

Table S1. Characteristics of participants in the second re-survey of China Kadoorie Biobank ($n = 17,318$)

	Female ($n = 10,918$)	Male ($n = 6,400$)	Overall ($n = 17,318$)
Age, year	58.7	59.9	59.1
Urban area (%)	38.8	40.3	39.3
Southern area (%)	67.4	67.9	67.6
High school and above (%)	40.6	57.0	46.7
Household income $\geq 20,000$ CNY (%)	77.7	81.8	79.2
Married (%)	84.5	91.8	87.2
Current smoker (%)	1.7	51.5	20.1
Weekly drinker (%)	2.0	28.9	11.9
Physical activity (MET-h/day)	18.1	19.4	18.6
Energy intake (kcal/day)	1525.1	1862.7	1649.8
Family history of diabetes (%)	9.0	9.8	9.5
BMI (kg/m^2)	24.2	24.0	24.1
Waist circumference (cm)	83.0	86.1	84.1

Abbreviations: CNY, unit of Chinese money Yuan; MET, metabolic equivalent; BMI, body mass index.

Table S2. Mean intakes of food and beverage groups according to quintiles of dietary pattern scores in the second res-urvey of China Kadoorie Biobank ($n = 17,318$).

Food and beverage intake, g/week	Dietary pattern 1					Dietary pattern 2				
	Q1 (Low)	Q2	Q3	Q4	Q5	Q1 (Low)	Q2	Q3	Q4	Q5
Rice	665.3	1410.5	2019.3	1857.9	1618.3	2228.4	1728.2	1361.8	1078.6	1174.6
Wheat	1672.5	720.5	298.7	160.1	148.0	227.5	414.5	656.6	818.2	882.9
Other staples	519.4	357.3	154.9	123.8	209.9	31.2	78.8	218.5	445.0	591.8
Meat	222.7	334.2	347.1	427.2	614.1	331.3	377.7	360.7	379.3	496.4
Poultry	54.3	60.6	79.1	90.2	192.8	35.7	55.8	79.1	100.3	206.0
Fish	64.6	99.1	119.6	135.8	287.3	35.7	74.0	110.0	138.3	348.4
Eggs	253.6	232.1	179.5	161.3	191.7	210.1	190.5	208.8	205.5	203.3
Fresh vegetables	1691.7	1417.4	1490.7	1565.1	1893.0	1120.8	1411.2	1603.3	1728.2	2194.1
Fresh fruit	538.2	506.1	515.6	528.6	701.2	234.2	408.2	529.5	642.6	975.1
Preserved vegetables	103.1	84.5	107.0	93.0	88.1	78.2	91.5	89.2	94.5	122.3
Soybean	173.0	169.4	155.2	161.2	264.6	109.2	152.2	175.0	201.4	285.5
Dairy products	237.2	198.4	199.2	212.5	718.8	163.0	227.3	341.1	367.2	467.5
Beer	12.0	6.3	4.3	2.2	2.7	1.4	1.6	3.0	5.7	15.8
Rice wine	1.4	2.6	3.6	4.5	6.9	2.5	2.1	4.3	3.5	6.5
Wine	0.3	0.3	0.4	0.1	0.5	0.5	0.2	0.2	0.3	0.6
Heavy spirit ($\geq 40\%$)	45.1	29.1	19.3	9.7	8.3	49.9	14.8	13.5	14.6	18.7
Light spirit ($< 40\%$)	9.6	8.4	9.5	4.3	3.6	13.2	6.7	3.9	4.0	7.6
Green tea	7.4	8.4	7.5	6.0	6.7	2.4	4.4	6.2	7.8	15.1
Oolong tea	0.6	0.9	0.5	0.5	1.0	0.0	0.0	0.2	0.5	2.7
Black tea	1.2	1.7	1.1	0.5	0.3	1.2	1.1	0.9	0.7	0.9
Other tea	0.3	0.6	0.4	0.6	2.4	0.1	0.2	0.4	0.7	2.9

Table S3. Mean intake of food and beverage groups according to quintiles of dietary pattern scores in the China Kadoorie Biobank ($n = 479,207$).

