|--------------------|---|
| Publication type | RCT Medline/Embase: 1. 'semaglutide'/exp 2. (ozempic OR rybelsus OR semaglutide OR wegovy):ti,ab,kw 3. #1 OR #2 4. 'abnormal blood pressure'/exp OR 'blood pressure'/exp OR 'hypotension'/exp OR 'hypertension'/exp OR 'blood pressure monitoring'/exp 5. ('Blood pressure' OR hypertensi* OR hypotensi*):ti,ab,kw 6. #4 OR #5 7. 'clinical trial'/de OR 'randomized controlled trial'/de OR 'randomization'/de OR 'single blind procedure'/de OR 'double blind procedure'/de OR 'crossover procedure'/de OR 'placebo'/de OR 'prospective study'/de OR ('randomi?ed controlled' NEXT/1 trial*) OR rct OR 'randomly allocated' OR 'allocated randomly' OR 'random allocation' OR (allocated NEAR/2 random) OR (single NEXT/1 blind*) OR (double NEXT/1 blind*) OR ((treble OR triple) NEAR/1 blind*) OR placebo* 8. #3 AND #6 AND #7 |
| Geography/Location | No restriction |
| Publication date | From inception of database until July 1 st 2022 |
| Language | No restriction |
| Age | No restriction |

Cochrane search

Date Run: 18/07/2022

(ozempic OR rybelsus OR semaglutide OR wegovy):ti,ab,kw

[mh "Blood Pressure Determination"] OR [mh "Blood Pressur"] OR [mh "Hypotension"] OR [mh "Hypertension"]

("Blood pressure" OR hypertensi* OR hypotensi*):ti,ab,kw

#2 OR #3

#1 AND #4

Medline (Ovid) search

Date Run: 18/07/2022

Randomized controlled trials as Topic/

Randomized controlled trial/

Random allocation/

Double blind method/

Single blind method/

Clinical trial/

exp Clinical Trials as Topic/

or/1-7

(clinic\$ adj trial\$1).tw.

((singl\$ or doubl\$ or treb\$ or tripl\$) adj (blind\$3 or mask\$3)).tw.

Placebos/

Placebo\$.tw.

Randomly allocated.tw.

(allocated adj2 random).tw.

or/9-14

8 or 15

Case report.tw.

Letter/

Historical article/

Review of reported cases.pt.

Review, multicase.pt.

or/17-21

16 not 22

(ozempic OR rybelsus OR semaglutide OR wegovy).ti,ab.

Blood Pressure Determination/ OR exp Blood Pressure/ OR exp Hypotension/ OR exp Hypertension/

(Blood pressure or hypertensi* or hypotensi*).ti,ab.

25 OR 26

23 AND 24 AND 27

CINAHL

Date Run: 18/07/2022

TI (ozempic OR rybelsus OR semaglutide OR wegovy) OR AB (ozempic OR rybelsus OR semaglutide OR wegovy)

(MH "Blood Pressure+") OR (MH "Blood Pressure Determination") OR (MH "Hypertension+") OR (MH "Hypotension+")

TI ("Blood pressure" OR hypertensi* OR hypotensi*) OR AB ("Blood pressure" OR hypertensi* OR hypotensi*)

S2 OR S3

TX allocat* random* OR (MH "Quantitative Studies") OR (MH "Placebos") OR TX placebo* OR TX random* allocat* OR (MH "Random Assignment") OR TX randomi* control* trial* OR TX ((singl* n1 blind*) OR (singl* n1 mask*)) OR TX ((doubl* n1 blind*) OR (doubl* n1 mask*)) OR TX ((tripl* n1 blind*) OR (tripl* n1 mask*)) OR TX ((trebl* n1 blind*) OR (trebl* n1 mask*)) OR TX clinic* n1 trial* OR PT Clinical trial OR (MH "Clinical Trials+")

S1 AND S4 AND S5

Web of Science

(ozempic OR rybelsus OR semaglutide OR wegovy) AND ("blood pressure" OR hypotensi* OR hypertensi*) AND (randomised OR randomized OR randomisation OR randomisation OR placebo* OR (random* AND (allocat* OR assign*))) OR (blind* AND (single OR double OR treble OR triple)))

Google Scholar

Ozempic | rybelsus | semaglutide | wegovy "blood pressure" | hypotension | hypertension
randomised | randomized | randomisation | randomisation | placebo

Figure S1: Leave-one-out sensitivity analysis of the treatment effect on SBP.

