**Supplementary Online Content**

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**eTable 1: PRS construction and selection details**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Cardiometabolic condition** | Atrial fibrillation | Diabetes | Erectile dysfunction | Hypercholesterolemia | Hypertension (SBP) | Myocardial infarction (CAD) | Sleep apnea | Stroke |
| **GWAS reference** | 31, 32 | 33 | 36 | 34 | 35 | 37 | 38 | 39 |
| **Selected threshold** | *P*<.0001 | *P*<.0001 | *P*<.4 | *P*<.0001 | *P*<.01 | *P*<.001 | *P*<.001 | *P*<.001 |
| **No. of variants used in PRS construction** | 1,213 | 220 | 288,613 | 794 | 32,669 | 1,844 | 1,639 | 2,313 |
| **PRS correlation with condition** | .178\*\* | .168\*\* | .044 | .242\*\* | .189\*\* | .130\*\* | -.056 | .090\* |

PRS = polygenic risk score; GWAS = genome-wide association study; CAD = coronary artery disease; SBP = systolic blood pressure

\*Significant at *P*<0.05; \*\*significant at *P*<0.0001

**eTable 2: Comparisons between participants with complete and incomplete data**

|  |  |  |
| --- | --- | --- |
|  | **Mann-Whitney *U* Test** | |
|  | Standardized Test Statistic | Sig. (2-sided) |
| Age (follow-up) | 0.039 | .969 |
| Depression symptoms (baseline) | -0.791 | .429 |
| Depression symptoms (follow-up) | -1.618 | .106 |
| Atrial Fibrillation | -0.117 | .907 |
| Diabetes | -0.102 | .918 |
| Erectile Dysfunction | 0.956 | .339 |
| Hypercholesterolemia | -1.004 | .315 |
| Hypertension | 0.554 | .579 |
| Myocardial Infarction | -2.205 | .027 |
| Sleep Apnea | 0.041 | .968 |
| Stroke | -0.298 | .765 |

**eTable 3. Crude associations between depression symptoms at baseline and health conditions at follow-up**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Exponentiated Odds Ratio [95% CI] | | | | | | | |
|  | Atrial Fibrillation | Diabetes | Erectile Dysfunction | Hyperchol-esterolemia | Hypertension | Myocardial Infarction | Sleep Apnea | Stroke |
| Baseline depression symptoms | 1.28  [0.96, 1.57] (*p*=.098) | 1.26^  [1.08, 1.48]  (*p*=.004) | 1.29^  [1.10, 1.52]  (*p*=.002) | 1.29^  [1.11, 1.51] (*p*=.001) | 1.14  [0.99, 1.31]  (*p*=.075) | 1.31^  [1.06, 1.63] (*p*=.014) | 1.33^  [1.13, 1.57]  (*p*=.001) | 1.20  [0.88, 1.64]  (*p*=.241) |

CI = confidence interval

^ = Association remained significant after correcting for multiple comparisons.

