## Supplementary Table 1. Definitions for classification of incident disease outcomes

Definition
ICD 10 codes I21-I23
ICD 10 codes I60-I64
ICD 10 codes I10, I11 and I15, systolic blood pressure ≥140 mm Hg, diastolic blood pressure ≥90 mm Hg, or physician diagnosis
ICD 10 codes E11, fasting glucose ≥126 mg/dL, or physician
diagnosis
ICD 10 codes C16
ICD 10 codes C18
ICD 10 codes C20
ICD 10 codes C34
ICD 10 codes C22
ICD 10 codes C25
ICD 10 codes C00-C06, C09-C14 and C32
ICD 10 codes C64
ICD 10 codes C23
ICD 10 codes C15

Abbreviations: ICD – International Classification of Disease

# Supplementary Table 2. Participants' characteristics at 1st, 2nd, 3rd, 4th, 5th and 6th repeat-visit

Repeat visit	Variables	All (n=215,295)	Exercise frequency				
1 <sup>st</sup>			None (n=112,156)	1-2 times/week (n=57,777)	3-4 times/week (n=25,390)	5-6 times/week (n= 6,443)	Almost everyday (n=13,529)
	Sex, %						•
	Men	51.1%	45.0%	61.8%	55.3%	50.6%	48.8%
	Women	48.9%	55.0%	38.2%	44.7%	49.4%	51.2%
	Age, years	52.7 (8.6)	53.6 (9.2)	50.9 (7.4)	51.3 (7.5)	52.3 (8.0)	55.6 (9.1)
	Body Mass Index, kg <sup>2</sup> /m	23.5 (2.8)	23.4 (2.9)	23.6 (2.7)	23.7 (2.6)	23.6 (2.6)	23.7 (2.7)
	Systolic blood pressure, mm Hg	120.5 (14.4)	120.6 (14.7)	120.4 (13.9)	120.0 (13.9)	119.6 (13.9)	121.4 (14.6)
	Diastolic blood pressure, mm Hg	75.7 (9.9)	75.6 (9.9)	75.9 (9.8)	75.5 (9.8)	75.2 (9.8)	75.7 (9.8)
	Fasting glucose levels, mg/dL	92.6 (18.5)	92.6 (18.8)	92.7 (17.4)	92.4 (17.8)	92.8 (21.0)	93.3 (20.2)
	Total cholesterol, mg/dL	197.3 (36.2)	197.0 (36.8)	197.3 (35.6)	197.9 (35.1)	197.4 (35.9)	197.8 (36.7)
	Family history of heart disease, stroke or hypertension, %	12.6%	10.7%	14.2%	16.7%	16.7%	12.0%
	Family history of cancer, %	14.3%	12.7%	15.5%	17.4%	19.2%	14.5%
	Family history of diabetes, %	6.0%	5.0%	6.7%	8.2%	9.0%	5.8%
	Smoking status, %						
	Never	70.7%	74.8%	62.4%	68.9%	71.7%	74.8%
	Previously	8.6%	5.8%	11.9%	12.4%	11.9%	8.8%
	Currently	20.8%	19.4%	25.7%	18.7%	16.3%	16.4%
	Alcohol Consumption, %						
	Never	59.8%	66.9%	49.2%	52.7%	54.9%	61.8%
	2-3 times/month	15.6%	12.7%	20.5%	18.6%	18.2%	12.8%
	1-2 times/week	15.8%	11.8%	21.7%	19.9%	17.0%	14.8%
	≥3 times/week	8.8%	8.7%	8.6%	8.7%	10.0%	10.6%

Repeat visit	Variables	All (n=150,845)	Exercise				
2 <sup>nd</sup>		(11=130,043)	None (n=73,660)	1-2 times/week (n=44,211)	3-4 times/week (n=19,593)	5-6 times/week (n=4,771)	Almost everyday (n= 8,610)
	Sex, %					, ,	,
	Men	54.2%	47.0%	64.6%	57.9%	53.8%	53.5%
	Women	45.8%	53.0%	35.4%	42.1%	46.2%	46.5%
	Age, years	53.3 (8.3)	54.2 (8.9)	51.7 (7.2)	52.3 (7.4)	53.4 (7.8)	56.5 (9.1)
	Body Mass Index, kg <sup>2</sup> /m	23.5 (2.7)	23.4 (2.8)	23.6 (2.6)	23.7 (2.6)	23.6 (2.6)	23.6 (2.7)
	Systolic blood pressure, mm Hg	120.9 (14.1)	121.0 (14.5)	120.7 (13.7)	120.4 (13.6)	120.3 (13.7)	122.0 (14.5)
	Diastolic blood pressure, mm Hg	75.8 (9.6)	75.8 (9.7)	76.0 (9.5)	75.5 (9.4)	75.4 (9.4)	76.0 (9.8)
	Fasting glucose levels, mg/dL	93.2 (16.9)	93.1 (17.4)	93.5 (17.0)	93.1 (15.5)	93.5 (15.9)	93.7 (16.2)
	Total cholesterol, mg/dL	197.6 (35.9)	197.7 (36.5)	197.4 (35.4)	197.8 (35.2)	196.7 (34.9)	198.1 (36.5)
	Family history of heart disease, stroke or hypertension, %	13.4%	11.2%	14.6%	17.5%	18.3%	13.1%
	Family history of cancer, %	14.9%	12.9%	16.4%	17.4%	19.7%	15.4%
	Family history of diabetes, %	6.3%	5.2%	7.1%	8.2%	9.0%	6.1%
	Smoking status, %						
	Never	71.0%	76.5%	62.3%	68.7%	71.2%	74.2%
	Previously	9.0%	5.5%	12.5%	13.1%	13.1%	9.4%
	Currently	20.0%	18.0%	25.3%	18.2%	15.8%	16.5%
	Alcohol Consumption, %						
	Never	59.0%	67.6%	48.1%	51.9%	54.1%	60.0%
	2-3 times/month	16.1%	12.6%	20.9%	19.0%	18.9%	13.6%
	1-2 times/week	16.7%	12.1%	22.8%	20.7%	17.5%	15.8%
	≥3 times/week	8.1%	7.8%	8.2%	8.3%	9.5%	10.7%

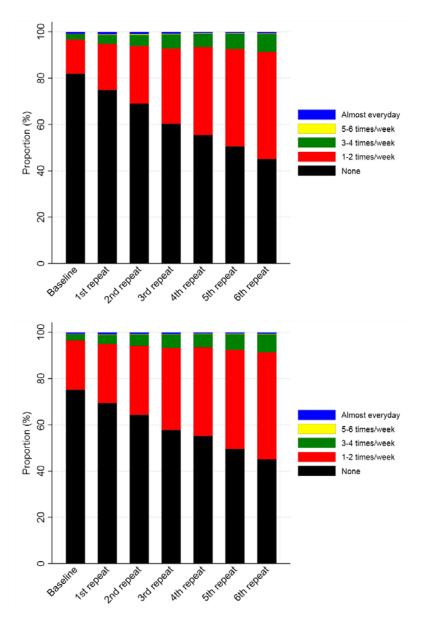
Repeat visit	Variables	All (n=80,639)	Exercise frequency				
3 <sup>rd</sup>		( 55,555)	None (n= 36,123)	1-2 times/week (n=26,505)	3-4 times/week (n=11,432)	5-6 times/week (n=2,391)	Almost everyday (n=4,188)
	Sex, %						
	Men	63.1%	53.9%	73.0%	68.6%	64.5%	63.4%
	Women	36.9%	46.1%	27.0%	31.4%	35.6%	36.7%
	Age, years	52.3 (7.2)	52.9 (7.8)	51.2 (6.2)	51.9 (6.6)	52.8 (7.0)	55.2 (8.4)
	Body Mass Index, kg <sup>2</sup> /m	23.5 (2.7)	23.3 (2.8)	23.6 (2.6)	23.7 (2.5)	23.7 (2.6)	23.7 (2.7)
	Systolic blood pressure, mm Hg	121.1 (13.6)	120.9 (13.9)	120.9 (13.4)	121.0 (13.2)	120.6 (13.3)	122.0 (14.0)
	Diastolic blood pressure, mm Hg	76.1 (9.4)	76.0 (9.5)	76.4 (9.4)	76.1 (9.1)	75.6 (9.5)	76.3 (9.6)
	Fasting glucose levels, mg/dL	93.7 (16.8)	93.3 (17.1)	94.1 (16.7)	93.9 (15.9)	94.1 (16.5)	94.5 (17.0)
	Total cholesterol, mg/dL	197.1 (35.2)	197.1 (35.5)	197.4 (34.8)	196.9 (34.7)	196.5 (35.2)	196.7 (35.4)
	Family history of heart disease, stroke or hypertension, %	13.5%	11.4%	14.8%	16.7%	18.6%	11.7%
	Family history of cancer, %	14.8%	13.0%	15.8%	17.8%	18.9%	14.7%
	Family history of diabetes, %	6.4%	5.3%	7.0%	8.0%	9.5%	6.2%
	Smoking status, %						
	Never	66.6%	73.8%	57.6%	63.9%	65.5%	68.8%
	Previously	10.7%	6.1%	14.0%	15.5%	16.6%	12.4%
	Currently	22.8%	20.2%	28.4%	20.6%	17.9%	18.7%
	Alcohol Consumption, %						
	Never	53.6%	64.2%	42.5%	47.2%	47.4%	53.9%
	2-3 times/month	18.5%	14.0%	23.7%	20.8%	21.4%	15.8%
	1-2 times/week	19.5%	14.0%	25.6 %	22.8%	20.7%	18.8%
	≥3 times/week	8.4%	7.8%	8.3%	9.2%	10.5%	11.5%