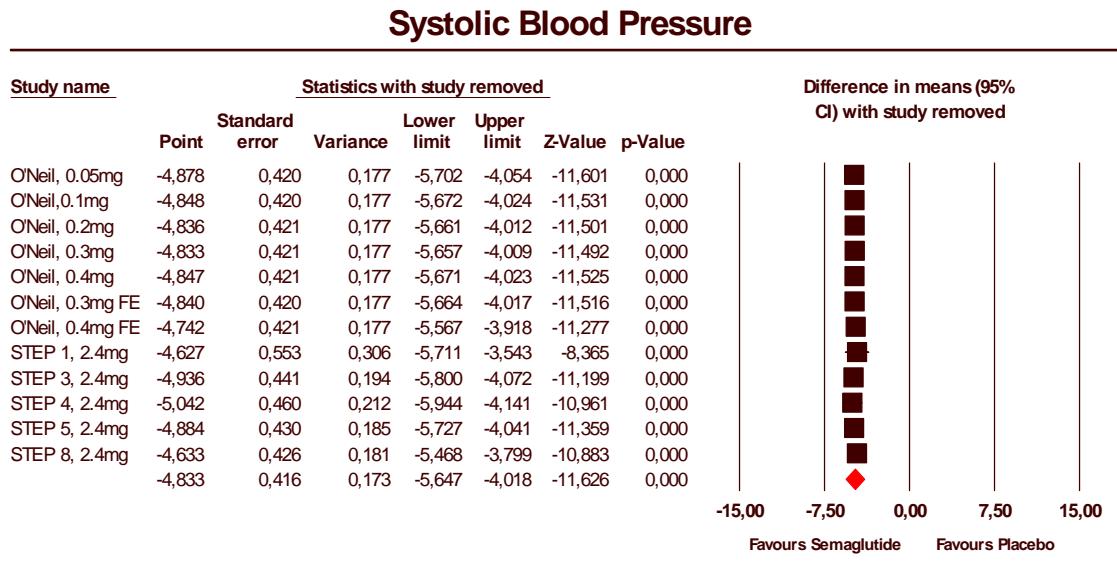


Figure S2: Leave-one-out sensitivity analysis of the treatment effect on DBP.

