## Supplementary Material 6. Sample characteristics.

Supplementary Table 3. Sample characteristics.

|  | Overall ( $\mathrm{N}=502521$ ) | Female |  | Male |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Healthy control ( $\mathrm{N}=123842$ ) | Depression $(\mathrm{N}=56276)$ | Healthy control ( $\mathrm{N}=131212$ ) | Depression $(\mathrm{N}=31063)$ |
| Age |  |  |  |  |  |
| Mean (SD) | 56.53 (8.10) | 55.90 (8.03) | 54.74 (7.78) | 56.37 (8.26) | 55.71 (7.96) |
| Ethnicity |  |  |  |  |  |
| White | 472711 (94.1\%) | 117587 (94.9\%) | 54386 (96.6\%) | 125053 (95.3\%) | 30089 (96.9\%) |
| Mixed-race | 2958 (0.6\%) | 805 (0.7\%) | 434 (0.8\%) | 588 (0.4\%) | 145 (0.5\%) |
| Asian | 8061 (1.6\%) | 2096 (1.7\%) | 556 (1.0\%) | 1779 (1.4\%) | 195 (0.6\%) |
| Black | 9882 (2.0\%) | 1809 (1.5\%) | 459 (0.8\%) | 2518 (1.9\%) | 393 (1.3\%) |
| Chinese | 1574 (0.3\%) | 527 (0.4\%) | 91 (0.2\%) | 357 (0.3\%) | 37 (0.1\%) |
| Other | 4558 (0.9\%) | 1018 (0.8\%) | 350 (0.6\%) | 917 (0.7\%) | 204 (0.7\%) |
| Prefer not to answer | 1662 (0.3\%) |  |  |  |  |
| Do not know | 217 (<0.1\%) |  |  |  |  |
| Missing | 898 (0.2\%) |  |  |  |  |
| Household income ${ }^{1}$ |  |  |  |  |  |
| Very low | 97205 (19.3\%) | 26243 (21.2\%) | 13986 (24.9\%) | 21903 (16.7\%) | 7181 (23.1\%) |
| Low | 108177 (21.5\%) | 32464 (26.2\%) | 14751 (26.2\%) | 31452 (24.0\%) | 7472 (24.1\%) |
| Middle | 110774 (22.0\%) | 32735 (26.4\%) | 14575 (25.9\%) | 36631 (27.9\%) | 8233 (26.5\%) |
| High | 86269 (17.2\%) | 25352 (20.5\%) | 10605 (18.8\%) | 31999 (24.4\%) | 6599 (21.2\%) |
| Very high | 22930 (4.6\%) | 7048 (5.7\%) | 2359 (4.2\%) | 9227 (7.0\%) | 1578 (5.1\%) |
| Prefer not to answer | 49848 (9.9\%) |  |  |  |  |
| Do not know | 21305 (4.2\%) |  |  |  |  |
| Missing | 6013 (1.2\%) |  |  |  |  |
| Walking ${ }^{2}$ |  |  |  |  |  |
| Mean (SD) | 5.39 (1.93) | 5.48 (1.84) | 5.35 (1.95) | 5.31 (1.99) | 5.23 (2.06) |
| Prefer not to answer | 979 (0.2\%) |  |  |  |  |
| Unable to walk | 1929 (0.4\%) |  |  |  |  |
| Do not know | 6687 (1.3\%) |  |  |  |  |
| Missing | 874 (0.2\%) |  |  |  |  |
| Moderate activity ${ }^{2}$ |  |  |  |  |  |
| Mean (SD) | 3.63 (2.33) | 3.62 (2.31) | 3.51 (2.34) | 3.59 (2.31) | 3.46 (2.35) |
| Prefer not to answer | 2273 (0.5\%) |  |  |  |  |
| Do not know | 24120 (4.8\%) |  |  |  |  |
| Missing | 878 (0.2\%) |  |  |  |  |
| Vigorous activity ${ }^{2}$ |  |  |  |  |  |
| Mean (SD) | 1.84 (1.96) | 1.73 (1.85) | 1.61 (1.82) | 2.10 (2.02) | 1.95 (2.02) |
| Prefer not to answer | 4116 (0.8\%) |  |  |  |  |
| Do not know | 22582 (4.5\%) |  |  |  |  |
| Missing | 878 (0.2\%) |  |  |  |  |
| Smoking status |  |  |  |  |  |
| Never | 273528 (54.4\%) | 77069 (62.2\%) | 30307 (53.9\%) | 67927 (51.8\%) | 13959 (44.9\%) |
| Former | 173064 (34.4\%) | 37682 (30.4\%) | 19633 (34.9\%) | 49044 (37.4\%) | 12473 (40.2\%) |
| Current | 52979 (10.5\%) | 9091 (7.3\%) | 6336 (11.3\%) | 14241 (10.9\%) | 4631 (14.9\%) |
| Prefer not to answer | 2059 (0.4\%) |  |  |  |  |
| Missing | 891 (0.2\%) |  |  |  |  |
| Alcohol intake frequency |  |  |  |  |  |
| Never | 40645 (8.1\%) | 9217 (7.4\%) | 4658 (8.3\%) | 6290 (4.8\%) | 2323 (7.5\%) |
| Special occasions | 58011 (11.5\%) | 16310 (13.2\%) | 8361 (14.9\%) | 8259 (6.3\%) | 2436 (7.8\%) |
| 1-3/month | 55856 (11.1\%) | 15862 (12.8\%) | 7869 (14.0\%) | 11184 (8.5\%) | 3054 (9.8\%) |
| 1-2/week | 129294 (25.7\%) | 33072 (26.7\%) | 14017 (24.9\%) | 34139 (26.0\%) | 7516 (24.2\%) |
| 3-4/week | 115443 (23.0\%) | 28093 (22.7\%) | 11628 (20.7\%) | 36606 (27.9\%) | 7587 (24.4\%) |
| Daily/almost daily | 101770 (20.3\%) | 21288 (17.2\%) | 9743 (17.3\%) | 34734 (26.5\%) | 8147 (26.2\%) |


| Prefer not to answer | $605(0.1 \%)$ |  |  |
| :--- | :---: | :---: | :---: |
| Missing | $897(0.2 \%)$ |  |  |
| Sleep duration | $7.18(1.00)$ | $7.17(1.17)$ |  |
| Mean (SD) | $7.11)$ |  |  |
| Prefer not to answer | $386(0.1 \%)$ |  |  |
| Do not know | $2943(0.6 \%)$ |  |  |
| Missing | $887(0.2 \%)$ |  |  |

Note: Descriptive statistics for covariates based on main dataset $N=342,393$. ${ }^{1}$ Annual household income groups: very low $(<£ 18,000)$, low ( $£ 18,000-30,999$ ), middle ( $£ 31,000-51,999$ ), high ( $£ 52,000-100,000$ ) and very high ( $>£ 100000$ ). ${ }^{2}$ number of days per week engaging in these activities for 10+ minutes continuously.

