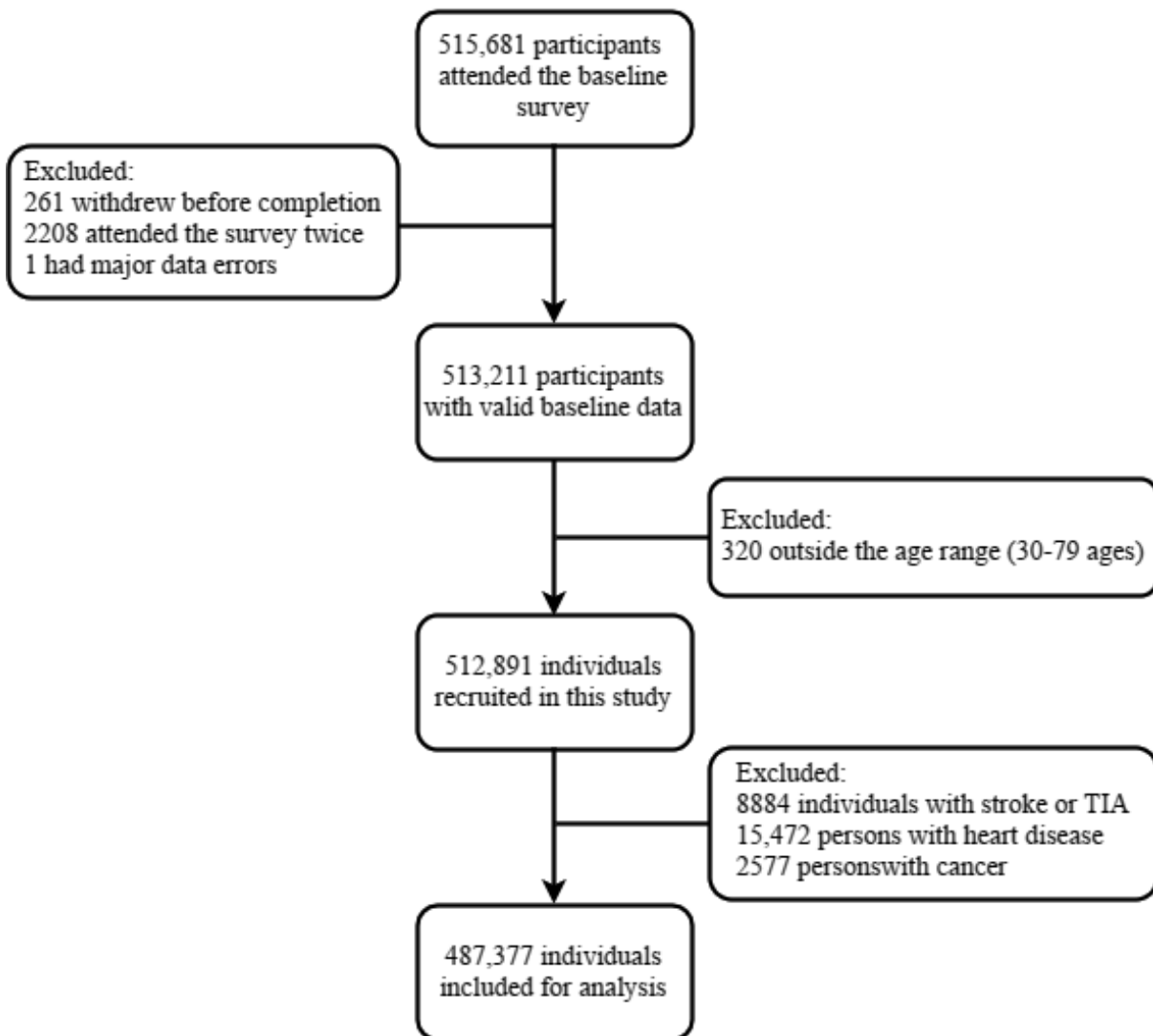


Tea consumption and risk of stroke in Chinese adults: a prospective cohort study of 0.5 million men and women-----Tian Tian et al.-----Online Supplemental Material



Supplemental Figure 1. Participant flowchart

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Supplemental Table 1. Baseline tea consumption characteristics of tea consumers.¹

Characteristics of tea consumption ²	All subjects	Men	Women
Total tea consumers (n)	317,043	160,934	156,109
Daily tea consumers (n)	128,280	82,467	45,813
Daily tea drinkers among participants (%)	26.3	41.4	15.9
Commonly consumed tea type for daily tea consumers ³			
Green tea (%)	86.7	82.4	92.1
Non-green tea (%)	13.4	17.6	7.9
Duration of tea consumption for daily tea consumers (years)	24.77	25.11	24.15
Amount of tea consumption for daily tea consumers (grams/day)	4.26	4.78	3.33
Amount of tea consumption for daily tea consumers (gram-years)	104.00	117.00	81.00

¹ The results were presented as the means or percentages, which were adjusted for age, gender and residential regions, as appropriate. *P* values calculated by analysis using either multiple linear regression (for continuous outcomes) or logistic regression (for binary outcomes) and the differences were statistically significant between men and women for all characteristics of tea consumption ($P<0.001$).

