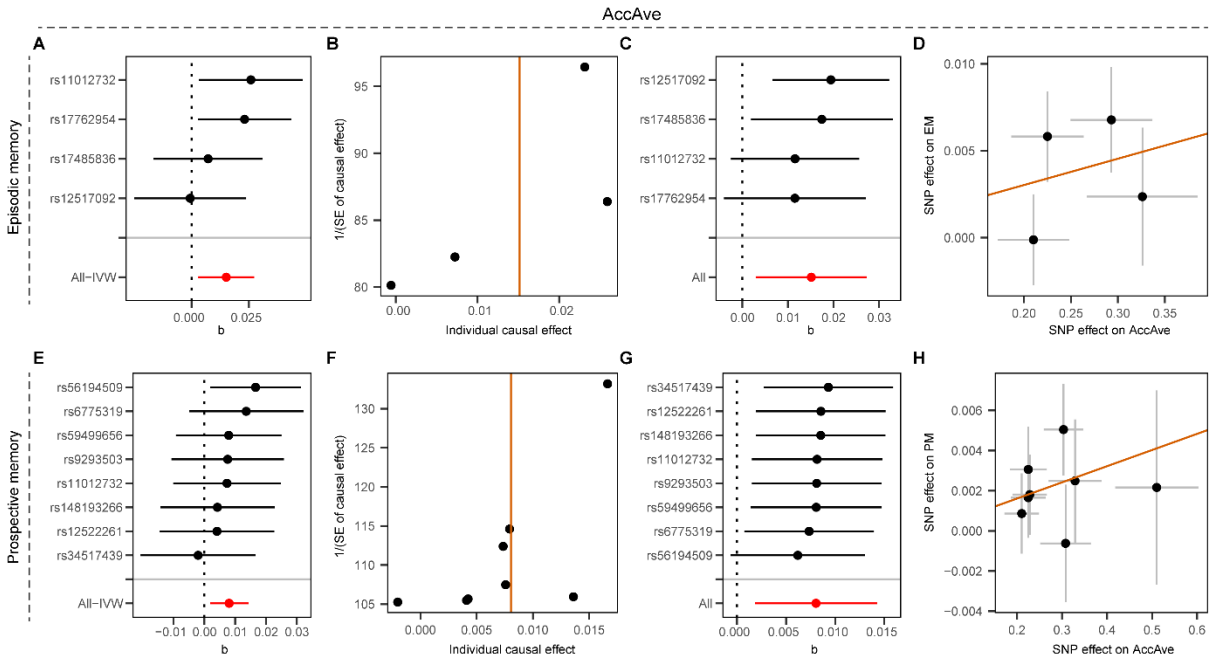
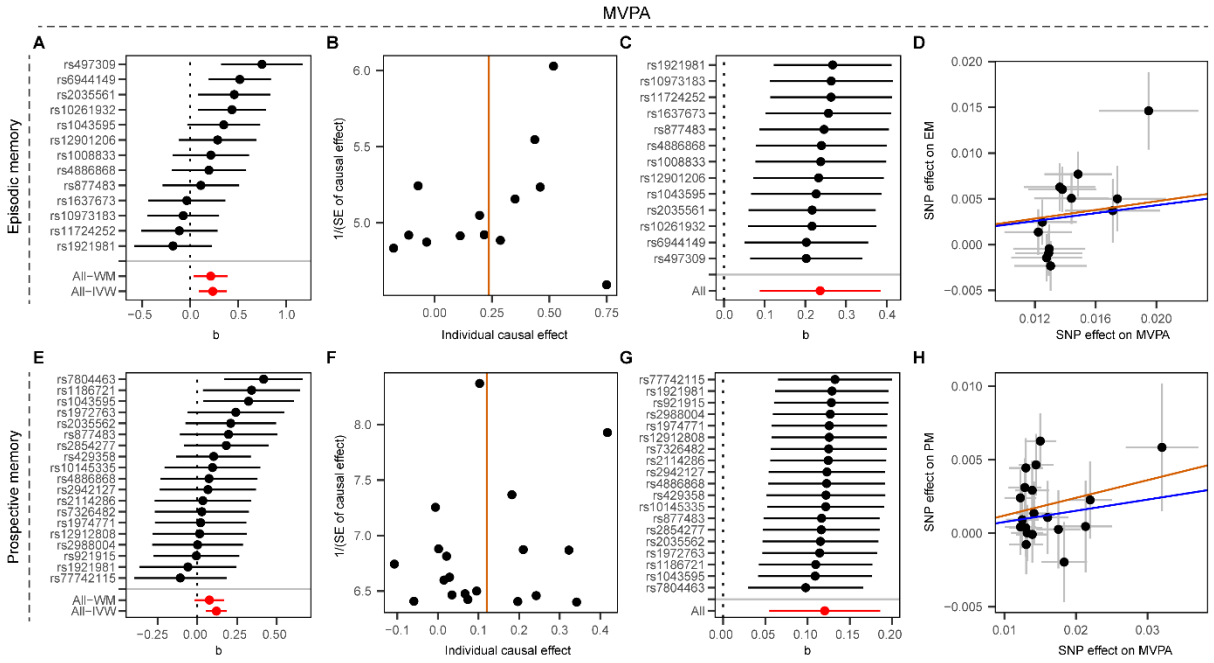
Supplementary Figure 1. Mendelian randomization analysis results for AccAve on memory performance.