**eTable 4. Longitudinal associations between depression symptoms at baseline and health conditions at follow-up (N=1195)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Exponentiated Odds Ratio [95% CI] | | | | | | | |
|  | Atrial Fibrillation | Diabetes | Erectile Dysfunction | Hyperchol-esterolemia | Hypertension | Myocardial Infarction | Sleep Apnea | Stroke |
| Baseline depression symptoms | 1.02  [0.79, 1.31]  (*p*=.893) | 1.20^  [1.03, 1.38]  (*p*=.016) | 1.14  [0.99, 1.32]  (*p*=.070) | 1.24^  [1.07, 1.44]  (*p*=.004) | 1.10  [0.95, 1.27]  (*p*=.219) | 1.18  [0.95, 1.46]  (*p*=.143) | 1.32^  [1.12, 1.56]  (*p*=.001) | 1.08  [0.81, 1.43]  (*p*=.616) |
| Age at follow-up | 1.74^  [1.32, 2.31]  (*p*<.001) | 0.94  [0.80, 1.11]  (*p*=.478) | 1.10  [0.93, 1.31]  (*p*=.264) | 1.05  [0.91, 1.21]  (*p*=.503) | 1.14  [0.99, 1.32]  (*p*=.080) | 1.01  [0.78, 1.31]  (*p*=.921) | 1.19  [0.99, 1.42]  (*p*=.065) | 1.05  [0.77, 1.44]  (*p*=.755) |
| Drinks per day at baseline | 0.94  [0.70, 1.27]  (*p*=.703) | 1.09  [0.91, 1.30]  (*p*=.341) | 1.01  [0.84, 1.21]  (*p*=.941) | 0.98  [0.83, 1.15]  (*p*=.805) | 1.29^  [1.07, 1.56]  (*p*=.009) | 0.86  [0.59, 1.24]  (*p*=.413) | 0.71^  [0.56, 0.90]  (*p*=.004) | 0.91  [0.62, 1.33]  (*p*=.624) |
| Cigarettes per day at baseline | 1.03  [0.82, 1.29]  (*p*=.827) | 0.99  [0.86, 1.14]  (*p*=.881) | 1.00  [0.86, 1.16]  (*p*=.955) | 1.17  [1.01, 1.36]  (*p*=.037) | 1.10  [0.94, 1.28]  (*p*=.247) | 1.24  [1.00, 1.53]  (*p*=.052) | 1.01  [0.86, 1.19]  (*p*=.921) | 1.41  [1.10, 1.82]  (*p*=.007) |
| BMI at follow-up | 1.51^  [1.20, 1.89]  (*p*<.001) | 1.68^  [1.42, 1.98]  (*p*<.001) | 1.22^  [1.05, 1.42]  (*p*=.008) | 1.46^  [1.23, 1.74]  (*p*<.001) | 1.85^  [1.52, 2.25]  (*p*<.001) | 1.05  [0.79, 1.38]  (*p*=.748) | 2.41^  [1.98, 2.92]  (*p*<.001) | 1.14  [0.90, 1.44]  (*p*=.290) |
| CRP at follow-up | 0.95  [0.78, 1.15]  (*p*=.594) | 1.05  [0.89, 1.24]  (*p*=.543) | 0.97  [0.82, 1.15]  (*p*=.702) | 0.79^  [0.67, 0.92]  (*p*=.002) | 1.10  [0.93, 1.31]  (*p*=.259) | 1.21  [1.03, 1.41]  (*p*=.019) | 1.10  [0.92, 1.31]  (*p*=.317) | 1.31^  [1.08, 1.58]  (*p*=.007) |

CI = confidence interval; BMI = body mass index; CRP = C-reactive protein

^ = Association remained significant after correcting for multiple comparisons

**eTable 5. Full sample characteristics (N=1195)**

|  |  |
| --- | --- |
|  | Mean (SD) or N (%) |
| Age at baseline (years) | 41.27 (2.36) |
| Age at follow-up (years) | 67.57 (2.53) |
| *Race* | |
| Native American | 5 (0.4%) |
| Black / African American | 72 (6.0%) |
| White | 1100 (92.1%) |
| More than one race | 16 (1.3%) |
| Declined to answer | 2 (0.2%) |
| # drinks/day at baseline | 2.16 (2.06) |
| # cigarettes/day at baseline | 18.00 (18.66) |
| # drinks/day at follow-up | 0.89 (1.70) |
| # cigarettes/day at follow-up | 2.07 (6.59) |
| BMI at follow-up | 30.07 (5.37) |
| CRP (mg/L) at follow-up | 3.44 (6.36) |
| # depression symptoms at baseline | 2.01 (2.32) |
| CES-D total score at follow-up | 7.09 (7.56) |

BMI = body mass index; CRP = C-reactive protein; CES-D = Center for Epidemiologic Studies Depression Scale