

Multimedia Appendix 1. Socio-demographic profile of the 2016 Health Survey for England sample (unweighted N=4539, weighted N=4380), stratified by body mass index.

|                          | Under/normal weight | Overweight     | Obese          |
|--------------------------|---------------------|----------------|----------------|
|                          | Weighted n (%)      | Weighted n (%) | Weighted n (%) |
|                          | SE                  | SE             | SE             |
| <b>Age group</b>         |                     |                |                |
| 16-44 years              | 1117 (55.48)        | 583 (38.69)    | 315 (36.58)    |
|                          | 1.2                 | 1.5            | 1.8            |
| 45-64 years              | 513 (25.46)         | 555 (36.86)    | 340 (39.51)    |
|                          | 1.0                 | 1.3            | 1.7            |
| 65+ years                | 384 (19.05)         | 368 (24.45)    | 206 (23.91)    |
|                          | 0.8                 | 1.0            | 1.4            |
| <b>Sex</b>               |                     |                |                |
| Women                    | 1114 (55.35)        | 622 (41.28)    | 462 (53.68)    |
|                          | 1.3                 | 1.4            | 1.8            |
| Men                      | 899 (44.65)         | 884 (58.72)    | 399 (46.32)    |
|                          | 1.3                 | 1.4            | 1.8            |
| <b>Physical activity</b> |                     |                |                |
| Active                   | 1613 (80.11)        | 1131 (75.09)   | 548 (63.65)    |
|                          | 1.0                 | 1.2            | 1.7            |
| Inactive                 | 400 (19.89)         | 375 (24.91)    | 313 (36.35)    |
|                          | 1.0                 | 1.2            | 1.7            |
| <b>Deprivation</b>       |                     |                |                |
| Top 80%                  | 1695 (84.20)        | 1210 (80.34)   | 634 (73.61)    |
|                          | 0.9                 | 1.2            | 1.5            |
| Most deprived 20%        | 318 (15.80)         | 296 (19.66)    | 227 (26.39)    |
|                          | 0.9                 | 1.2            | 1.5            |