Repeat	Variables	All	Exercise				
visit 4 <sup>th</sup>		(n=40,910)	None (n=17,678)	1-2 times/week (n=14,624)	3-4 times/week (n= 5,685)	5-6 times/week (n=1,094)	Almost everyday (n=1,829)
	Sex, %					7 7	77
	Men	72.3%	61.6%	81.1%	81.5%	78.2%	73.9%
	Women	27.7%	38.4%	18.9%	18.5%	21.9%	26.1%
	Age, years	50.9 (5.4)	51.2 (5.5)	50.6 (5.1)	50.7 (5.3)	51.0 (5.6)	52.6 (6.3)
	Body Mass Index, kg <sup>2</sup> /m	23.5 (2.7)	23.3 (2.7)	23.7 (2.6)	23.8 (2.6)	23.8 (2.5)	23.7 (2.6)
	Systolic blood pressure, mm Hg	121.4 (13.3)	120.9 (13.5)	121.7 (13.0)	121.5 (12.8)	121.5 (13.1)	122.7 (13.6)
	Diastolic blood pressure, mm Hg	76.6 (9.2)	76.2 (9.3)	77.0 (9.2)	76.8 (8.9)	76.8 (9.4)	77.2 (9.5)
	Fasting glucose levels, mg/dL	93.9 (17.8)	93.3 (17.9)	94.4 (17.9)	94.3 (17.1)	94.0 (16.0)	94.9 (18.8)
	Total cholesterol, mg/dL	196.8 (35.0)	197.2 (35.5)	196.7 (34.6)	196.6 (34.2)	195.0 (34.3)	196.5 (34.9)
	Family history of heart disease, stroke or hypertension, %	12.3%	10.4%	13.7%	14.2%	16.3%	11.6%
	Family history of cancer, %	13.8%	12.6%	14.7%	15.0%	16.3%	13.5%
	Family history of diabetes, %	5.7%	4.8%	6.2%	6.9%	7.5%	6.7%
	Smoking status, %						
	Never	60.6%	69.5%	51.9%	55.5%	57.3%	62.0%
	Previously	12.2%	6.9%	15.1%	18.7%	18.7%	15.7%
	Currently	27.2%	23.7%	33.0%	25.8%	24.0%	22.4%
	Alcohol Consumption, %						
	Never	48.1%	60.0%	38.0%	39.1%	39.9%	45.4%
	2-3 times/month	20.5%	15.5%	24.9%	24.3%	24.0%	19.7%
	1-2 times/week	22.4%	16.2%	28.4%	26.3%	22.6%	22.9%
	≥3 times/week	9.0%	8.2%	8.7%	10.3%	13.6%	12.0%

Repeat	Variables	All	Exercise				
visit 5 <sup>th</sup>		(n= 26,356)	None (n=10,771)	1-2 times/week (n=9,807)	3-4 times/week (n=3,884)	5-6 times/week (n=724)	Almost everyday (n=1,170)
	Sex, %					(11=124)	(11=1,170)
	Men	73.7%	62.6%	81.6%	82.4%	81.2%	76.9%
	Women	26.3%	37.4%	18.4%	17.6%	18.8%	23.0%
	Age, years	51.1 (4.9)	51.4 (5.1)	50.8 (4.7)	51.0 (4.7)	51.4 (5.0)	52.1 (5.6)
	Body Mass Index, kg <sup>2</sup> /m	23.5 (2.6)	23.3 (2.7)	23.7 (2.6)	23.8 (2.4)	23.7 (2.5)	23.8 (2.6)
	Systolic blood pressure, mm Hg	121.4 (13.0)	121.0 (13.4)	121.8 (12.9)	121.6 (12.6)	120.8 (12.9)	121.5 (12.7)
	Diastolic blood pressure, mm Hg	76.6 (9.1)	76.2 (9.1)	77.1 (9.0)	76.8 (8.8)	76.7 (8.6)	76.4 (9.0)
	Fasting glucose levels, mg/dL	94.3 (17.6)	93.7 (18.1)	94.6 (17.3)	94.7 (16.6)	94.6 (15.9)	95.4 (18.7)
	Total cholesterol, mg/dL	197.1 (34.5)	197.7 (34.8)	196.7 (34.2)	196.4 (33.8)	195.2 (34.2)	198.2 (37.0)
	Family history of heart disease, stroke or hypertension, %	12.6%	11.3%	13.4%	14.3%	13.8%	10.9%
	Family history of cancer, %	14.3%	13.2%	15.1%	14.9%	17.8%	13.5%
	Family history of diabetes, %	5.9%	4.9%	6.4%	6.7%	7.2%	8.6%
	Smoking status, %						
	Never	58.9%	68.1%	50.8%	54.4%	57.0%	58.5%
	Previously	13.1%	7.1%	16.0%	19.3%	19.8%	19.7%
	Currently	28.0%	24.8%	33.2%	26.2%	23.2%	21.9%
	Alcohol Consumption, %						
	Never	46.3%	57.9%	37.6%	38.3%	41.3%	42.9%
	2-3 times/month	21.7%	16.7%	25.8%	24.7%	22.2%	22.3%
	1-2 times/week	23.4%	17.4%	28.0%	27.3%	26.0%	25.0%
	≥3 times/week	8.6%	8.1%	8.5%	9.8%	10.5%	9.7%

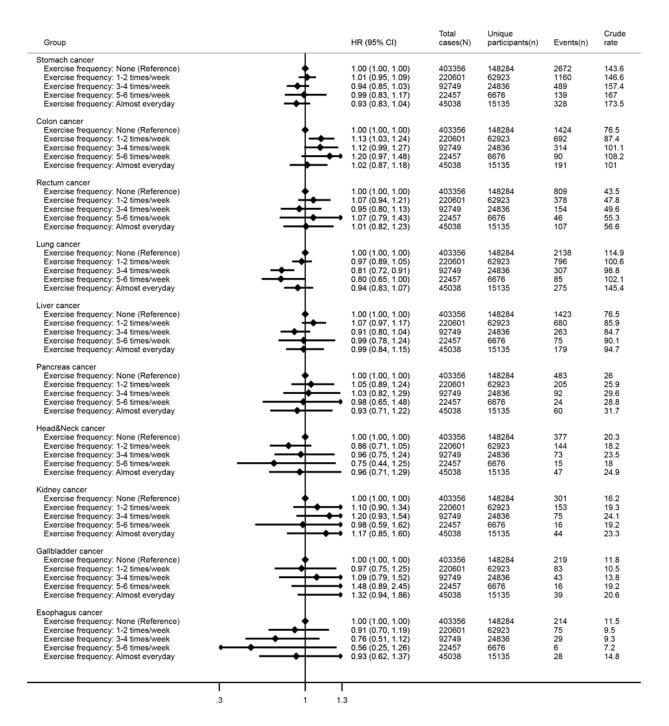
# Supplementary Table 2. Participants' characteristics at 1st, 2nd, 3rd, 4th, 5th and 6th repeat-visit (cont.)