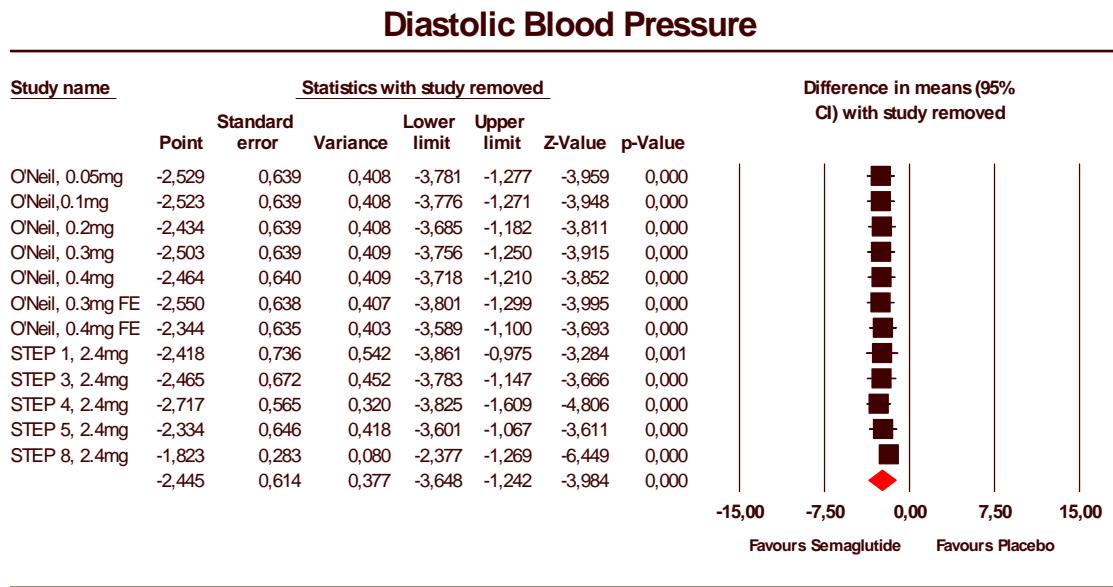


Figure S3: Forest plot of semaglutide vs placebo showing the pooled weighted mean difference for SBP (fixed effect model).

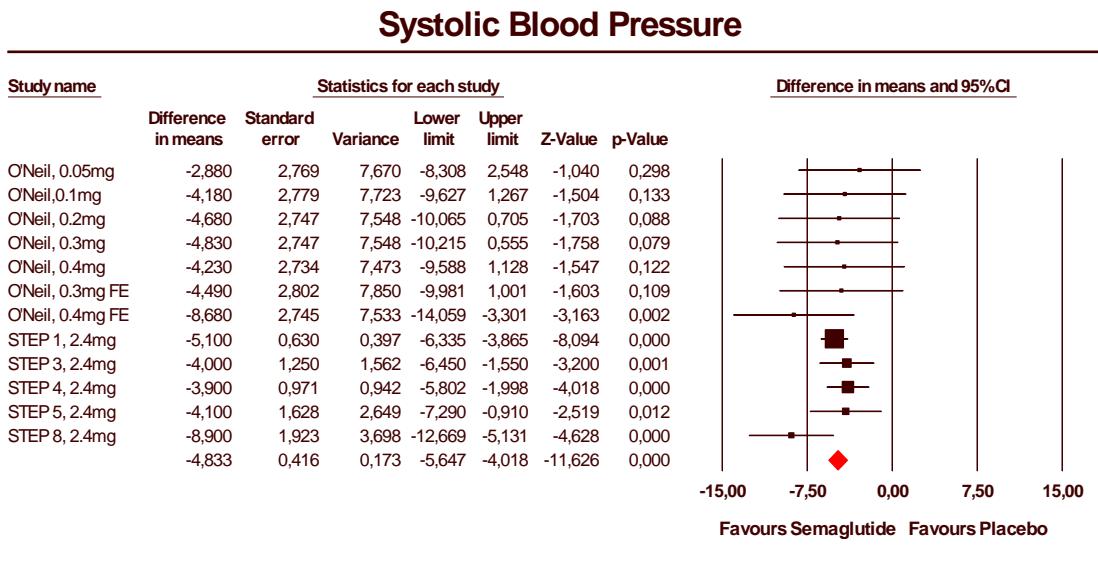


Figure S4: Forest plot of semaglutide vs placebo showing the pooled weighted mean difference for DBP (fixed effect model).