² Commonly consumed tea type and other characteristics (duration and amount of tea consumed) were calculated only among daily tea consumers.

³ Non-green tea included black tea, oolong tea, and other types of tea.

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Supplemental Table 2. Association of tea consumption with stroke risk according to the duration and amount of tea consumption among male participants.

Variables of tea consumption ¹	Total stroke ²		Ischemic stroke		Hemorrhagic stroke	
	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴
Never	1.00		1.00		1.00	
Duration of tea consumption (years)		<0.001		<0.001		<0.001
<19	0.93(0.87, 0.99)		0.95(0.88, 1.02)		0.82(0.71, 0.94)	
19-30	0.84(0.78, 0.90)		0.84(0.78, 0.91)		0.79(0.68, 0.92)	
>30	0.91(0.85, 0.96)		0.92(0.85, 0.99)		0.79(0.69, 0.91)	
Amount of tea consumption (grams/day)		<0.001		0.002		<0.001
<2	0.91(0.86, 0.97)		0.90(0.84, 0.97)		0.86(0.75, 0.98)	
2-4	0.89(0.84, 0.95)		0.92(0.86, 0.99)		0.76(0.66, 0.87)	
>4	0.89(0.84, 0.95)		0.90(0.84, 0.97)		0.78(0.68, 0.90)	
Amount of tea consumption (gram-years)		<0.001		<0.001		<0.001
<46	0.94(0.88, 0.997)		0.96(0.89, 1.03)		0.84(0.73, 0.97)	
46-105	0.88(0.83, 0.94)		0.89(0.83, 0.96)		0.80(0.69, 0.91)	
>105	0.88(0.83, 0.93)		0.89(0.83, 0.95)		0.77(0.68, 0.88)	

Values obtained with a Cox proportional hazards analysis.

¹ Variables of tea consumption (duration and amount of tea consumed) were only calculated among daily tea consumers.

² Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

³ Adjusted for age, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

⁴ *P*_{trend}, *P* for linear trend test.

HR, hazard ratio; 95% CI, 95% confidence interval.

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Supplemental Table 3. Association of tea consumption with stroke risk according to the duration and amount of tea consumption among female participants.

Variables of tea consumption ¹	Total stroke ²		Ischemic stroke		Hemorrhagic stroke	
	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴
Never	1.00		1.00		1.00	
Duration of tea consumption (years)		0.345		0.581		0.259
<19	0.98(0.91, 1.05)		0.98(0.90, 1.06)		0.97(0.82, 1.14)	
19-30	1.04(0.93, 1.15)		1.04(0.93, 1.19)		1.00(0.79, 1.27)	
>30	0.92(0.83, 1.03)		0.94(0.84, 1.06)		0.82(0.65, 1.05)	
Amount of tea consumption (grams/day)		0.214		0.302		0.393
<2	1.01(0.95, 1.09)		1.04(0.96, 1.12)		0.94(0.80, 1.10)	
2-4	0.93(0.86, 1.01)		0.92(0.84, 1.00)		0.96(0.81, 1.14)	
>4	0.96(0.86, 1.07)		0.96(0.85, 1.09)		0.91(0.71, 1.16)	
Amount of tea consumption (gram-years)		0.354		0.62		0.316
<46	0.97(0.91, 1.04)		0.97(0.89, 1.04)		0.97(0.83, 1.13)	
46-105	1.01(0.93, 1.10)		1.05(0.96, 1.16)		0.90(0.74, 1.09)	
>105	0.94(0.86, 1.04)		0.95(0.86, 1.06)		0.91(0.74, 1.12)	

Values obtained with a Cox proportional hazards analysis.

¹ Variables of tea consumption (duration and amount of tea consumed) were only calculated among daily tea consumers.

² Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

³ Adjusted for age, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

⁴ *P*_{trend}, *P* for linear trend test.

HR, hazard ratio; 95% CI, 95% confidence interval.

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Supplemental Table 4. Association of frequency of tea consumption with the risk of stroke according to types of tea.