Repeat	Variables	All	Exercise				
visit 6 <sup>th</sup>		(n= 12,302)	None (n= 4,684)	1-2 times/week (n=4,754)	3-4 times/week (n=1,929)	5-6 times/week (n=358)	Almost everyday (n=577)
	Sex, %					,	,
	Men	76.2%	64.2%	83.8%	84.7%	80.7%	80.4%
	Women	23.8%	35.8%	16.2%	15.3%	19.3%	19.6%
	Age, years	51.3 (4.5)	51.6 (4.7)	51.0 (4.2)	51.0 (4.4)	51.2 (4.3)	52.0 (5.1)
	Body Mass Index, kg <sup>2</sup> /m	23.6 (2.6)	23.3 (2.7)	23.7 (2.6)	23.8 (2.4)	23.6 (2.2)	23.7 (2.5)
	Systolic blood pressure, mm Hg	121.5 (12.8)	121.2 (13.0)	121.6 (12.6)	121.7 (12.6)	121.0 (12.5)	122.1 (12.3)
	Diastolic blood pressure, mm Hg	76.7 (9.0)	76.4 (9.0)	77.0 (8.9)	77.0 (9.0)	76.0 (8.7)	76.3 (9.0)
	Fasting glucose levels, mg/dL	94.6 (18.5)	93.7 (18.8)	95.1 (18.7)	94.9 (16.6)	95.1 (18.4)	95.7 (20.1)
	Total cholesterol, mg/dL	197.1 (34.5)	197.9 (35.0)	197.1 (34.2)	195.8 (34.3)	192.0 (32.2)	197.4 (34.3)
	Family history of heart disease, stroke or hypertension, %	13.2%	11.7%	13.7%	15.5%	14.3%	12.7%
	Family history of cancer, %	14.5%	12.9%	15.5%	15.7%	15.1%	14.9%
	Family history of diabetes, %	6.4%	5.5%	6.4%	7.3%	7.3%	9.5%
	Smoking status, %						
	Never	56.9%	66.6%	48.7%	53.6%	57.3%	57.4%
	Previously	14.0%	7.0%	17.3%	20.4%	16.8%	21.1%
	Currently	29.1%	26.5%	34.1%	26.0%	26.0%	21.5%
	Alcohol Consumption, %						
	Never	43.7%	56.5%	35.0%	36.4%	40.5%	37.8%
	2-3 times/month	22.8%	17.0%	27.2%	24.9%	24.6%	24.8%
	1-2 times/week	24.8%	17.6%	30.0%	28.3%	26.5%	27.4%
	≥3 times/week	8.8%	8.8%	7.9%	10.4%	8.4%	10.1%



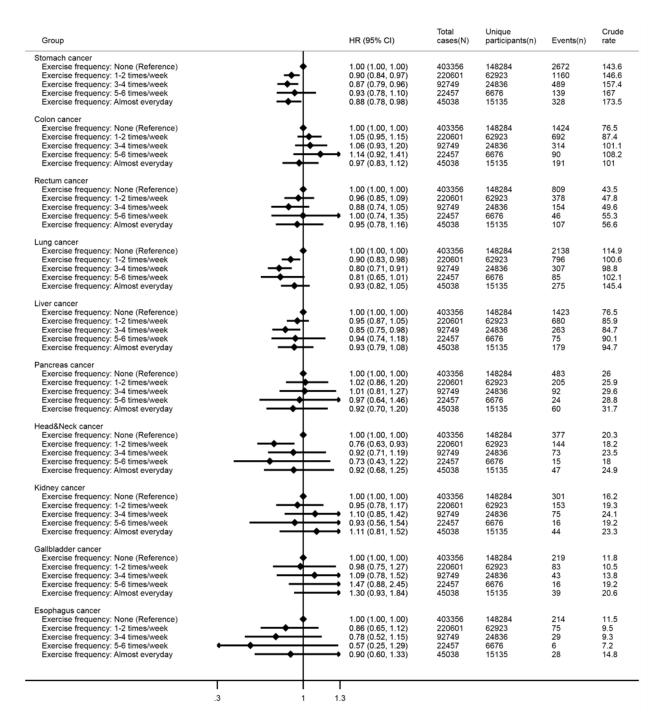
Supplementary Figure 1. Changes in proportions of exercise frequency categories across 7 time points in all 257,854 individuals who provided data at each respective assessment visit (top panel), and 12,302 individuals who provided data from all 7 assessment visits (bottom panel).

Group		HR (95% CI)	Total cases(N	Unique ) participants	s(n) Events(	Cr n) rat
Myocardial infarction						
Exercise frequency: None (Reference)	+	1.00 (1.00, 1.00)	403356	148284	1741	40
Exercise frequency: 1-2 times/week	<b>—</b>	0.98 (0.90, 1.07)	220601	62923	723	31
Exercise frequency: 3-4 times/week	<del></del>	0.83 (0.73, 0.94)	92749	24836	276	29
Exercise frequency: 5-6 times/week	<del></del>	0.98 (0.79, 1.22)	22457	6676	88	38
Exercise frequency: Almost everyday	<del></del>	0.97 (0.84, 1.12)	45038	15135	219	46
Stroke						
Exercise frequency: None (Reference)	<b>†</b>	1.00 (1.00, 1.00)	403356	148284	9689	23
Exercise frequency: 1-2 times/week	<b>→</b>	0.86 (0.82, 0.89)	220601	62923	3333	14
Exercise frequency: 3-4 times/week	<b>→</b>	0.83 (0.79, 0.88)	92749	24836	1482	16
Exercise frequency: 5-6 times/week	<b>→</b>	0.80 (0.72, 0.88)	22457	6676	390	17
Exercise frequency: Almost everyday	<del> </del>	0.95 (0.90, 1.01)	45038	15135	1240	2
Hypertension						
Exercise frequency: None (Reference)	<b>†</b>	1.00 (1.00, 1.00)	403356	148284	65964	2
Exercise frequency: 1-2 times/week	<b>+</b>	0.98 (0.96, 0.99)	220601	62923	30623	2
Exercise frequency: 3-4 times/week	+	0.90 (0.89, 0.92)	92749	24836	12617	20
Exercise frequency: 5-6 times/week	<b>+</b>	0.91 (0.88, 0.94)	22457	6676	3294	2
Exercise frequency: Almost everyday	†	1.00 (0.97, 1.02)	45038	15135	7705	2
Type 2 diabetes						
Exercise frequency: None (Reference)	<b>†</b>	1.00 (1.00, 1.00)	403356	148284	27128	14
Exercise frequency: 1-2 times/week	+	1.00 (0.98, 1.02)	220601	62923	13226	16
Exercise frequency: 3-4 times/week	+	0.91 (0.89, 0.94)	92749	24836	5421	17
Exercise frequency: 5-6 times/week	<b>→</b>	0.92 (0.88, 0.97)	22457	6676	1399	16
Exercise frequency: Almost everyday	+	1.01 (0.97, 1.04)	45038	15135	3285	1
1		1				
.3	1	1.3				



