

Table S1. Association of attrition status at each wave with CVD and Non-CVD mortality up to the subsequent wave. (Analysis 1)

Wave	Response status	No. alive	CVD mortality		Non-CVD mortality	
			No. deaths	SHR (95% CI) ^a	No. deaths	SHR (95% CI) ^a
1	Responders	10 012	12	-	29	-
2	Responders	8024	12	<i>ref.</i>	35	<i>ref.</i>
	Withdrawal/Non-response	1947	9	3.39 (1.35-8.53)	18	2.18 (1.24-3.84)
3	Responders	8647	20	<i>ref.</i>	38	<i>ref.</i>
	Withdrawal/Non-response	1250	3	1.30 (0.38-4.40)	5	0.89 (0.35-2.26)
4	Responders	8462	25	<i>ref.</i>	57	<i>ref.</i>
	Withdrawal/Non-response	1369	9	2.38 (1.11-5.11)	15	1.53 (0.85-2.73)
5	Responders	7723	23	<i>ref.</i>	51	<i>ref.</i>
	Withdrawal/Non-response	2002	9	1.65 (0.75-3.63)	24	1.86 (1.14-3.04)
6	Responders	7231	28	<i>ref.</i>	69	<i>ref.</i>
	Withdrawal/Non-response	2387	15	1.59 (0.84-3.01)	41	1.77 (1.21-2.61)
7	Responders	6855	27	<i>ref.</i>	77	<i>ref.</i>
	Withdrawal/Non-response	2610	22	2.29 (1.29-4.07)	62	2.00 (1.43-2.80)
8	Responders	7054	28	<i>ref.</i>	92	<i>ref.</i>
	Withdrawal/Non-response	2223	16	1.74 (0.95-3.18)	38	1.27 (0.87-1.85)
9	Responders	6655	73	<i>ref.</i>	183	<i>ref.</i>
	Withdrawal/Non-response	2448	55	1.99 (1.40-2.84)	133	1.88 (1.51-2.34)
11	Responders	6213	43	<i>ref.</i>	178	<i>ref.</i>
	Withdrawal/Non-response	2446	36	1.84 (1.15-2.93)	112	1.47 (1.17-1.85)
12 ^b	Responders	5551	21	<i>ref.</i>	64	<i>ref.</i>
	Withdrawal/Non-response	2739	9	0.84 (0.38-1.86)	46	1.27 (0.86-1.86)
<i>P-value for linearity</i>				<i>P=0.11</i>	<i>P=0.61</i>	

^a Adjusted for sex and age

^b Mortality follow-up from wave 12 is up to August 2017

Table S2. Sub-distribution hazard ratios (SHRs) of CVD and Non-CVD mortality from wave 1 to August 2017, by attrition status^a in 10 012 participants (person years as time-scale)

Outcome	Attrition status	No. deaths	SHR (95% CI)		
			<i>Adjusted for</i>		<i>All factors^b</i>
			<i>Sex and Age</i>		
CVD mortality		495			
	Response	312		<i>ref.</i>	<i>ref.</i>
	Withdrawal/Non-response	183	1.76	(1.45-2.13)	1.46 (1.20-1.79)
Non-CVD mortality		1367			
	Response	873		<i>ref.</i>	<i>ref.</i>
	Withdrawal/Non-response	494	1.54	(1.38-1.73)	1.48 (1.32-1.67)

^a Attrition status is time dependent and varies at each wave of the study

^b Adjusted for sex, age, ethnicity, marital status, employment grade, smoking habit, alcohol drinking, and physical activity

Table S3. Sub-distribution hazard ratios (SHRs) and 95% confidence interval (CIs) of CVD and non-CVD mortality by response status from wave 4 to August 2017 in 8791 participants (Analysis 2)

Outcome	Response status	No. Deaths	SHR (95% CI)							
			Sex and Age		Adjusted for +Demography and health risk behaviours ^b		+General health status ^c			
				<i>p</i> -value ^a		<i>p</i> -value ^a		<i>p</i> -value ^a		
CVD mortality		353								
	Response	258		<i>ref.</i>		<i>ref.</i>		<i>ref.</i>		
	Withdrawal	33	1.28	(0.89-1.84)	0.102	1.14	(0.79-1.65)	0.218	1.21	(0.84-1.75)
	Non-response	62	1.82	(1.37-2.41)		1.49	(1.10-2.01)		1.53	(1.13-2.06)
Non-CVD mortality		1056								
	Response	748		<i>ref.</i>		<i>ref.</i>		<i>ref.</i>		
	Withdrawal	136	1.75	(1.46-2.11)	0.617	1.72	(1.43-2.08)	0.593	1.77	(1.47-2.13)
	Non-response	172	1.65	(1.40-1.95)		1.62	(1.36-1.92)		1.59	(1.34-1.89)

^a P-value of Likelihood Ratio Test between the model with attrition status (response and withdrawal/non-response) and response status (response, withdrawal, non-response)

^b Additionally adjusted for ethnicity, marital status, employment grade, smoking habit, alcohol drinking, and physical activity

