

### Supplementary Material

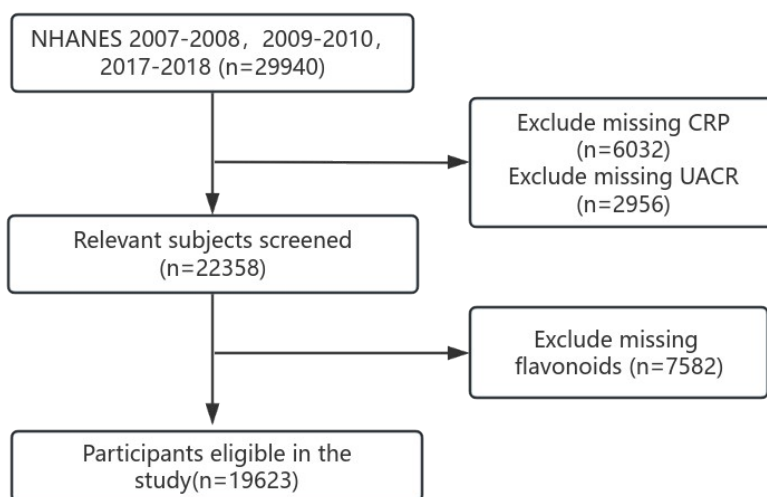


Fig. S1 Flow chart of participants selection.

Table S1 Flavonoids in the Flavonoid Database from United States Department of Food and Nutrient Database for Dietary Studies (FNDDS).

<i>CLASS</i>	<i>name</i>
<i>Anthocyanidins</i>	Cyanidin
	Delphinidin
	Malvidin
	Pelargonidin
	Peonidin
	Petunidin
<i>Flavan-3-ols</i>	Catechins
	(-)-Epicatechin
	(-)-Epicatechin 4-gallate
	(-)-Epigallocatechin
	(-)-Epigallocatechin 4-gallate
	(+)-Catechin
	(+)-Gallocatechin
	Theaflavin
	Theaflavin-3,4'-digallate
	Theaflavin-4'-gallate
	Theaflavin-4-gallate
	Thearubigins
	<i>Flavanones</i>
Hesperetin	
Naringenin	
<i>Flavones</i>	Apigenin
	Luteolin
<i>Flavonols</i>	Isorhamnetin
	Kaempferol
	Myricetin
	Quercetin
<i>Isoflavones</i>	Daidzein
	Genistein
	Glycitein

Table S2. Multivariate logistic regression analysis of Log10-transformed flavonoids for the prevalence of albuminuria

	Continuous	Q1	Q2	Q3	Q4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Log10 Tota flavonoids (mg)	0.92 (0.90, 0.95)***	1.00 (reference)	0.99 (0.88, 1.12)	0.90(0.80, 1.02)	0.73(0.65, 0.83)***
Log10 Flavonols (mg)	0.88(0.85, 0.91)***	1.00 (reference)	0.85 (0.75, 0.95)***	0.76 (0.68, 0.86)***	0.66 (0.58, 0.75)***
Log10 Flavones (mg)	0.93(0.90, 0.96)***	1.00 (reference)	0.80 (0.71, 0.91)***	0.77(0.67, 0.87)***	0.76(0.66, 0.86)***
Log10 Flavanones (mg)	1.00(0.97, 1.02)	1.00 (reference)	0.90(0.77, 1.06)	0.87(0.74, 1.02)	1.00(0.85, 1.17)
Log10 Flavan 3-ols (mg)	0.96(0.94, 0.98)***	1.00 (reference)	0.97(0.85, 1.09)	0.89(0.79, 1.01)	0.78 (0.68, 0.88)***
Log10 Anthocyanidins (mg)	0.97 (0.95, 0.99) *	1.00 (reference)	0.96 (0.82, 1.12)	0.92 (0.79, 1.07)	0.89 (0.76, 1.04)
Log10 Isoflavones (mg)	0.99 (0.96, 1.02)	1.00 (reference)	0.88 (0.73, 1.07)	0.96 (0.80,1.17)	0.94 (0.78, 1.14)
Log10 Subtotal: Catechins (mg)	0.95 (0.93, 0.97)***	1.00 (reference)	0.97 (0.85, 1.09)	0.92 (0.81, 1.04)	0.77(0.67, 0.87)***

Models were adjusted for sex, age, race education, family income marital status, body mass index, drinking alcohol status, and smoke status. Continuous, Q, quartile; \* P < 0.05, \*\* P < 0.01, and \*\*\* P < 0.001.

Table S3 CRP as mediators in the log10-transformed favonoid subclass intake and urine protein-creatinine ratio

	effect	$\beta$	P	LLCI	ULCI	Estimation%
	Total	-0.041	<0.01	-0.050	-0.032	
flavonoids	Direct	-0.038	<0.01	-0.047	-0.028	92.7%
	Indirect	-0.003	<0.01	-0.040	-0.020	7.3%
	Total	-0.071	<0.01	-0.084	-0.058	
Flavonols	Direct	-0.067	<0.01	-0.080	-0.054	94.4%
	Indirect	-0.004	<0.01	-0.005	-0.003	5.6%
	Total	-0.044	<0.01	-0.056	-0.034	
flavones	Direct	-0.043	<0.01	-0.054	-0.032	97.7%
	Indirect	-0.001	<0.01	-0.002	-0.001	2.3%
	Total	-0.022	<0.01	-0.029	-0.015	
flavan3-ols	Direct	-0.021	<0.01	-0.029	-0.015	95.4%
	Indirect	-0.001	<0.01	-0.001	0.000	4.6%
	Total	-0.016	<0.01	-0.025	-0.008	
anthocyanidins	Direct	-0.016	<0.01	-0.025	-0.008	100.0%
	Indirect	0.000	0.192	-0.001	0.000	0.0%
	Total	-0.026	<0.01	-0.035	-0.019	
catechin	Direct	-0.024	<0.01	-0.019	-0.017	92.3%
	Indirect	-0.002	<0.01	-0.003	-0.001	7.7%
	Total	-0.008	0.072	-0.017	0.001	
isoflavones	Direct	-0.008	0.085	-0.017	0.001	
	Indirect	0.000	0.433	-0.001	0.001	
	Total	-0.001	0.866	-0.008	0.007	
flavanones	Direct	0.001	0.73	-0.006	0.009	
	Indirect	-0.002	<.001	-0.003	-0.001	