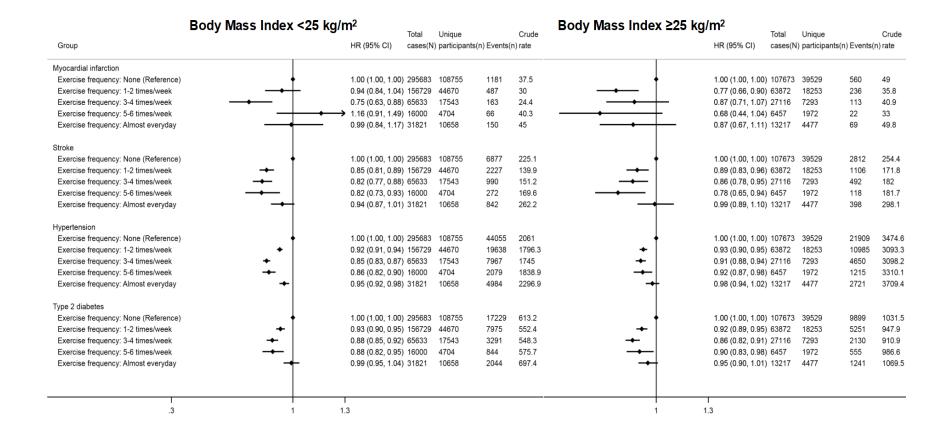
Supplementary Figure 2. Associations of exercise with incident myocardial infarction, stroke, hypertension and Type 2 diabetes (top panel) and various incident cancer outcomes (bottom panel). Note: Cox regression models using age as the underlying timescale were not adjusted for any confounders. Crude rates are per 100,000 person-years. "N" indicates numbers of total observations (i.e. participants who provided repeated measures are treated as separate observations) and "n" indicates numbers of unique participants at baseline. Abbreviations: HR – Hazard Ratio; CI – Confidence Intervals

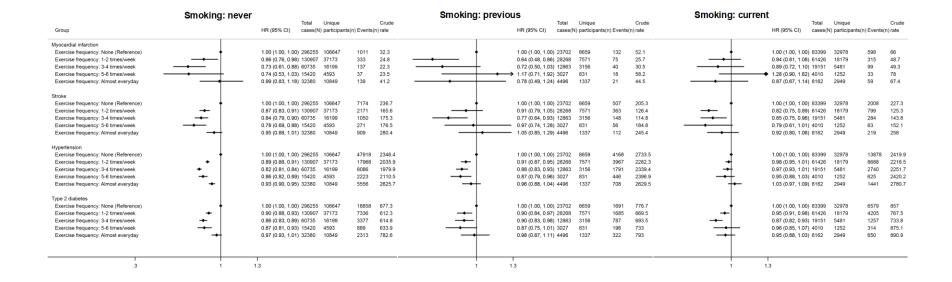
0		LID (OFN) OIL	Total	Unique	- (-) <b>-</b> (-)	Cr
Group		HR (95% CI)	cases(N	) participants	s(n) Events(	n) rat
Myocardial infarction						
Exercise frequency: None (Reference)	+	1.00 (1.00, 1.00)	403105	148033	1526	35
Exercise frequency: 1-2 times/week	<b>→</b>	0.89 (0.81, 0.98)	220498	62820	635	27
Exercise frequency: 3-4 times/week	<del></del>	0.82 (0.71, 0.94)	92715	24802	246	26
Exercise frequency: 5-6 times/week	<del></del>	0.95 (0.75, 1.20)	22439	6658	74	32
Exercise frequency: Almost everyday		0.95 (0.82, 1.11)	45014	15111	197	41
Stroke						
Exercise frequency: None (Reference)	+	1.00 (1.00, 1.00)	403105	148033	9669	23
Exercise frequency: 1-2 times/week	<b>+</b>	0.86 (0.82, 0.89)	220498	62820	3330	14
Exercise frequency: 3-4 times/week	<b>→</b>	0.83 (0.79, 0.88)	92715	24802	1481	16
Exercise frequency: 5-6 times/week	<b>—</b>	0.80 (0.73, 0.89)	22439	6658	389	17
Exercise frequency: Almost everyday	<del> </del>	0.95 (0.90, 1.01)	45014	15111	1239	27
Hypertension						
Exercise frequency: None (Reference)	+	1.00 (1.00, 1.00)	403105	148033	65872	23
Exercise frequency: 1-2 times/week	•	0.92 (0.90, 0.93)	220498	62820	30585	21
Exercise frequency: 3-4 times/week	+	0.86 (0.84, 0.88)	92715	24802	12605	20
Exercise frequency: 5-6 times/week	<b>+</b>	0.87 (0.84, 0.90)	22439	6658	3288	2
Exercise frequency: Almost everyday	+	0.95 (0.93, 0.97)	45014	15111	7694	26
Type 2 diabetes						
Exercise frequency: None (Reference)	<b>†</b>	1.00 (1.00, 1.00)	403105	148033	27101	14
Exercise frequency: 1-2 times/week	+	0.92 (0.90, 0.94)	220498	62820	13214	16
Exercise frequency: 3-4 times/week	<b>+</b>	0.87 (0.84, 0.89)		24802	5415	17
Exercise frequency: 5-6 times/week	<b>→</b>	0.88 (0.84, 0.93)	22439	6658	1397	16
Exercise frequency: Almost everyday	-	0.96 (0.93, 1.00)	45014	15111	3282	17
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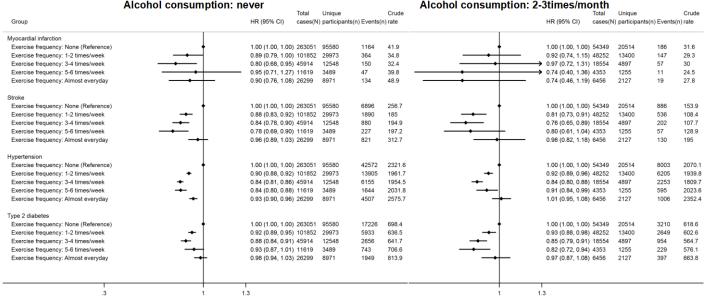


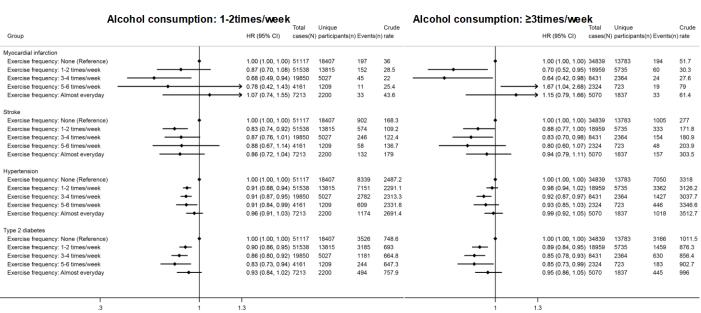
Supplementary Figure 3. Associations of exercise with incident myocardial infarction, stroke, hypertension and Type 2 diabetes (top panel) and various incident cancer outcomes (bottom panel) after excluding data from the first 2-year follow-up period. Note: Cox regression models using age as the underlying timescale were adjusted for sex, body mass index, systolic blood pressure, fasting glucose levels, total cholesterol levels, family history of heart disease, stroke or hypertension (in models for incident myocardial infarction, stroke and hypertension), diabetes (in models for incident Type 2 diabetes) or cancer (in models for incident cancer outcomes), smoking status and alcohol consumption. Crude rates are per 100,000 person-years. "N"

indicates numbers of total observations (i.e. participants who provided repeated measures are treated as separate observations) and "n" indicates numbers of unique participants at baseline. Abbreviations: HR – Hazard Ratio; CI – Confidence Intervals