Food and beverage intake, g/week	Dietary pattern 1					Dietary pattern 2				
	Q1 (Low)	Q2	Q3	Q4	Q5	Q1 (Low)	Q2	Q3	Q4	Q5
Rice	246.8	1029.3	1872.4	2105.5	1656.6	1875.8	1509.6	1183.5	1180.1	1135.7
Wheat	1747.2	1034.7	364.9	134.5	247.9	227.8	842.8	909.9	839.8	728.8
Other staples	524.4	330.2	57.3	35.4	84.9	32.8	62.9	398.2	413.7	134.3
Meat	121.0	293.1	311.6	297.0	472.6	294.5	226.3	213.3	291.8	466.7
Poultry	7.6	69.5	69.4	94.5	200.9	38.6	63.3	57.6	96.5	185.7
Fish	15.0	152.1	129.4	141.8	248.5	76.7	79.3	89.4	143.5	297.4
Eggs	177.3	223.2	172.5	151.0	145.5	165.2	159.0	175.8	167.8	201.3
Fresh vegetables	1549.0	1819.4	1554.4	1516.4	1737.1	1400.2	1421.5	1661.6	1747.2	1948.8
Fresh fruit	310.6	550.5	341.5	265.7	570.2	184.3	317.5	303.8	429.8	803.6
Preserved vegetables	150.3	151.7	164.9	163.2	111.9	132.2	195.4	148.2	137.3	128.5
Soybean	69.2	204.3	168.8	169.2	200.7	129.4	145.8	127.9	166.1	241.1
Dairy products	40.9	316.6	178.0	52.3	353.3	29.5	55.0	136.1	274.2	444.6
Beer	4.5	11.7	2.0	0.9	1.2	0.0	0.1	0.8	3.1	16.4
Rice wine	0.0	1.0	2.8	4.2	8.9	0.3	2.2	4.4	5.7	4.3
Wine	0.0	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1
Heavy spirit ($\geq 40\%$)	28.2	56.7	26.5	5.9	2.6	74.1	13.2	12.0	8.6	10.3
Light spirit ($< 40\%$)	10.3	17.9	10.8	4.7	4.6	14.3	8.1	10.2	9.1	6.3
Green tea	5.2	8.3	8.5	5.8	4.7	5.6	4.4	4.9	5.6	12.1
Oolong tea	0.1	0.2	0.3	0.5	0.9	0.0	0.0	0.0	0.1	1.8
Black tea	0.5	2.4	1.5	0.5	0.3	0.9	2.0	1.5	0.3	0.4
Other tea	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1

Table S4. Hazard ratios (HRs) and 95% confidence intervals (CIs) of diabetes according to quintiles of dietary pattern scores of participants without diabetes incidence occurring in the first two years of follow-up in the China Kadoorie Biobank (n = 473,340) ¹.

	Quintiles of dietary pattern scores					P for trend
	Q1 (Low)	Q2	Q3	Q4	Q5 (High)	
	Dietary pattern 1					
Cases	1,548	3,145	4,431	4,734	3,286	
Incidence rate (/1000 person-yr)	1.46	3.17	4.33	4.52	3.27	
Model 1	1.00 (Reference)	1.17 (1.07, 1.28)	1.23 (1.11, 1.37)	1.23 (1.10, 1.37)	1.15 (1.01, 1.29)	0.044
Model 2	1.00 (Reference)	1.15 (1.05, 1.27)	1.19 (1.07, 1.33)	1.17 (1.05, 1.32)	1.07 (0.95, 1.22)	0.432
	Dietary pattern 2					
Cases	4,291	3,808	3,036	2,963	3,046	
Incidence rate (/1000 person-yr)	4.19	3.62	2.97	2.91	3.01	
Model 1	1.00 (Reference)	1.13 (1.07, 1.19)	1.19 (1.12, 1.27)	1.27 (1.17, 1.37)	1.54 (1.40, 1.69)	<0.001
Model 2	1.00 (Reference)	1.10 (1.05, 1.16)	1.15 (1.08, 1.23)	1.22 (1.13, 1.32)	1.48 (1.34, 1.63)	<0.001

¹Quintile 1 is the reference category based on Cox proportional regression models and stratified by year of birth (5 years in each category) and sites (10 region sites). Model 2: adjusted for gender, education attainment (no formal school, primary school, middle school, high school, or college/university), marital status (yes or no), and household income (<2500, 2500-4999, 5000-9999, 10000-19999, 20000-34999, ≥35000 CNY/year), smoking status (never, occasional, former, current), alcohol consumption (never regular drinkers, ex-regular drinkers, occasional drinkers, monthly drinkers, reduced drinkers, weekly drinkers), physical activity (MET-h/day), total energy intake (kcal/day), family history of diabetes (yes or no). Test for trend across quintiles were performed by entering median values of quintile categories of each dietary pattern. Q, quintile; CNY, unit of Chinese money Yuan; MET, metabolic equivalent.