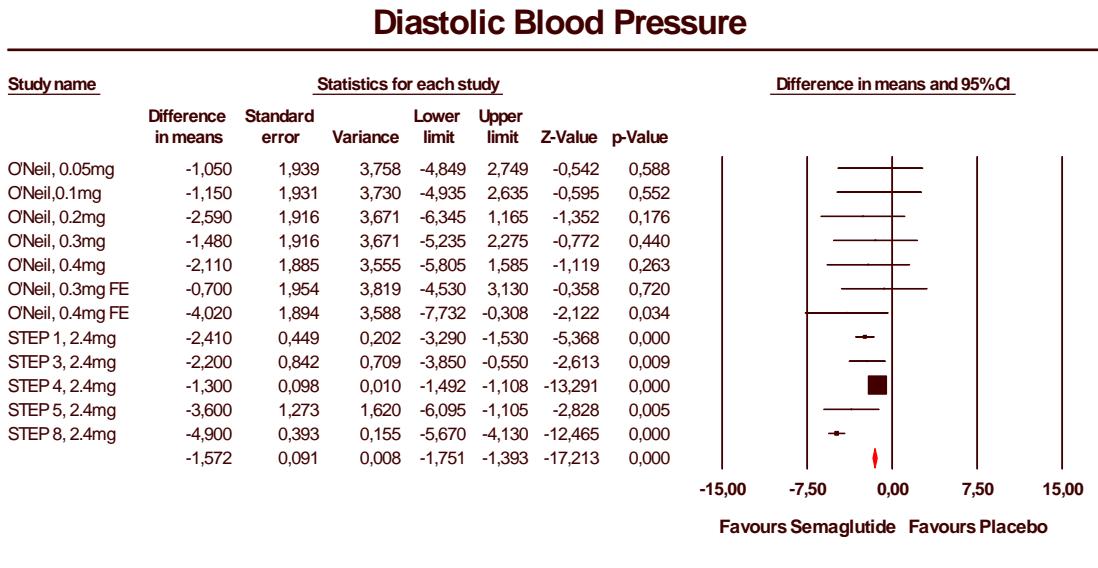


Figure S5: Funnel plot of the effect of semaglutide on SBP.

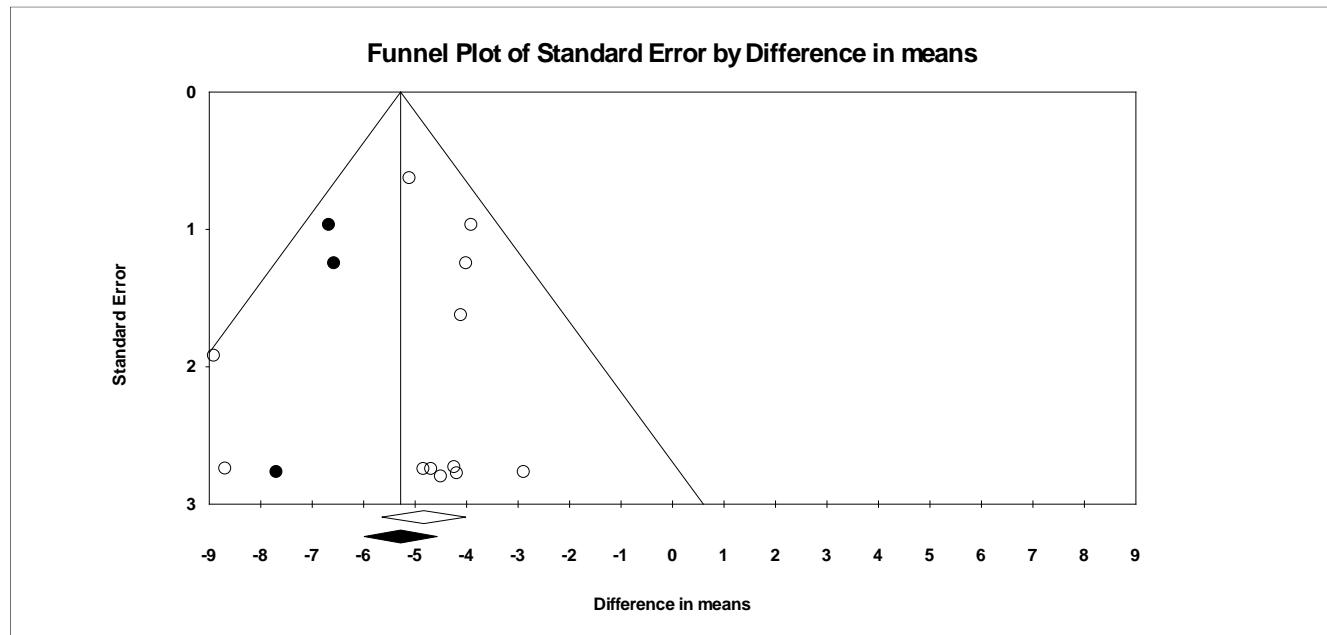


Figure S6: Meta-regression analysis of the duration of follow-up and effect of semaglutide on SBP (mmHg). The duration of follow-up is in weeks.