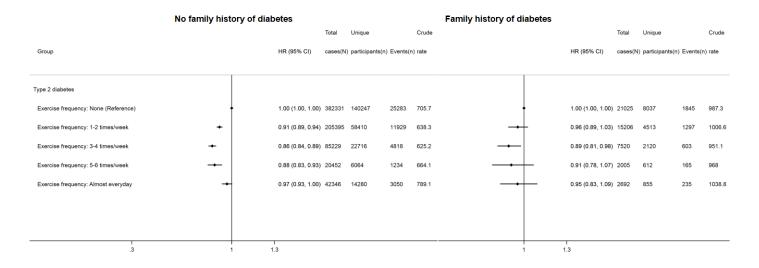


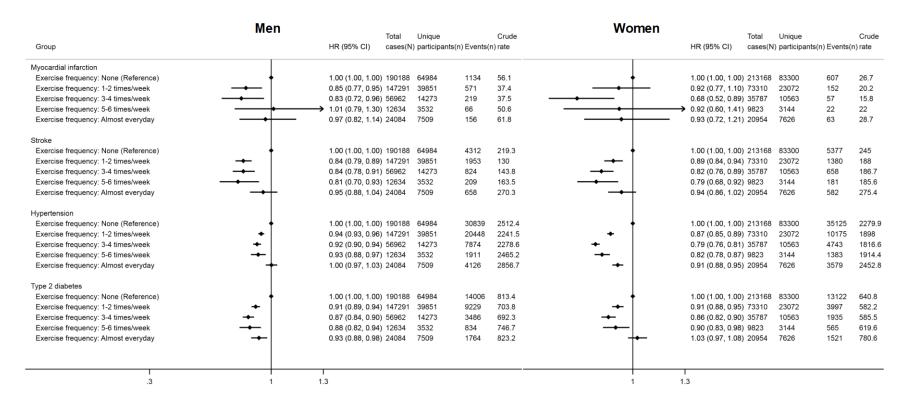






	No family history of	CVD	Total	Unique		Crude	Family history of CVD		Total	Unique		Crude
Group		HR (95% CI)	cases(N)		Events(n)			HR (95% CI)	cases(N)		Events(n)	
Myocardial infarction												
Exercise frequency: None (Reference)	+	1.00 (1.00, 1.00)	359412	132298	1576	41.2	+	1.00 (1.00, 1.00)	43944	15986	165	35.6
Exercise frequency: 1-2 times/week	<b>→</b>	0.87 (0.79, 0.96)	189298	54170	621	31.7		0.84 (0.66, 1.09)	31303	8753	102	32
Exercise frequency: 3-4 times/week	<del></del>	0.81 (0.70, 0.93)	77584	20894	237	29.9		0.70 (0.49, 0.99)	15165	3942	39	25.5
Exercise frequency: 5-6 times/week	<del></del>	→ 1.04 (0.83, 1.31)	18631	5573	78	40.7		0.67 (0.35, 1.27)	3826	1103	10	25.8
Exercise frequency: Almost everyday		0.93 (0.80, 1.09)	39732	13481	195	46.8	<del></del>	1.00 (0.65, 1.54)	5306	1654	24	43.7
Stroke												
Exercise frequency: None (Reference)	<b>+</b>	1.00 (1.00, 1.00)	359412	132298	8756	236	<b>+</b>	1.00 (1.00, 1.00)	43944	15986	933	207.2
Exercise frequency: 1-2 times/week	<b>+</b>	0.86 (0.82, 0.90)	189298	54170	2817	146.4	<b></b>	0.87 (0.78, 0.97)	31303	8753	516	165.4
Exercise frequency: 3-4 times/week	<b>→</b>	0.82 (0.77, 0.87)	77584	20894	1212	156.1	<del></del>	0.89 (0.77, 1.02)	15165	3942	270	181.4
Exercise frequency: 5-6 times/week	<del></del>	0.82 (0.73, 0.91)	18631	5573	328	174.9		0.76 (0.59, 0.98)	3826	1103	62	164
Exercise frequency: Almost everyday	<del>-  </del>	0.96 (0.90, 1.02)	39732	13481	1109	275.9	<del></del>	0.91 (0.76, 1.10)	5306	1654	131	248
Hypertension												
Exercise frequency: None (Reference)	<b>+</b>	1.00 (1.00, 1.00)	359412	132298	58611	2366.4	<b>↓</b>	1.00 (1.00, 1.00)	43944	15986	7353	2524
Exercise frequency: 1-2 times/week	•	0.92 (0.90, 0.93)	189298	54170	25975	2066.5	<b>+</b>	0.93 (0.89, 0.96)	31303	8753	4648	2428.4
Exercise frequency: 3-4 times/week	+	0.85 (0.83, 0.87)	77584	20894	10332	2005.9	<b>→</b>	0.92 (0.88, 0.97)	15165	3942	2285	2495.5
Exercise frequency: 5-6 times/week	<b>→</b>	0.87 (0.84, 0.90)	18631	5573	2710	2149.4	<b>—</b>	0.91 (0.83, 0.99)	3826	1103	584	2466.1
Exercise frequency: Almost everyday	+	0.94 (0.92, 0.97)	39732	13481	6797	2627	<del></del>	1.01 (0.94, 1.08)	5306	1654	908	2872.8
3	1	1.3					.3 1 1	3				



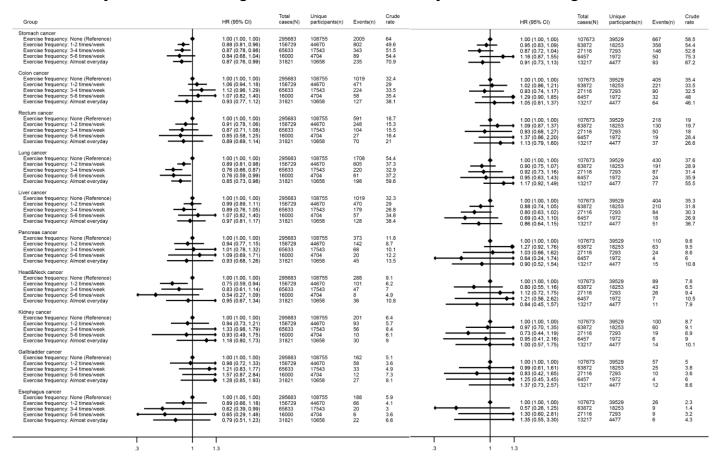


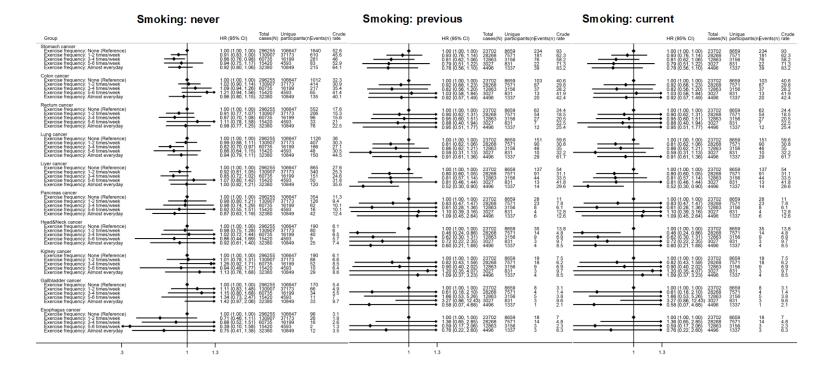
Supplementary Figure 4. Results from running Cox regression models examining effect modification of sex, body mass index, smoking, alcohol consumption, and family history of disease in the associations between exercise frequency and incident myocardial infarction, stroke, hypertension and type 2 diabetes. Note: Cox regression models using age as the underlying timescale were adjusted for sex [not in models for effect modification by sex], body mass index [not in models for effect modification by body mass index], systolic blood pressure, fasting glucose levels, total cholesterol levels, family history [not in models for effect modification by family history of respective disease] of heart disease/stroke/hypertension (in models for myocardial infarction, stroke and hypertension), or diabetes (in models for Type 2 diabetes), smoking status [not in models for effect modification by smoking status] and alcohol consumption [not in models for effect modification by alcohol consumption]. Crude rates are per 100,000 person-years. "N" indicates numbers of total observations (i.e. participants who provided repeated measures are treated as separate observations) and "n" indicates numbers of unique participants at baseline. P-values for multiplicative terms – myocardial infarction (p-value = 0.235), stroke (p-value = 0.363), hypertension (p-value = 0.050) and type 2 diabetes (p-value = 0.196) by body mass index;

myocardial infarction (p-value = 0.643), stroke (p-value = 0.661), hypertension (p-value <0.001) and type 2 diabetes (p-value = 0.980) by smoking; myocardial infarction (p-value = 0.300), stroke (p-value = 0.607), hypertension (p-value <0.001) and type 2 diabetes (p-value = 0.081) by alcohol consumption; myocardial infarction (p-value = 0.590), stroke (p-value = 0.505), and hypertension (p-value = 0.029) by family history of cardiovascular disease; type 2 diabetes (p-value = 0.952) by family history of diabetes; and myocardial infarction (p-value = 0.334), stroke (p-value = 0.818), hypertension (p-value <0.001) and type 2 diabetes (p-value = 0.012) by sex. Abbreviations: HR – Hazard Ratio; CI – Confidence Intervals