^c Additionally adjusted for PCS and MCS from each wave

Table S4. SHRs and 95% CIs of CVD mortality in three models (Analysis 2)

	n=8791	<i>Adjusted for</i>					
		Sex and age		+ Demography and health behaviours		+ Health status	
		SHR	95% CI	SHR	95% CI	SHR	95% CI
Response status							
Response			<i>ref.</i>		<i>ref.</i>		<i>ref.</i>
Withdrawal		1.28	(0.89-1.84)	1.14	(0.79-1.65)	1.21	(0.84-1.75)
Non-response		1.82	(1.37-2.41)	1.49	(1.10-2.01)	1.53	(1.13-2.06)
Sex							
Men			<i>ref.</i>		<i>ref.</i>		<i>ref.</i>
Women		0.78	(0.62-0.98)	0.57	(0.43-0.75)	0.54	(0.40-0.71)
Age in years							
39 and below			<i>ref.</i>		<i>ref.</i>		<i>ref.</i>
40 - 44		1.58	(1.01-2.47)	1.59	(1.01-2.49)	1.50	(0.95-2.36)
45 - 49		3.29	(2.17-5.00)	3.20	(2.09-4.88)	2.79	(1.83-4.25)
50 and over		7.33	(5.03-10.66)	7.20	(4.92-10.54)	6.02	(4.12-8.81)
Ethnicity							
White					<i>ref.</i>		<i>ref.</i>
Non-white				1.49	(1.08-2.05)	1.42	(1.02-1.96)
Marital status							
Married/cohabit					<i>ref.</i>		<i>ref.</i>
Single				1.46	(1.10-1.92)	1.47	(1.12-1.95)
Divorced/widowed				0.96	(0.67-1.39)	0.95	(0.66-1.37)
Employment grade							
High					<i>ref.</i>		<i>ref.</i>
Intermediate				1.07	(0.82-1.40)	1.05	(0.81-1.38)
Low				1.50	(1.05-2.14)	1.47	(1.03-2.11)
Smoking habit							
Never-smoker					<i>ref.</i>		<i>ref.</i>
Ex-smoker				1.11	(0.87-1.42)	1.10	(0.86-1.41)
Current smoker				1.62	(1.23-2.14)	1.54	(1.17-2.03)
Alcohol drinking							
<14 units per week					<i>ref.</i>		<i>ref.</i>
≥14 units per week				0.90	(0.69-1.16)	0.90	(0.70-1.16)
Physical activity							
High					<i>ref.</i>		<i>ref.</i>
Intermediate				0.97	(0.69-1.36)	0.95	(0.68-1.34)
Low				1.34	(1.00-1.78)	1.31	(0.98-1.74)
SF-36: PCS							
Q4 (best)							<i>ref.</i>
Q3						1.61	(1.01-2.35)
Q2						1.42	(0.97-2.09)
Q1 (worst)						2.39	(1.68-3.40)
SF-36: MCS							
Q4 (best)							<i>ref.</i>
Q3						0.84	(0.63-1.11)
Q2						0.72	(0.53-0.96)
Q1 (worst)						0.74	(0.56-0.98)

Table S5. SHRs and 95% CIs of non-CVD mortality in three models (Analysis 2)

	n=8791	Sex and age		<i>Adjusted for</i> + Demography and health behaviours		+ Health status	
		SHR	95% CI	SHR	95% CI	SHR	95% CI
Response status							
Response		<i>ref.</i>		<i>ref.</i>		<i>ref.</i>	
Withdrawal		1.75	(1.46-2.11)	1.72	(1.43-2.08)	1.77	(1.47-2.13)
Non-response		1.65	(1.40-1.95)	1.62	(1.36-1.92)	1.59	(1.34-1.89)
Sex							
Men		<i>ref.</i>		<i>ref.</i>		<i>ref.</i>	
Women		0.94	(0.83-1.07)	0.95	(0.81-1.11)	0.90	(0.76-1.05)
Age in years							
39 and below		<i>ref.</i>		<i>ref.</i>		<i>ref.</i>	
40 - 44		1.30	(1.04-1.63)	1.30	(1.04-1.64)	1.29	(1.03-1.63)
45 - 49		2.25	(1.82-2.79)	2.33	(1.88-2.89)	2.22	(1.78-2.77)
50 and over		4.56	(3.78-5.50)	4.76	(3.93-5.77)	4.45	(3.65-5.42)
Ethnicity							
White				<i>ref.</i>		<i>ref.</i>	
Non-white				0.75	(0.60-0.94)	0.69	(0.55-0.87)
Marital status							
Married/cohabit				<i>ref.</i>		<i>ref.</i>	
Single				1.00	(0.84-1.20)	0.97	(0.82-1.16)
Divorced/widowed				1.05	(0.86-1.28)	1.02	(0.84-1.24)
Employment grade							
High				<i>ref.</i>		<i>ref.</i>	
Intermediate				1.02	(0.88-1.17)	0.99	(0.86-1.15)
Low				0.89	(0.73-1.09)	0.83	(0.68-1.02)
Smoking habit							
Never-smoker				<i>ref.</i>		<i>ref.</i>	
Ex-smoker				1.09	(0.94-1.25)	1.06	(0.92-1.22)
Current smoker				2.04	(1.75-2.37)	1.91	(1.64-2.23)
Alcohol drinking							
<14 units per week				<i>ref.</i>		<i>ref.</i>	
≥14 units per week				1.10	(0.96-1.26)	1.10	(0.96-1.26)
Physical activity							
High				<i>ref.</i>		<i>ref.</i>	
Intermediate				0.81	(0.68-0.97)	0.80	(0.67-0.96)
Low				0.96	(0.83-1.12)	0.92	(0.79-1.07)
SF-36: PCS							
Q4 (best)						<i>ref.</i>	
Q3						1.20	(0.97-1.49)
Q2						1.42	(1.16-1.74)
Q1 (worst)						2.04	(1.69-2.46)
SF-36: MCS							
Q4 (best)						<i>ref.</i>	
Q3						1.01	(0.85-1.20)
Q2						1.18	(0.99-1.39)
Q1 (worst)						1.32	(1.12-1.56)