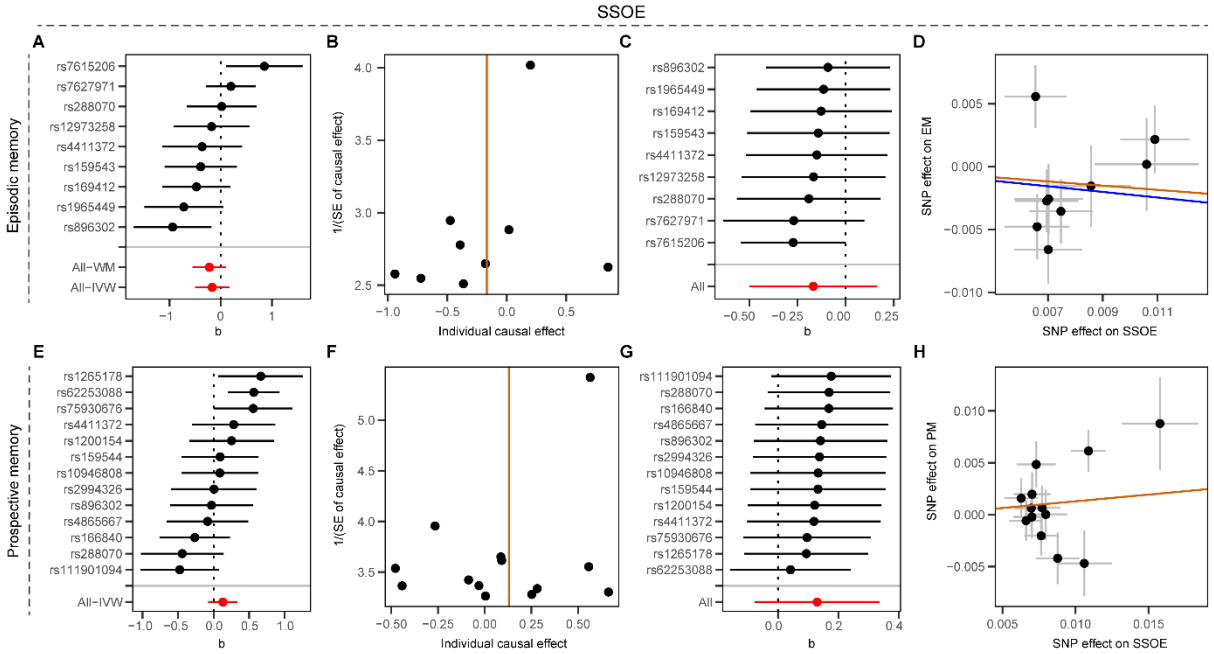
(**A,E**) Forest plot of the causal effect of AccAve on memory performance. AccAve, overall acceleration average. (**B,F**) Funnel plot showing the estimation using the inverse of the standard error of the causal estimate with each individual SNP as a tool. The vertical line represents the estimated causal effect. SNP, single nucleotide polymorphism. (**C,G**) Forest plot of the results of the leave-one-out sensitivity analysis, where each SNP in the instrument was iteratively removed from the instrument variables. (**D,H**) Scatter plot of SNP potential effects on AccAve and memory performance. The 95% CI for the effect size on memory performance is shown as vertical lines, while the 95% CI for the effect size on AccAve is shown as horizontal lines. The slope of fitted lines represents the estimated MR effect per method.