### Body Mass Index <25 kg/m<sup>2</sup>

#### Body Mass Index ≥25 kg/m<sup>2</sup>

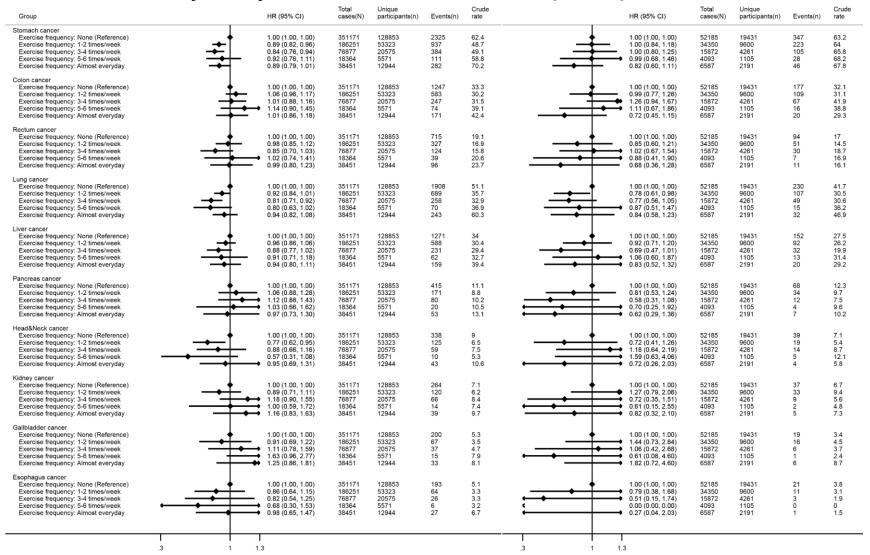


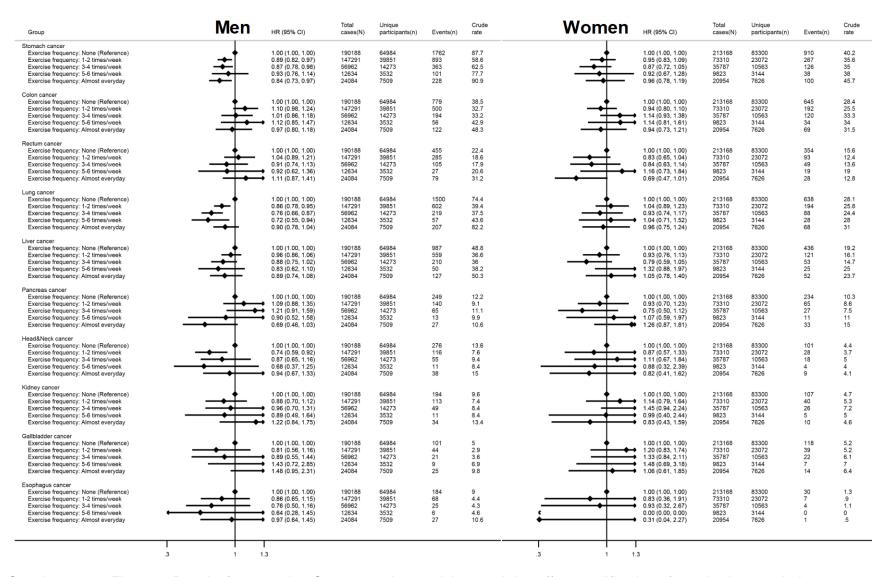


0	ohol consumption	n: never	Total cases(N)	Unique participants(n)	Events(n)	Crude rate	Alcohol consumption:	: 2-3times/n	Unique participants(n)	Events(n)	Crude rate
itomach cancer Exercise frequency: Nane (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-4 times/week Exercise frequency: 5-6 times/week Exercise frequency: Almost everyday	=	1.00 (1.00, 1.00) 0.88 (0.80, 0.98) 0.93 (0.82, 1.07) 0.92 (0.72, 1.17) 0.84 (0.72, 0.98)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	1650 521 258 69 177	59.5 49.9 55.9 58.5 64.9		1.00, 1.00) 54349 0.85, 1.20) 48252 0.55, 0.94) 18554 0.64, 1.48) 4353 0.64, 1.27) 6456	20514 13400 4897 1255 2127	278 244 68 24 37	47.4 48.8 35.8 53.5 54.3
Colon cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; 5-8 times/week Exercise frequency; Almost everyday	<b>‡</b>	1.00 (1.00, 1.00) 0.99 (0.87, 1.13) 1.00 (0.84, 1.19) 1.10 (0.82, 1.48) 1.01 (0.84, 1.23)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	929 321 155 46 117	33.4 30.6 33.4 38.9 42.7	1.00 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (1.09 (	1.00, 1.00) 54349 0.85, 1.39) 48252 0.87, 1.64) 18554 0.96, 2.53) 4353 0.48, 1.32) 6456	20514 13400 4897 1255 2127	141 126 55 19 17	23.9 25.1 28.9 42.3 24.9
Rechim cancer Exercise frequency: Nane (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-3 times/week Exercise frequency: 5-5 times/week Exercise frequency: Almost everyday		1.00 (1.00, 1.00) 0.87 (0.73, 1.05) 0.79 (0.62, 1.02) 0.89 (0.57, 1.38) 0.80 (0.60, 1.07)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	517 159 69 21 52	18.5 15.1 14.9 17.7 18.9	1.00 (1 0.99 (1 0.94 (1 1.37 (1 1.60 (1	1.00, 1.00) 54349 0.72, 1.38) 49252 0.60, 1.47) 18554 0.71, 2.64) 4353 0.98, 2.62) 6456	20514 13400 4897 1255 2127	82 69 26 10 20	13.9 13.7 13.6 22.2 29.2
ung cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; Almost everyday	#	1.00 (1.00, 1.00) 0.96 (0.86, 1.08) 0.79 (0.67, 0.93) 0.87 (0.65, 1.16) 0.86 (0.73, 1.02)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	1328 412 156 47 149	47.8 39.3 33.6 39.7 54.5		1.00, 1.00) 54349 0.68, 1.07) 48252 0.58, 1.13) 18554 0.41, 1.38) 4353 0.94, 1.91) 6456	20514 13400 4897 1255 2127	198 125 45 11 37	33.7 24.9 23.6 24.4 54.3
Iver cancer Exercise frequency: None (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-4 times/week Exercise frequency: 5-5 times/week Exercise frequency: Almost everyday	#	1.00 (1.00, 1.00) 0.95 (0.83, 1.08) 0.85 (0.70, 1.02) 1.05 (0.77, 1.42) 0.99 (0.81, 1.21)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	873 314 130 43 110	31.4 30 28 36.3 40.1		1.00, 1.00) 54349 0.76, 1.21) 48252 0.44, 0.93) 18554 0.54, 1.69) 4353 0.24, 0.88) 6456	20514 13400 4897 1255 2127	160 138 35 13 10	27.2 27.5 18.4 28.9 14.6
lancreas cancer Exercise frequency: None (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-5 times/week Exercise frequency: 5-5 times/week Exercise frequency: 5-6 times/week Exercise frequency: Almost everyday fead&Neck cancer		1.00 (1.00, 1.00) 0.97 (0.78, 1.21) 0.94 (0.69, 1.27) 0.84 (0.47, 1.50) 1.05 (0.76, 1.43)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	338 108 49 12 44	12.1 10.1 10.5 10.1	1.00 (1 1.00 (1 0.99 (1 1.13 (0	1.00, 1.00) 54349 0.71, 1.06) 48252 0.55, 1.77) 18554 0.12, 1.98) 4353 0.53, 2.40) 6456	20514 13400 4897 1255 2127	50 42 15 2 8	8.5 8.3 7.8 4.4 11.7
Exercise frequency: None (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-4 times/week Exercise frequency: 5-8 times/week Exercise frequency: Almost everyday	-	1.00 (1.00, 1.00) 0.76 (0.57, 1.02) 1.07 (0.75, 1.52) 0.74 (0.35, 1.57) 0.83 (0.53, 1.30)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	204 59 38 7 21	7.3 5.6 8.2 5.9 7.7		1.00, 1.00) 54349 0.48, 1.28) 48252 0.44, 1.60) 18554 0.14, 2.38) 4353 0.44, 2.44) 6456	20514 13400 4897 1255 2127	43 30 12 2 6	7.3 6 6.3 4.4 8.8
idney cancer Exercise frequency: None (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-4 times/week Exercise frequency: 3-6 times/week Exercise frequency: Almost everyday salbiadder cancer		1.00 (1.00, 1.00) 0.92 (0.69, 1.23) 1.04 (0.72, 1.51) 0.94 (0.46, 1.91) 1.10 (0.73, 1.68)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	189 65 34 8 25	6.8 6.2 7.3 6.8 9.1		1.00, 1.00) 54349 0.38, 1.00) 48252 0.59, 1.81) 18554 0.23, 2.35) 4353 0.21, 1.61) 6456	20514 13400 4897 1255 2127	49 26 17 3 4	8.3 5.2 8.9 6.7 5.9
Exercise frequency: None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; Almost everyday	#	1.00 (1.00, 1.00) 1.07 (0.77, 1.49) 1.38 (0.93, 2.05) 1.66 (0.88, 3.16) 1.44 (0.95, 2.19)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	147 48 30 10 26	5.3 4.6 6.4 8.4 9.4		1.00, 1.00) 54349 0.51, 1.70) 48252 0.23, 1.58) 18554 0.37, 4.12) 4353 0.21, 2.26) 6456	20514 13400 4897 1255 2127	28 19 5 3 3	4.7 3.8 2.6 6.6 4.4
sophagus cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 timos/week Exercise frequency; 3-3 timos/week Exercise frequency; 5-5 timos/week Exercise frequency; Almost everyday		1.00 (1.00, 1.00) 0.77 (0.49, 1.23) 1.04 (0.59, 1.84) 0.54 (0.13, 2.21) 0.75 (0.38, 1.49)	263051 101852 45914 11619 26299	95580 29973 12548 3489 8971	90 23 14 2 9	3.2 2.2 3 1.7 3.3	1.00 (1 0.50 (2 0.30 (1 1.51 (2	1.00, 1.00) 54349 0.26, 1.37) 48252 0.08, 1.58) 18554 0.34, 6.61) 4353 0.19, 3.54) 6456	20514 13400 4897 1255 2127	17 9 2 2 2	2.9 1.8 1 4.4 2.9
Alcoho	consumption: 1	T -3 <b>-2times/w</b> HR (95% CI)	eek Total cases(N)	Unique participants(n)	Events(n)	Crude rate	Alcohol consumption:	≥3times/we Total 5% CI) cases(N)	ek Unique participants(n)	Events(n)	Crude rate
omach cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; Almost everyday		1.00 (1.00, 1.00) 0.87 (0.74, 1.03) 0.79 (0.63, 1.00) 0.80 (0.51, 1.24) • 0.99 (0.74, 1.32)	51117 51538 19850 4161 7213	18407 13815 5027 1209 2200	335 254 92 21 55	61.4 47.7 45.2 48.7 73		1.00, 1.00) 34839 0.73, 1.08) 18959 0.74, 1.23) 8431 0.71, 1.59) 2324 0.67, 1.17) 5070	13783 5735 2964 723 1837	409 141 71 25 59	110.2 71.6 82.2 104.4 110.6
olon cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; 5-6 times/week		1.00 (1.00, 1.00) 1.01 (0.81, 1.26) 0.94 (0.70, 1.26) • 1.18 (0.72, 1.94) 0.85 (0.56, 1.27)	51117 51538 19850 4161 7213	18407 13815 5027 1209 2200	183 155 59 17 27	33.4 29 28.9 39.4 35.6	1.00 (1 1.36 (1 1.42 (1 0.78 (1 1.05 (1	1.00, 1.00) 34839 1.05, 1.78) 18959 1.01, 1.98) 8431 0.39, 1.60) 2324 0.71, 1.55) 5070	13783 5735 2364 723 1837	171 90 45 8 30	45.6 45.5 51.8 33.2 55.8