Type of tea	Stroke type	No. of participants	Frequency of Tea Consumption				<i>P</i> _{trend} ³
			Never	Occasional	Weekly	Daily	
Green tea	No. of participants	462,752	170,334	153,122	29,341	109,955	
	No. of person years	4,070,801	1,492,052	1,353,461	260,417	964,871	
	No. of cases	36,827	16,283	10,628	1860	8056	
	HR (95% CI) ¹						
	Total stroke ²		1.00	0.96(0.93, 0.99)	0.90(0.86, 0.95)	0.89(0.86, 0.92)	<0.001
	Ischemic stroke		1.00	0.96(0.93, 0.98)	0.91(0.86, 0.97)	0.90(0.86, 0.94)	<0.001
	Hemorrhagic stroke		1.00	0.95(0.89, 1.02)	0.84(0.74, 0.94)	0.84(0.78, 0.91)	<0.001
Non-green tea	No. of participants	348,081	170,334	153,122	6300	18,325	
	No. of person years	3,064,296	1,492,052	1,353,461	56,356	162,427	
	No. of cases	28,811	16,283	10,628	481	1419	
	HR (95% CI) ¹						
	Total stroke ²		1.00	0.95(0.93, 0.98)	1.12(1.01, 1.23)	1.04(0.97, 1.12)	0.457
	Ischemic stroke		1.00	0.95(0.92, 0.98)	1.09(0.98, 1.21)	1.04(0.97, 1.13)	0.460
	Hemorrhagic stroke		1.00	0.95(0.88, 1.01)	1.29(0.99, 1.66)	1.01(0.84, 1.20)	0.549

Values obtained with a Cox proportional hazards analysis.

¹ Adjusted for age, gender, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

² Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

³ *P*_{trend}, *P* for linear trend test.

HR, hazard ratio; 95% CI, 95% confidence interval.

Supplemental Table 5. Association of green tea consumption with stroke risk according to the duration and amount of tea consumption.

Variables of tea consumption ¹	Total stroke ²		Ischemic stroke		Hemorrhagic stroke	
	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴
Never	1.00		1.00		1.00	
Duration of tea consumption (years)		<0.001		<0.001		<0.001
<19	0.92(0.87, 0.97)		0.93(0.88, 0.99)		0.86(0.77, 0.97)	
19-30	0.87(0.82, 0.92)		0.88(0.82, 0.94)		0.82(0.72, 0.94)	
>30	0.89(0.84, 0.94)		0.90(0.84, 0.96)		0.77(0.68, 0.88)	
Amount of tea consumption (grams/day)		<0.001		<0.001		<0.001
<2	0.93(0.89, 0.98)		0.95(0.89, 1.00)		0.86(0.77, 0.96)	
2-4	0.87(0.82, 0.91)		0.88(0.83, 0.94)		0.79(0.70, 0.88)	
>4	0.89(0.84, 0.94)		0.89(0.84, 0.95)		0.81(0.71, 0.92)	
Amount of tea consumption (gram-years)		<0.001		<0.001		<0.001
<46	0.92(0.88, 0.97)		0.93(0.88, 0.99)		0.87(0.78, 0.97)	
46-105	0.90(0.85, 0.95)		0.92(0.86, 0.98)		0.80(0.71, 0.90)	
>105	0.87(0.82, 0.91)		0.88(0.82, 0.93)		0.78(0.70, 0.88)	

Values obtained with a Cox proportional hazards analysis.

¹ Variables of tea consumption (duration and amount of tea consumed) were only calculated among daily tea consumers.

² Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

³ Adjusted for age, gender, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

⁴ *P*_{trend}, *P* for linear trend test.

HR, hazard ratio; 95% CI, 95% confidence interval.

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Supplemental Table 6. Association of non-green tea consumption with stroke risk according to the duration and amount of tea consumption.

Variables of tea consumption ¹	Total stroke ²		Ischemic stroke		Hemorrhagic stroke	
	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴	HR (95%CI) ³	<i>P</i> _{trend} ⁴
Never	1.00		1.00		1.00	
Duration of tea consumption (years)		0.131		0.113		0.848
<19	1.12(1.02, 1.23)		1.12(1.01, 1.25)		1.03(0.78, 1.37)	
19-30	0.99(0.86, 1.13)		0.98(0.84, 1.14)		1.08(0.77, 1.51)	
>30	1.07(0.95, 1.19)		1.09(0.96, 1.24)		1.00(0.77, 1.30)	
Amount of tea consumption (grams/day)		0.08		0.045		0.733
<2	1.05(0.94, 1.18)		1.02(0.90, 1.15)		1.18(0.90, 1.56)	
2-4	1.13(1.03, 1.26)		1.15(1.03, 1.28)		1.08(0.83, 1.42)	
>4	1.03(0.92, 1.16)		1.08(0.95, 1.23)		0.83(0.61, 1.11)	
Amount of tea consumption (gram-years)		0.126		0.098		0.942
<46	1.12(1.01, 1.24)		1.11(0.996, 1.24)		1.09(0.81, 1.46)	
46-105	1.04(0.92, 1.17)		1.05(0.92, 1.20)		1.04(0.77, 1.41)	
>105	1.06(0.95, 1.18)		1.08(0.95, 1.22)		0.98(0.75, 1.27)	

