

Supplementary Table 1. Summary of the main characteristics and findings of recent studies on diet quality in relation to hyperuricemia and/or gout

Reference	Author, country of study, population	Publication year	Study period	Study design	Participants, total/man/woman	Mean age (yr)	Serum uric acid cut-off for hyperuricemia (mg/dL)	Hyperuricemia prevalence	Diet quality assessment	Main finding	Sex-specific associations between diet quality and hyperuricemia
[18]	Nie et al., USA	2022	2007~2016	Cross-sectional	23,109/11,438 /11,671	Not provided	Men: >7.0, women: >5.7	19.7%~21.6%	HEI	A higher HEI score was associated with a lower risk of gout (adjusted OR, 0.878; 95% CI, 0.876~0.880) and hyperuricemia (adjusted OR, 0.978; 95% CI, 0.976~0.979)	Not examined
[19]	Ye et al., China	2021	2009	Cross-sectional	7,880/3,628 /4,252	Men: 50.8, women: 50.6	Men: ≥7.0, women: ≥6.0	Men: 20.5%, women: 11.5%	DII	A higher DII score was associated with a higher risk of hyperuricemia (adjusted OR for the fourth quartile 0.73; 95% CI, 0.61~0.88)	Similar trends in both men and women
[20]	Rai et al., USA	2017	1986~2011	Prospective cohort	44,444/44,444 /0	Range: 40~75 in 1986	Not provided	Gout: 3.9%	DASH	A higher DASH score was associated with a lower risk for gout (adjusted RR for the fifth quintile 0.68; 95% CI, 0.57~0.80)	Not applicable (women not enrolled)
[21*]	Kontogianni et al., Greece	2012	2001~2002	Cross-sectional	3,042/1,514/1,528	Men: 46, women: 45	Men: >7.0, women: >6.0	Men: 4.6%, women: 2.6%	MedDietScore	MedDietScore was inversely associated with hyperuricemia (adjusted OR for the fourth quartile 0.30; 95% CI, 0.11~0.82)	Significant association in women, not in men
[28]	Juraschek et al., USA	2016	1997~1999	Randomized, crossover trial	103/57/46	51.5	≥7.0	7.8%	DASH	A DASH diet reduced serum uric acid levels (-0.35 mg/dL; 95% CI, -0.65 to -0.05), with a more pronounced effect among participants with baseline hyperuricemia (-1.29 mg/dL; 95% CI, -2.50 to -0.08)	Larger decrease of serum uric acid in men (-0.67 mg/dL) than in women (-0.09 mg/dL)

Supplementary Table 1. Continued

Reference	Author, country of study population	Publication year	Study period	Study design	Participants, total/male/female	Mean age (yr)	Serum uric acid cut-off for hyperuricemia (mg/dL)	Hyperuricemia prevalence	Diet quality assessment	Main finding	Sex-specific associations between diet quality and hyperuricemia
[30]	Yokose et al., USA	2022	1984~2018	Prospective cohort	89,039/0 /80,039	50.5 (at baseline)	Not defined	Gout: 4.9%	DASH, Mediterranean, AHEI	A healthy diet was associated with a lower risk of incident gout, with adjusted HRs 0.68 (95% CI, 0.61~0.76) (DASH), 0.88 (95% CI, 0.80~0.98) (Mediterranean), and 0.79 (95% CI, 0.71~0.89) (AHEI)	Not applicable (men not enrolled)
[31]	Wang et al., USA	2023	2011~2018	Cross-sectional	19,004/9,279/ 9,725	Not provided	Men: ≥ 7.0 , women: ≥ 6.0	Men: 24.5%, women: 17.3%	DII	A DII score was positively associated with serum uric acid levels and the risk of hyperuricemia (adjusted OR for the third tertile 1.29; 95% CI, 1.11~1.50)	Significant association in men and the BMI <30 subgroup in women
[32]	Rai et al., USA	2024	1984~2012	Prospective cohort	122,679/ 43,703/78,976	Men: 53.8, women: 50.9	Not defined	Gout: 2.2%	PDI	Unhealthy PDI was positively associated with the risk of gout (adjusted HR for the fifth quintile 1.17; 95% CI, 1.03~1.33)	Significant in women but not in men
Current	Lee et al., Korea	2026	2019~2021	Cross-sectional	14,305/6,131/ 8,174	Men: 47.1, women: 51.0	Men: ≥ 7.0 , women: ≥ 6.0	Men: 35.6%, women: 12.6%	HEI	Higher diet quality was independently associated with a lower risk of hyperuricemia in men (adjusted OR for the fourth quartile 0.76; 95% CI, 0.61~0.94) No significant protective effect in women	Significant in men but not in women

HEI: Healthy Eating Index, OR: odds ratio, CI: confidence interval, DII: Dietary Inflammation Index, DASH: Dietary Approaches to Stop Hypertension, RR: relative risk, MedDietScore: Mediterranean diet score, AHEI: Alternative Healthy Eating Index, HR: hazard ratio, BMI: body mass index, PDI: plant-based diet. *Participants with chronic diseases, such as coronary heart disease, cardiovascular disease, and chronic renal disease, were excluded