echun cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 timos/week Exercise frequency; 3-4 timos/week Exercise frequency; 5-6 timos/week Exercise frequency; 4-8 timos/week		1.00 (1.00, 1.00) 1.14 (0.86, 1.52) 1.05 (0.71, 1.54) 1.29 (0.67, 2.48) 1.59 (1.03, 2.45)	51117 51538 19850 4161 7213	18407 13815 5027 1209 2200	101 100 36 10 28	18.4 18.7 17.6 23.2 34.3	1.00 (1 1.15 (0 1.12 (0 0.78 (0	1.00, 1.00) 34839 0.82, 1.63) 18959 0.71, 1.77) 8431 0.32, 1.91) 2324 0.26, 1.00) 5070	13783 5735 2364 723 1837	109 50 23 5 9	29 25.2 26.4 20.7 16.7
ing cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 5-6 times/week Exercise frequency; 5-6 times/week Exercise frequency; 5-8 times/week	-	1.00 (1.00, 1.00) 0.81 (0.67, 0.99) 0.78 (0.59, 1.03) 0.58 (0.31, 1.05) 0.72 (0.50, 1.04)	51117 51538 19850 4161 7213	18407 13815 5027 1209 2200	283 169 63 11 32	51.8 31.6 30.9 25.4 42.3		1.00, 1.00) 34839 0.68, 1.10) 18959 0.63, 1.19) 8431 0.59, 1.61) 2324 0.83, 1.45) 5070	13783 5735 2364 723 1837	329 90 43 16 57	88.2 45.5 49.5 66.3 106.6
ver cancer Exercise frequency; None (Reference) Exercise frequency; 1-2 times/week Exercise frequency; 3-4 times/week Exercise frequency; 3-6 times/week Exercise frequency; Amorat everyday	<u></u>	1.00 (1.00, 1.00) 0.90 (0.72, 1.12) 0.95 (0.70, 1.27) 0.95 (0.48, 1.54) 0.78 (0.50, 1.20)	51117 51538 19850	18407 13815 5027	187 147 60 12 23	34.1 27.5 29.4 27.8 30.4	1.00 (1 1.02 (0 1.03 (0 0.60 (0	1.00, 1.00) 34839 0.78, 1.32) 18959 0.72, 1.46) 8431 0.28, 1.27) 2324 0.81, 1.66) 5070	13783 5735 2364 723 1837	203 81 38 7 36	54.2 40.9 43.7 28.9 67.2
	<del></del>	0.78 (0.50, 1.20)	19850 4161 7213	5027 1209 2200	23	30.4		0.81, 1.66) 5070	1837	36	
ancreas cancer Exercise frequency: Nane (Reference) Exercise frequency: 1-2 times/week Exercise frequency: 3-4 times/week Exercise frequency: 5-6 times/week Exercise frequency: 5-6 times/week Exercise frequency: Almost everyday		1.00 (1.00, 1.00) 1.23 (0.78, 1.96) 1.55 (0.90, 2.69) 1.28 (0.46, 3.59) 0.13 (0.02, 0.97)	51117 51538 19850 4161 7213	18407 13815 5027 1209 2200	41 37 20 4 1	7.5 6.9 9.8 9.2 1.3		0.81, 1.66) 5070 0.81, 1.06) 5070 1.00, 1.00) 34839 0.60, 1.72) 18959 0.41, 1.95) 8431 0.88, 4.83) 2324 0.38, 1.85) 5070	1837 13783 5735 2364 723 1837	54 20 8 6 7	14.3 10.1 9.2 24.8 12.9
ancreas cancer  Exercise frequency; Name (Reference)  Exercise frequency; 1-2 tracel week  Exercise frequency; 3-4 tracel week  Exercise frequency; 3-6 tracel week  Exercise frequency; 3-6 tracel week  Exercise frequency; Amost everyday  cad&Neck cancer  Exercise frequency; 1-2 tracel week  Exercise frequency; 1-2 tracel week  Exercise frequency; 1-2 tracel week  Exercise frequency; 3-6 tracel week  Exercise frequency; Amost everyday			51117 51538	18407		7.5	1.00 (1 1.01 (1 0.07 (1 0.08 (1 0.08 (1			54 20	14.3
accreas concer Exercise Proparry 1-3 incalvance Exercise Proparry 1-3 incalvance Exercise Proparry 1-3 incalvance Exercise Proparry 5-8 incalvance Exercise Proparry 5-8 incalvance Exercise Proparry 1-9 incalvance Exercise Proparry 1-2 incalvance Exercise Proparry 1-2 incalvance Exercise Proparry 1-2 incalvance Exercise Proparry 1-3 incalvance Exercise Proparry 1-3 incalvance Exercise Proparry 1-4 incalvance Exercise Proparry 1-4 incalvance Exercise Proparry 1-4 incalvance Exercise Proparry 1-5 incalvance Exercise Proparry 1-5 incalvance Exercise Proparry 1-5 incalvance Exercise Proparry 1-5 incalvance Exercise Proparry 1-6 incalvance		1.00 (1.00, 1.00) 1.22 (0.78, 1.98) 1.25 (0.00, 2.99) 1.28 (0.46, 3.99) 0.13 (0.02, 0.97) 1.00 (1.00, 1.00) 0.52 (0.39, 0.96) 0.77 (0.43, 1.38) 0.97 (0.44, 1.97) 1.00 (1.00, 1.00) 1.19 (0.76, 1.95) 1.41 (0.02, 2.42) 1.54 (0.01, 2.74)	51117 51538 19850 4161 7213 51117 51538 19850	18407 13815 5027 1209 2200	41 37 20 4 1	7.5 6.9 9.8 9.2 1.3	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00, 1.00) 34830 0.60, 1.72) 19959 19959 0.41, 1.86) 8431 2324 1.00, 1.00) 34839 0.62, 1.56) 19959 0.62, 1.56) 19959 0.62, 1.56) 19959 1.00, 1.00) 34839 0.54, 1.95) 5070 1.00, 1.00) 34839 0.54, 1.95) 5070 1.00, 1.00) 18959 0.54, 1.95) 5070	13783 5735 2364 723 1837	54 20 8 6 7	14.3 10.1 9.2 24.8 12.9
Increase never these (Bullemone) Execute Page 19 (Bullemon		1.00 (1.00, 1.00) 1.22 (0.78, 1.96) 1.25 (0.90, 2.99) 1.25 (0.90, 2.99) 1.25 (0.90, 2.99) 1.20 (1.00, 1.00) 0.82 (0.39, 0.97) 1.20 (1.00, 1.00) 0.82 (0.39, 0.97) 1.20 (1.00, 1.00) 0.82 (0.39, 0.97) 1.20 (1.00, 1.00) 1.20 (1.00, 1.00)	51117 51338 19850 4161 7213 51117 51538 19850 4161 7213 51117 51538 19850 4161 7213	18407 13815 5027 1209 2200 18407 13815 5027 1209 2200 18407 13815 5027 1209 2200 18407 13815 5027 1209 2100 18407 13815 5027 1209 2200	41 37 20 4 1 59 30 14 2 9	7.5 6.9 9.8 9.2 1.3 10.8 5.8 6.9 4.6 11.9	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00, 1.00) 34830 1.00, 1.00) 34830 1.00, 1.72, 1.00 1.00, 1.72, 1.00 1.00, 1.00 1.00 1.00, 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	13783 5735 2364 723 1837 13783 5735 2364 723 1537 13783 5735 2364 723 13783 5735 13783 5735 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 13783 1378	54 20 8 6 7 71 25 9 4 11	14.3 10.1 9.2 24.8 12.9 10.3 10.5 20.5 6.7 9.1 3.4 0 16.7 7.2 2 3.4 8.2 11.1
normal canonic Exercise Regions (Reference) Exercise Regions (1-1) Introduced Exercise Regions (1-1) Introdu		1.00 (1.00, 1.00) 1.23 (0.78, 1.36) 1.25 (0.90, 2.59) 1.25 (0.90, 2.59) 1.25 (0.90, 2.59) 1.30 (1.00, 1.00) 0.82 (0.39, 0.95) 0.77 (0.41, 1.39) 0.87 (0.41, 1.39) 1.20 (1.00, 1.00) 1.20 (1.00, 1.00)	51117 51538 19850 4161 7213 51117 51538 19850 4161 7213 51117 51538 19850 4161 7213	18407 18815 5027 1209 2200 18407 13815 5027 1209 2200 18407 13815 5027 1209 2200 18407 13815	41 37 20 4 1 59 30 14 2 9 38 44 421 56	7.5 9.8 9.2 1.3 10.8 6.9 4.6 11.9 6.9 8.2 11.6 7.9	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00, 1.00) 34830 0.60, 1.72) 19959 19959 0.41, 1.86) 8431 2324 1.00, 1.00) 34839 0.62, 1.56) 19959 0.62, 1.56) 19959 0.62, 1.56) 19959 1.00, 1.00) 34839 0.54, 1.95) 5070 1.00, 1.00) 34839 0.54, 1.95) 5070 1.00, 1.00) 18959 0.54, 1.95) 5070	13783 5735 2364 723 1637 13783 5735 2364 723 1837 13783 5735 2364 723 1837	544 220 8 6 7 7 711 25 9 4 111 25 18 3 0 9	14.3 10.1 9.2 24.8 12.9 10.3 10.3 10.5 20.5 6.7 9.1 3.4 0 16.7