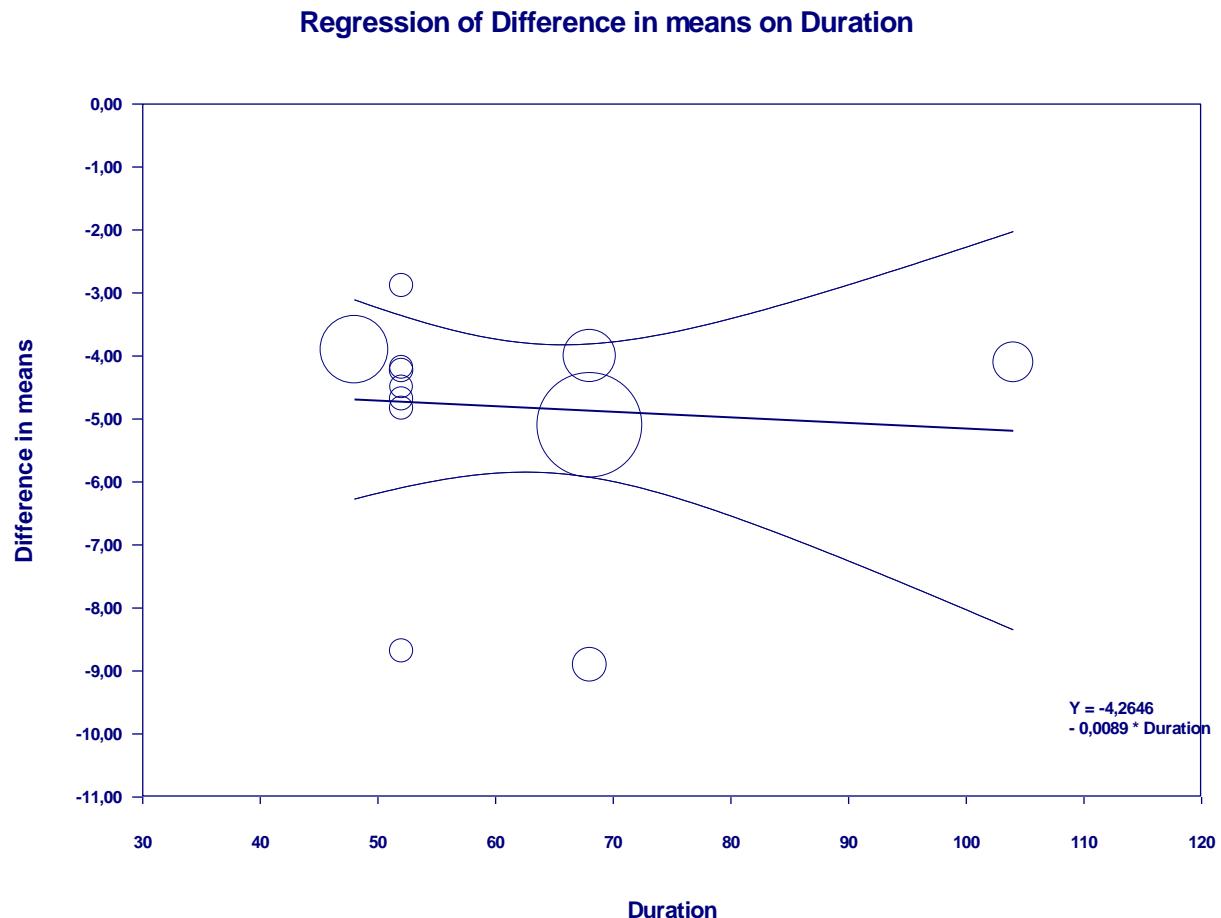


Figure S7: Meta-regression analysis of the semaglutide dose (mg) on SBP (mmHg).