Table S5. Hazard ratios (HRs) and 95% confidence intervals (CIs) of diabetes incidence according to quintiles of dietary pattern-1 stratified by gender, age, region, smoking, physical activity, BMI and central obesity groups of participants in the China Kadoorie Biobank (*n* = 479,207)

	Q1 (Low)		Q2		Q3		Q4		Q5		P _{inter}
	N	HR	N	HR (95% CI)	N	HR (95% CI)	N	HR (95% CI)	N	HR (95% CI)	
Gender											
Male	906	1.0 0	1,71 4	0.95 (0.83, 1.08)	1,91 9	1.00 (0.87, 1.16)	1,32 3	0.99 (0.85, 1.15)	1,36 4	0.97 (0.82, 1.14)	0.141
Female	729	1.0 0	1,64 7	1.24 (1.07, 1.42)	2,90 1	1.28 (1.08, 1.52)	3,97 7	1.25 (1.05, 1.49)	2,19 7	1.12 (0.93, 1.36)	
Age (years)											
< 50	714	1.0 0	1,16 8	1.08 (0.93, 1.24)	1,34 5	0.97 (0.82, 1.16)	1,65 2	1.00 (0.84, 1.20)	1,06 8	0.93 (0.76, 1.13)	<0.001
≥ 50	921	1.0 0	2,19 3	1.24 (1.10, 1.39)	3,47 5	1.34 (1.17, 1.53)	3,64 8	1.31 (1.14, 1.50)	2,49 3	1.18 (1.01, 1.37)	
Rural											
No	1335	1.0 0	1,23 7	1.33 (1.18, 1.50)	3,76 7	1.36 (1.18, 1.58)	3,86 5	1.31 (1.12, 1.52)	481	1.27 (1.06, 1.51)	<0.001
Yes	300	1.0 0	2,12 4	1.00 (0.88, 1.13)	1,05 3	1.01 (0.87, 1.17)	1,43 5	1.05 (0.89, 1.24)	3,08 0	0.94 (0.79, 1.11)	
Southern											
No	1592	1.0 0	2,48 0	1.19 (1.08, 1.31)	578	1.08 (0.93, 1.24)	56	0.94 (0.70, 1.26)	15	1.42 (0.85, 2.38)	0.056

Yes	43	1.0 0	881	0.96 (0.71, 1.30)	4,24 2	1.03 (0.76, 1.39)	5,24 4	1.01 (0.74, 1.36)	3,54 6	0.93 (0.68, 1.26)	
Current Smoking											
No	1,05 0	1.0 0	2,22 5	1.23 (1.10, 1.38)	3,48 9	1.26 (1.10, 1.44)	4,42 0	1.23 (1.07, 1.42)	2,86 4	1.10 (0.94, 1.28)	0.382
Yes	585	1.0 0	1,13 6	0.95 (0.81, 1.11)	1,33 1	1.00 (0.84, 1.19)	880	0.99 (0.82, 1.19)	697	1.02 (0.83, 1.25)	
Physical activity											
Low	541	1.0 0	1,57 5	1.18 (1.04, 1.35)	1,65 7	1.20 (1.02, 1.42)	1,52 7	1.16 (0.98, 1.38)	1,65 2	1.01 (0.83, 1.23)	0.003
Medium	511	1.0 0	1,04 1	1.10 (0.94, 1.30)	1,70 5	1.12 (0.92, 1.35)	1,77 3	1.10 (0.91, 1.34)	1,16 3	1.03 (0.83, 1.28)	
High	583	1.0 0	745	1.07 (0.88, 1.31)	1,45 8	1.14 (0.92, 1.42)	2,00 0	1.19 (0.95, 1.48)	746	1.10 (0.87, 1.40)	
BMI (kg/m²)											
< 24	517	1.0 0	821	1.14 (0.94, 1.38)	1,74 4	1.21 (0.98, 1.49)	1,98 2	1.23 (0.99, 1.53)	1,09 1	1.12 (0.88, 1.42)	0.571
24-28	681	1.0 0	1,48 0	1.22 (1.07, 1.41)	2,02 8	1.24 (1.05, 1.45)	2,29 3	1.28 (1.09, 1.51)	1,69 3	1.25 (1.04, 1.51)	
≥ 28	437	1.0 0	1,06 0	1.17 (1.00, 1.37)	1,04 8	1.30 (1.07, 1.57)	1,02 5	1.24 (1.01, 1.52)	777	1.15 (0.91, 1.45)	
Central obesity											
No	325	1.0	795	1.27 (1.02,	1,08	1.35 (1.06,	1,05	1.25 (0.97,	671	1.15 (0.87,	0.350

	0		1.59)		4	1.72)	6	1.60)	1.53)	
Yes	1,31	1.0	2,56	1.20 (1.09,	3,73	1.26 (1.12,	4,24	1.27 (1.12,	2,89	1.19 (1.04,
	0	0	6	1.33)	6	1.42)	4	1.43)	0	1.36)

¹ Quintile 1 is the reference category and the model is adjusted for gender, education attainment, marital status, household income, smoking status, alcohol consumption, physical activity, total energy intake, and family history of diabetes. Q, quintile.

