

eAPPENDIX 1: MODIFIED NEWCASTLE-OTTAWA SCALE (NOS)

The NOS¹⁸ is a scale designed to assess the quality of non-randomized epidemiologic research. Stars are assigned for a study's design characteristics. Studies that garner more stars are deemed to be of higher quality.

The following NOS criteria were modified for use in this review and meta-analysis:

1. Under the heading "selection," criterion 3 was modified to assign one star for direct measurement of exposure.
2. Under the heading "outcome," criterion 1 was modified to assign one star for disease diagnosis following in-person clinical examination.

eAPPENDIX 2: SEARCH TERMS

MEDLINE (PUBMED), n=1611

((("Epidemiology"[Mesh] OR "Cohort Studies"[Mesh] OR "Case-Control Studies"[Mesh] or Cohort OR case-control OR epidemiology) AND ("Dementia"[Mesh] OR "Alzheimer Disease"[Mesh] OR dementia OR alzheimer OR alzheimers) AND ("Blood Pressure"[Mesh] OR "Hypertension"[Mesh] OR "Hypotension"[Mesh] OR "blood pressure" OR hypertension OR hypotension OR “risk factors”[ti] or “risk factor”[ti])) AND ("0"[EDAT] : "2010"[EDAT])

EMBASE, n=2671 (2006 additional citations not previously identified by the MEDLINE search)

'blood' OR 'blood'/exp OR blood AND ('pressure' OR 'pressure'/exp OR pressure) OR 'hypertension' OR 'hypertension'/exp OR hypertension OR 'hypotension' OR 'hypotension'/exp OR hypotension AND ('dementia' OR 'dementia'/exp OR dementia OR alzheimer*) AND (cohort OR 'epidemiology' OR 'epidemiology'/exp OR epidemiology OR 'case control') AND [1-1-1900]/sd NOT [1-1-2011]/sd

CINAHL, n= 354 (175 additional citation not previously identified by the PUBMED or

EMBASE searches)

((("MH "Hypertension+") or (MH "Hypotension+") or (MH “Blood Pressure+”) or hypotension or hypertension or “blood pressure”) AND ((MH “Alzheimer’s Disease”) or (MH “Dementia+”) or dementia or alzheimer*) AND ((MH "Case Control Studies+") or

(MH "Prospective Studies+") or (MH "Epidemiology+") or cohort or case-control or epidemiology)) and EM 1900-2010

WEB OF SCIENCE, n=640 (338 additional citation not previously identified by the PUBMED , EMBASE, or CINAHL searches)

((TS=alzheimer*) or (TS=dementia)) AND ((TS=blood pressure) or (TS=hypertension) or (TS=hypotension)) AND ((TS=cohort) or (TS=case-control) or (TS=epidemiology))

Total references evaluated: 4129

eAPPENDIX 3: Example STATA Code

We used the metan command in STATA to compute summary estimates and the I^2 test:

```
metan lnrr selnrr, random eform
```

Where lnrr is the ln(RR) and selnrr is the standard error of the ln(RR) for each study included in the analysis.

This command will also produce forest plots.

We used the heterogi command in STATA to compute 95% confidence intervals for I^2 using the non-central chi-squared approach.

```
heterogi q df, level(95) ncchi
```

Where q is the Q statistic and df is the degrees of freedom.

Likewise, we used the metabias and metafunnel commands in STATA to get Egger's regression asymmetry test and Begg's funnel plot:

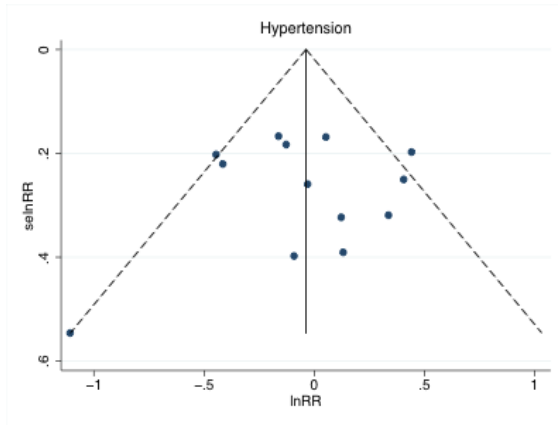
```
metabias lnrr selnrr, egger
```

```
metafunnel lnrr selnrr
```

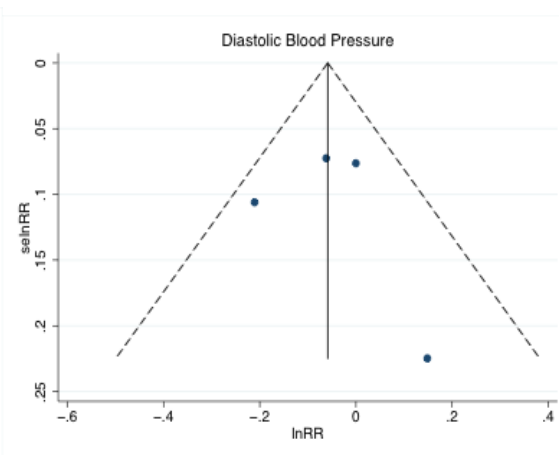
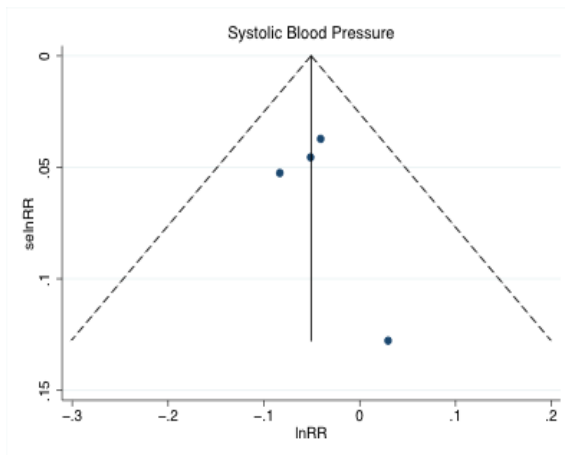
Where lnrr is the ln(RR) and selnrr is the standard error of the ln(RR) for each study included in the analysis.

eAPPENDIX 4: Begg's Funnel Plots and Egger's Test of Asymmetry

Begg's Funnel Plots for Combined "History of Hypertension" and "Hypertension at Baseline"



Begg's Funnel Plots for a 10 mm Hg increase in Systolic BP or Diastolic BP



Egger's Test of Asymmetry:

<i>BP Measurement</i>	<i>Bias (95%CI)</i>
Combined "history of hypertension" and "hypertension at baseline"	-0.19 (-3.03, 2.65)
Systolic BP	0.54 (-3.15, 4.24)
Diastolic BP	0.45 (-7.78, 8.67)