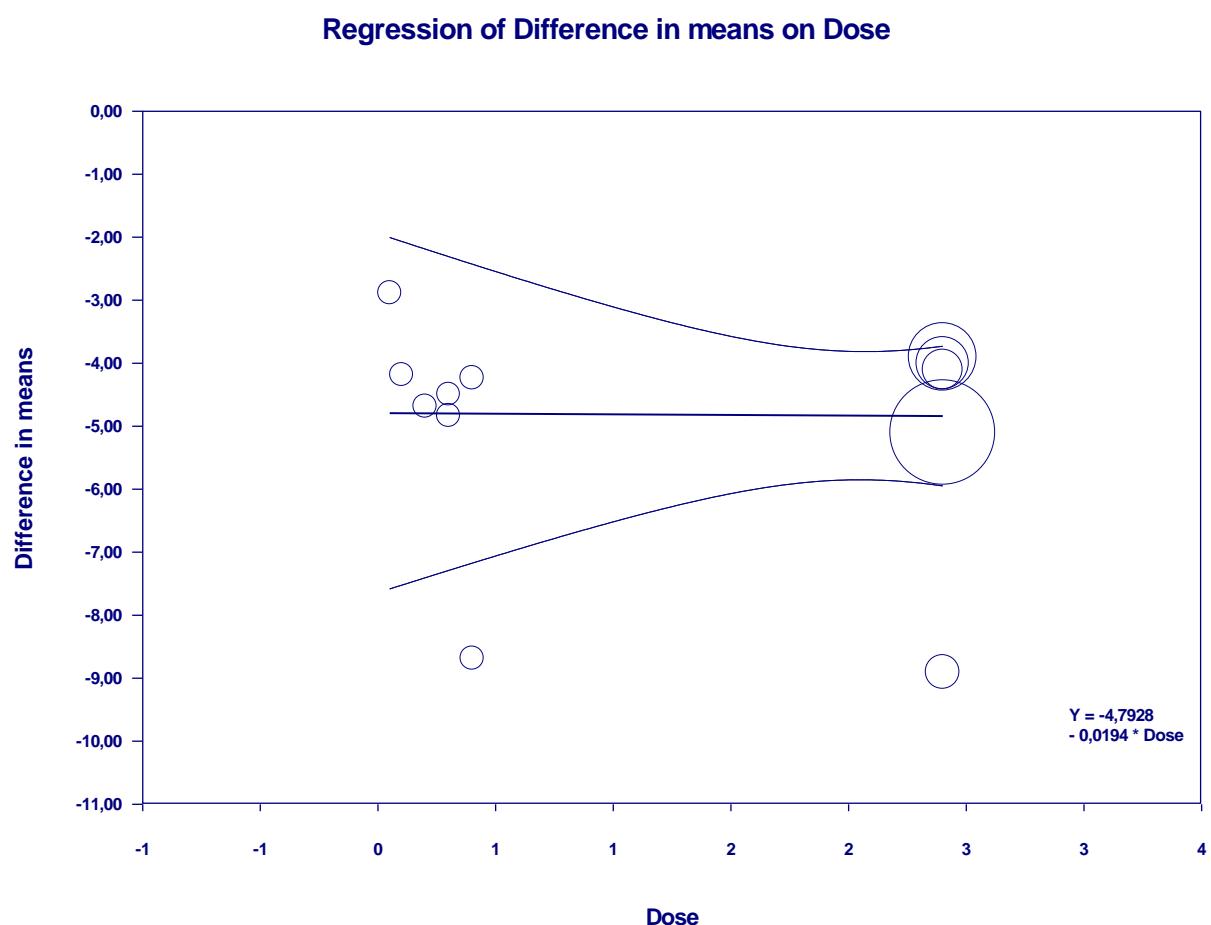


Figure S8: Risk of bias assessment of the included studies.

| | Randomization process | Deviations from intended interventions | Missing outcome data | Measurement of the outcome | Selection of the reported result | Overall Bias |
|--------------|-----------------------|--|----------------------|----------------------------|----------------------------------|--------------|
| O'Neil et al | + | + | + | + | + | + |
| STEP 1 | + | + | + | + | + | + |
| STEP 3 | + | + | + | + | + | + |
| STEP 4 | + | + | + | + | + | + |
| STEP 5 | + | + | + | + | + | + |
| STEP 8 | + | + | + | + | + | + |