### No family history of cancer

### Family history of cancer





Supplementary Figure 5. Results from running Cox regression models examining effect modification of sex, body mass index, smoking, alcohol consumption, and family history of disease in the associations between exercise frequency and various incident cancer outcomes. Note: Cox regression models using age as the underlying timescale were adjusted for sex [not in models for effect

modification by sex], body mass index [not in models for effect modification by body mass index], systolic blood pressure, fasting glucose levels, total cholesterol levels, family history of cancer [not in models for effect modification by family history of cancer], smoking status [not in models for effect modification by smoking status] and alcohol consumption [not in models for effect modification by alcohol consumption]. Crude rates are per 100,000 person-years. "N" indicates numbers of total observations (i.e. participants who provided repeated measures are treated as separate observations) and "n" indicates numbers of unique participants at baseline. P-values for multiplicative terms – stomach cancer (p-value = 0.274), colon cancer (p-value = 0.640), rectum cancer (p-value = 0.274). value = 0.107), lung cancer (p-value = 0.016), liver cancer (p-value = 0.129), pancreas cancer (p-value = 0.860), head & neck cancer (p-value = 0.488), kidney cancer (p-value = 0.285), gallbladder cancer (p-value = 0.970), and esophagus cancer (p-value = 0.263) by body mass index; stomach cancer (p-value = 0.699), colon cancer (p-value = 0.932), rectum cancer (p-value = 0.610), lung cancer (p-value = 0.492), liver cancer (p-value = 0.405), pancreas cancer (p-value = 0.338), head & neck cancer (p-value = 0.562), kidney cancer (p-value = 0.280), gallbladder cancer (p-value = 0.295), and esophagus cancer (p-value = 0.292) by smoking; stomach cancer (p-value = 0.655), colon cancer (p-value = 0.977), rectum cancer (p-value = 0.433), lung cancer (p-value = 0.387), liver cancer (p-value = 0.704), pancreas cancer (p-value = 0.711), head & neck cancer (p-value = 1.000), kidney cancer (p-value = 0.336), gallbladder cancer (p-value = 0.350), and esophagus cancer (p-value = 0.550) by alcohol consumption; stomach cancer (p-value = 0.550) value = 0.996), colon cancer (p-value = 0.399), rectum cancer (p-value = 0.478), lung cancer (p-value = 0.427), liver cancer (p-value = 0.337), pancreas cancer (p-value = 0.086), head & neck cancer (p-value = 0.712), kidney cancer (p-value = 0.319), gallbladder cancer (p-value = 0.766), and esophagus cancer (p-value = 0.098) by family history of cancer; and stomach cancer (p-value = 0.405), colon cancer (p-value = 0.957), rectum cancer (p-value = 0.106), lung cancer (p-value = 0.063), liver cancer (p-value = 0.278), pancreas cancer (p-value = 0.265), head & neck cancer (p-value = 0.907), kidney cancer (p-value = 0.967), gallbladder (p-value = 0.967), gallbladd value = 0.548), and esophagus cancer (p-value = 0.256) by sex. Abbreviations: HR – Hazard Ratio; CI – Confidence Intervals