Table S6. Hazard ratios (HRs) and 95% confidence intervals (CIs) of diabetes incidence according to quintiles of dietary pattern-2 stratified by gender, age, region, smoking, physical activity, BMI and central obesity groups of participants in the China Kadoorie Biobank (n=479,207)

	Q1 (Low)		Q2		Q3		Q4		Q5		P _{inter}
	N	HR	N	HR (95% CI)	N	HR (95% CI)	N	HR (95% CI)	N	HR (95% CI)	
Gender											
Male	1,500	1.0	1,479	1.15 (1.06, 1.25)	1,248	1.18 (1.07, 1.30)	1,351	1.26 (1.13, 1.41)	1,648	1.40 (1.22, 1.60)	<0.001
Female	3,174	1.0	2,833	1.09 (1.02, 1.16)	2,034	1.07 (0.98, 1.17)	1,808	1.17 (1.05, 1.31)	1,602	1.40 (1.21, 1.61)	
Age (years)											
< 50	1,083	1.0	1,553	1.12 (1.02, 1.23)	1,083	1.05 (0.94, 1.18)	1,092	1.14 (1.00, 1.30)	1,136	1.29 (1.10, 1.52)	0.588
≥ 50	3,591	1.0	2,759	1.08 (1.02, 1.14)	2,199	1.15 (1.06, 1.24)	2,067	1.19 (1.08, 1.31)	2,114	1.47 (1.31, 1.66)	
Rural											
No	4,538	1.0	3,845	1.09 (1.03, 1.15)	1,582	1.10 (1.02, 1.19)	676	1.22 (1.09, 1.37)	44	1.69 (1.25, 2.28)	0.710
Yes	136	1.0	467	0.96 (0.79, 1.16)	1,700	1.05 (0.88, 1.25)	2,483	1.08 (0.91, 1.30)	3,206	1.29 (1.07, 1.55)	
Southern											
No	92	1.0	601	1.07 (0.85, 1.33)	1,228	1.11 (0.90, 1.39)	1,563	1.15 (0.92, 1.43)	1,237	1.39 (1.09, 1.77)	0.236

Yes	4,582	1.00	3,711	1.11 (1.05, 1.17)	2,054	1.15 (1.07, 1.23)	1,596	1.23 (1.12, 1.34)	2,013	1.50 (1.34, 1.68)	<0.001
Current Smoking											
No	3,474	1.00	3,334	1.09 (1.03, 1.15)	2,500	1.12 (1.03, 1.21)	2,346	1.18 (1.08, 1.30)	2,394	1.47 (1.31, 1.66)	
Yes	1,200	1.00	978	1.14 (1.04, 1.26)	782	1.12 (1.00, 1.26)	813	1.26 (1.10, 1.45)	856	1.33 (1.13, 1.57)	0.021
Physical activity											
Low	1,654	1.00	1,074	1.10 (1.00, 1.20)	1,232	1.07 (0.95, 1.20)	1,404	1.08 (0.95, 1.22)	1,588	1.31 (1.13, 1.53)	
Medium	1,702	1.00	1,371	1.09 (1.00, 1.19)	1,006	1.13 (1.01, 1.26)	1,022	1.30 (1.14, 1.49)	1,092	1.63 (1.38, 1.93)	
High	1,318	1.00	1,867	1.10 (1.01, 1.19)	1,044	1.15 (1.04, 1.29)	733	1.20 (1.05, 1.38)	570	1.38 (1.14, 1.67)	0.002
BMI (kg/m²)											
< 24	2,048	1.00	1,575	1.04 (0.96, 1.13)	957	1.10 (0.99, 1.22)	812	1.15 (1.00, 1.32)	763	1.37 (1.15, 1.63)	
24-28	1,852	1.00	1,919	1.05 (0.97, 1.13)	1,481	0.99 (0.90, 1.09)	1,401	0.97 (0.87, 1.09)	1,522	1.16 (1.00, 1.33)	
≥ 28	774	1.00	818	1.00 (0.89, 1.12)	844	0.96 (0.84, 1.10)	946	1.02 (0.87, 1.18)	965	1.02 (0.84, 1.23)	0.122
Central obesity											
No	944	1.00	984	1.04 (0.94, 1.14)	675	1.08 (0.94, 1.23)	637	1.04 (0.88, 1.20)	691	1.29 (1.05, 1.53)	

	0		1.16)		1.24)		1.23)		1.60)	
Yes	3,73	1.0	3,32	1.10 (1.04,	2,60	1.10 (1.02,	2,52	1.17 (1.08,	2,55	1.33 (1.20,
	0	0	8	1.16)	7	1.18)	2	1.28)	9	1.48)

¹ Quintile 1 is the reference category and the model is adjusted for gender, education attainment, marital status, household income, smoking status, alcohol consumption, physical activity, total energy intake, and family history of diabetes. Q, quintile.

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