Values obtained with a Cox proportional hazards analysis.

¹ Variables of tea consumption (duration and amount of tea consumed) were only calculated among daily tea consumers.

² Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

³ Adjusted for age, gender, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

⁴ *P*_{trend}, *P* for linear trend test.

HR, hazard ratio; 95% CI, 95% confidence interval.

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Supplemental Table 7. Association of tea consumption with stroke risk among non-current drinkers/smokers for males.

Population for analysis	No. of participants	Frequency of tea consumption				P_{trend}^3
		Never	Occasional	Weekly	Daily	
Non-current smokers						
No. of participants	75,513	19,509	25,367	7320	23,317	
No. of person years	646,115	162,650	218,427	63,818	201,220	
No. of cases	7668	2651	2286	559	2172	
Model 1 ¹		1.00	0.93(0.88, 0.99)	0.86(0.79, 0.95)	0.91(0.86, 0.97)	0.005
Model 2 ²		1.00	0.95(0.89, 1.00)	0.87(0.79, 0.96)	0.89(0.84, 0.96)	0.001
Non-current drinkers						
No. of participants	109,596	25,336	32,446	9301	42,513	
No. of person years	940,227	211,010	280,669	80,909	367,639	
No. of cases	10,458	3386	2770	713	3589	
Model 1 ¹		1.00	0.92(0.87, 0.97)	0.89(0.81, 0.97)	0.87(0.82, 0.92)	<0.001
Model 2 ²		1.00	0.94(0.89, 0.995)	0.90(0.83, 0.98)	0.86(0.81, 0.92)	<0.001

Values obtained with a Cox proportional hazards analysis.

¹ Model 1: Hazard ratio (95% confidence interval) was achieved after adjusted for age and gender.

² Model 2: Hazard ratio (95% confidence interval) was achieved after adjusted for age, gender, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

³ P_{trend} , P for linear trend test.

Supplemental Table 8. Association of tea consumption with stroke risk among participants over forty.

Stroke type	Frequency of tea consumption				P_{trend}^4
	Never	Occasional	Weekly	Daily	
No. of participants	145,946	123,824	28,475	111,671	
No. of person years	1,264,798	1,082,395	250,146	971,899	
Total stroke ¹					
No. of cases	15,926	10,218	2236	9234	
Model 1 ²	1.00	0.95(0.93, 0.98)	0.94(0.90, 0.98)	0.94(0.91, 0.97)	<0.001
Model 2 ³	1.00	0.96(0.93, 0.99)	0.94(0.89, 0.98)	0.91(0.88, 0.95)	<0.001
Ischemic stroke					
No. of cases	13,037	8115	1723	6662	
Model 1 ²	1.00	0.96(0.93, 0.98)	0.95(0.90, 1.01)	0.96(0.92, 0.995)	0.022
Model 2 ³	1.00	0.96(0.93, 0.98)	0.94(0.89, 0.99)	0.92(0.88, 0.95)	<0.001
Hemorrhagic stroke					
No. of cases	2337	1727	422	2175	
Model 1 ²	1.00	0.92(0.85, 0.98)	0.85(0.76, 0.95)	0.85(0.79, 0.92)	<0.001
Model 2 ³	1.00	0.96(0.89, 1.02)	0.89(0.79, 0.99)	0.86(0.80, 0.93)	<0.001

Values obtained with a Cox proportional hazards analysis.

¹ Including hemorrhagic stroke, ischemic stroke and stroke of unknown type.

² Model 1: Hazard ratio (95% confidence interval) was achieved after adjusted for age and gender.

³ Model 2: Hazard ratio (95% confidence interval) was achieved after adjusted for age, gender, marital status, education, annual household income, smoking status, alcohol consumption, physical activity, BMI, history of hypertension, history of diabetes, intake frequencies of red meat, fresh fruits and fresh vegetables, and family history of stroke.

⁴ P_{trend} , P for linear trend test.

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