

**Meirelles O<sup>1</sup>, Arnette A<sup>1</sup>, Gudnason V<sup>2</sup>, Launer LJ<sup>1</sup>.** The magnitude and direction of the relationship between risk factor and cognition depends on age: a pooled analysis of 5 community-based studies **European J Epidemiology.**

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### **List and legends for Online Resources (OR)**

#### **Titles**

- OR 1: Description of the 5 cohorts included in the pooled analysis
- OR 2: Online Resource 2: Mean age (years) and calendar year by exam per cohort
- OR 3: Graphed sample size per 1-yr age bin - all cohorts combined cohorts
- OR 4: Online Resource 4 Method to harmonize risk factors and DSST across 5 cohorts in the pooled analysis.
- OR 5: Graphed steps to harmonize original cohort data to the MESA study
- OR 6a: Comparison of non-harmonized and harmonized 1-yr means of CVRF by cohort  
OR 6b: Comparison of non-harmonized and harmonized risk factor by age by cohort
- OR 7: Comparison of DSST-DBP 1-yr slope trajectories model-fit statistics without (R0) and with (R1) additional confounders (BMI, Fasting Glucose and Systolic BP)
- OR 8a: Trajectories of the association of the DSST to CVRF by race.  
OR 8b: Trajectories of the association of the DSST to CVRF by sex.
- OR 9: Resource : Model fit differences (R2 )comparing stratified harmonized models (Race: White and Black; Sex: Men and Women) to pooled sample model (Figure 1a-e, main text)
- OR 10: Comparison of statistical fit for different piecewise models estimating 1-yr slope trajectories of the association between a cardiovascular risk factor and the DSST cognitive test outcome.
- OR 11: Description of the model development to estimate trajectories of 1-yr slopes describing the relationship between a cardiovascular risk factor and the DSST
- OR12: Description of the smoothing algorithm applied to the trajectories of 1-yr slopes shown in Figures 1a-e (main text)
- OR13: Table: Cross cohort harmonized and non-harmonized mean and standard deviation of risk factors and DSST cognitive score
- OR 14: Trajectories of harmonized 1-yr slopes of the association between the DSST and cardiovascular risk factors by cohort.