Supplementary Figure 2. Mendelian randomization analysis results for MVPA on memory performance.



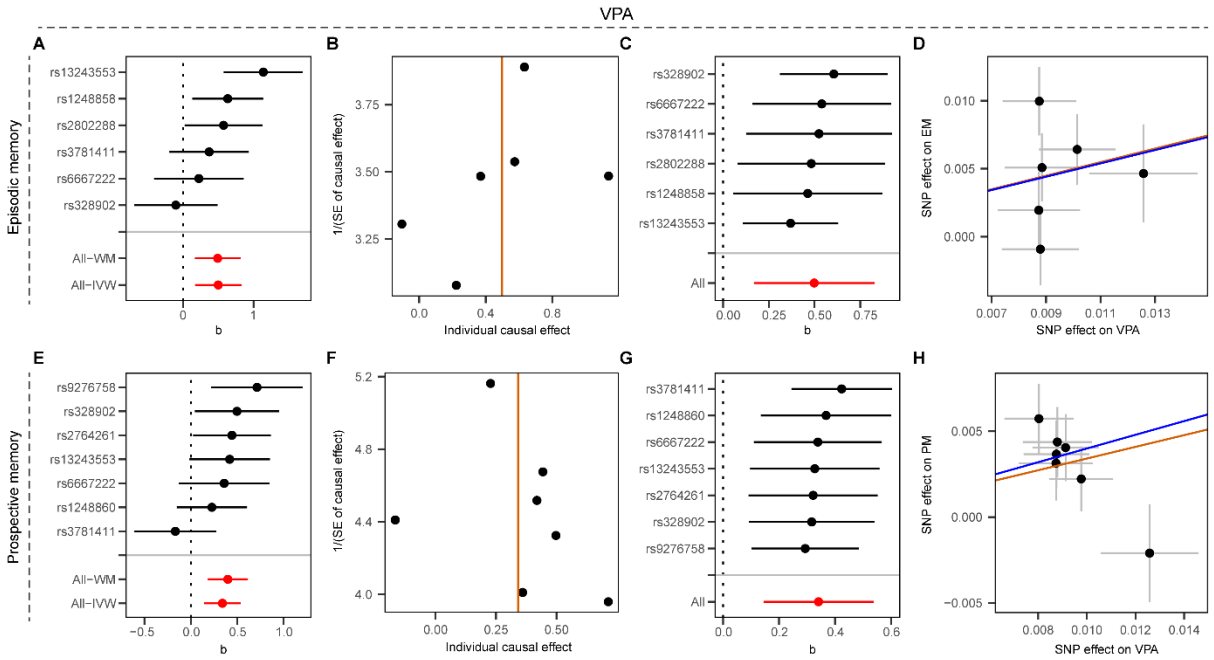
MVPA, moderate-to-vigorous physical activity.

Supplementary Figure 3. Mendelian randomization analysis results for SSOE on memory performance.



SSOE, strenuous sports or other exercises.

Supplementary Figure 4. Mendelian randomization analysis results for VPA on memory performance.



VPA, vigorous physical activity.

Supplementary Figure 5. Mendelian randomization analysis results for overall activity on memory performance.