

Supplementary Data

Effects of low protein diet on modulating gut microbiota in patients with chronic kidney disease: a systematic review and meta-analysis of international studies

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Table S1: Search terms and search strategy.

Patients/Population	Intervention	Outcome	Combined
Patients with CKD	Low protein diet	Gut microbiota	search terms
PUBMED			
"renal insufficiency, chronic"[MeSH Terms] OR "chronic renal insufficiency"[All Fields] OR "chronic kidney disease"[All Fields] OR "CKD"[All Fields]	"diet, protein restricted"[MeSH Terms] OR "protein-restricted diet"[All Fields] OR "low-protein diet"[All Fields]	"microbiota"[MeSH Terms] OR "microbi- ota"[All Fields]	
EMBASE			
chronic kidney failure'/exp OR 'chronic kidney disease' OR 'chronic kidney disorder' OR 'chronic kidney failure' OR 'chronic kidney insufficiency' OR 'chronic nephropathy' OR 'chronic renal disease' OR 'chronic renal failure' OR 'chronic renal insufficiency' OR 'kidney chronic failure' OR 'kidney disease, chronic' OR 'kidney failure, chronic' OR 'kidney function, chronic disease' OR 'renal insufficiency, chronic'	protein restriction'/exp OR 'diet, protein poor' OR 'diet, protein-restricted' OR 'low protein diet' OR 'protein free diet' OR 'pro- tein poor diet' OR 'protein restricted diet' OR 'protein restriction' OR 'pro- tein-restricted diet'	'microflora'/exp OR 'microbiota'	Column 1 AND Column 2 AND Column 3

Abbreviation: CKD, chronic kidney disease.

Table S2: Changes of gut microbiota associated with low protein diet in the included studies.

Studies	LPD, n	LPD, mean	NPD, n	NPD, mean	p
<i>Family</i>					
Lactobacillaceae					
Di Iorio, 2019	60	0.127	60	0.052	0.047
Wu, 2020	16	0.0524	27	0.0106	0.123
Bacteroidaceae					
Di Iorio, 2019	60	0.023	60	0.0067	0.026
Wu, 2020	16	0.0958	27	0.1054	0.722
<i>Genus</i>					
Escherichia					
Jiang, 2020	12	0.0556	11	0.0204	0.404
Wu, 2020	16	0.036	27	0.049	0.462
<i>Species</i>					
Faecalibacterium prausnitzii					
Di Iorio, 2019	60	0.0219	60	0.025	0.275
Wu, 2020	16	0.0591	27	0.0462	0.242
Coprococcus eutactus					
Di Iorio, 2019	60	0.0016	60	0.0014	0.435
Wu, 2020	16	0.0141	27	0.0112	0.237
Streptococcus anginosus					
Di Iorio, 2019	60	0.0026	60	0.0005	0.035
Wu, 2020	16	0.0043	27	0.0008	0.004
Bacteroides eggerthii					
Di Iorio, 2019	60	0.001	60	0.0012	0.413
Wu, 2020	16	0.0003	27	0.0023	0.024
Blautia hydrogenotrophica					
Di Iorio, 2019	60	0	60	0.001	0.163
Wu, 2020	16	0.001	27	0.0007	0.560
Roseburia faecis					
Di Iorio, 2019	60	0.0038	60	0.0063	0.133
Wu, 2020	16	0.0149	27	0.0206	0.088

Abbreviation: LPD, low protein diet; NPD, normal-protein diet.