## WEB APPENDIX: SUPPLEMENTARY MATERIAL

Web table 1. Survey participants who consented and did not consent to record linkage: followup of ten cohort studies from the Health Survey for England (N = 68,222)

Covariate	Consented	Did not consent	Þ
N	75936	9325	
Age (mean, SD)	56.1 (14.4)	64.7 (17.7)	< 0.001
Female (%)	54.9	64.2	< 0.001
Individual occupational social class (% I-IIINM)	56.4	52.2	< 0.001
Body mass index (kg/m²; mean, SD)	27.2 (4.7)	27.0 (4.8)	0.001
Systolic blood pressure <sup>1</sup> (mmHg, mean, SD)	137.6 (20.6)	136.9 (21.3)	0.096
Physical activity <sup>2</sup> (%)	65.3	71.4	< 0.001
Current smoker (%)	22.3	18.9	< 0.001
Drinks more than recommended alcohol limit <sup>3</sup> (%)	20.3	14.3	< 0.001
Cardiovascular disease <sup>4</sup> (%)	4.8	6.4	< 0.001
Cancer (%)	2.2	2.6	0.008
Diabetes (%)	3.7	4.8	< 0.001

<sup>&</sup>lt;sup>1</sup> Mean of 2<sup>nd</sup> and 3<sup>rd</sup> readings <sup>2</sup> Binary variable: any weekly moderate to vigorous physical activity

<sup>&</sup>lt;sup>3</sup> Calculated using sex-specific safe limits: ≤14 units per week for women and ≤21 units for men

<sup>&</sup>lt;sup>4</sup> Including angina, myocardial infarction and haemorrhagic or thrombotic stroke

Web table 2. Survey participants included and excluded from fully-adjusted model: follow-up of ten cohort studies from the Health Survey for England (N = 68,222)

Covariate	Complete data	Missing data in	Þ
	for all variables	≥1 variable	
N	41362	26860	
Age (mean, SD)	54.1 (13.4)	56.5 (15.0)	< 0.001
Female (%)	53.3	58.1	< 0.001
Individual occupational social class (% I-IIINM)	57.3	58.0	0.355
Body mass index (kg/m²; mean, SD)	27.0 (4.6)	27.4 (4.9)	< 0.001
Systolic blood pressure <sup>1</sup> (mmHg, mean, SD)	137.7 (20.2)	135.1 (21.1)	< 0.001
Physical activity <sup>2</sup> (%)	72.3	57.6	< 0.001
Current smoker (%)	23.0	22.0	0.001
Drinks more than recommended alcohol limit <sup>3</sup> (%)	21.8	18.4	< 0.001
Diabetes (%)	2.7	3.9	< 0.001

<sup>&</sup>lt;sup>1</sup> Mean of 2<sup>nd</sup> and 3<sup>rd</sup> readings <sup>2</sup> Binary variable: any weekly moderate to vigorous physical activity <sup>3</sup> Calculated using sex-specific safe limits: ≤14 units per week for women and ≤21 units for men

Web table 3. Sub-group analysis—excluding deaths within five years of follow-up: follow-up of ten cohort studies from the Health Survey for England (N = 68,222)

Basic model adjusted for age and sex	Deaths	n	1 SD disadvantage in GHQ-12 score <sup>1</sup> HR	p (trend)
Total mortality				
All deaths	8365	68222	1.21 (1.15, 1.27)	< 0.001
Deaths of individuals who survived >5 years	4011	55845	1.13 (1.10, 1.17)	< 0.001
Cardiovascular disease mortality				
All deaths	3382	68222	1.22 (1.14, 1.31)	< 0.001
Deaths of individuals who survived >5 years	1574	55845	1.17 (1.10, 1.24)	< 0.001
Cancer mortality				
All deaths	2552	68222	1.09 (1.04, 1.13)	<0.001
Deaths of individuals who survived >5 years	1253	55845	1.03 (0.97, 1.09)	0.359

<sup>&</sup>lt;sup>1</sup> GHQ-12 score standardised with sex-specific standard deviations <sup>2</sup> Cardiovascular disease comprises ischaemic heart disease, stroke, peripheral vascular disease, and heart failure

Web table 4. Sub-group analysis—Hazard ratios (95% confidence interval) for the association of psychological distress with cause-specific mortality with broad and narrow definitions<sup>1</sup> of disease: follow-up of ten cohort studies from the Health Survey for England (N = 68,222)

	Deaths	Broad case definition <sup>1</sup> 1 SD disadvantage in GHQ-12 score <sup>2</sup> HR	Deaths	Narrow case definition <sup>1</sup> 1 SD disadvantage in GHQ-12 score <sup>2</sup> HR	
Cardiovascular disease <sup>3</sup> mortality					
Age- & sex-adjusted	3382	1.23 (1.14, 1.33)	2585	1.21 (1.12, 1.30)	
Cancer mortality					
Age- & sex-adjusted	2552	1.09 (1.05, 1.14)	2329	1.07 (1.03, 1.12)	
External cause more	tality				
Age- & sex-adjusted	386	1.26 (1.14, 1.40)	201	1.28 (1.13, 1.44)	

<sup>&</sup>lt;sup>1</sup> Broad definition indicates any mention of the condition on the death certificate; narrow definition indicates that the condition was the underlying cause of death

<sup>&</sup>lt;sup>2</sup>GHQ-12 score standardised with sex-specific standard deviations

<sup>&</sup>lt;sup>3</sup> Cardiovascular disease comprises ischaemic heart disease, stroke, peripheral vascular disease, and heart failure