

Ernährungstherapie bei Nierenerkrankungen

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Literatur:

1. KDIGO (Kidney Disease: Improving Global Outcomes) (2013) KDIGO 2012 Clinical Practice Guideline for the Evaluation and management of Chronic Kidney Disease. *Kidney Int* 3: 1–150
2. Zhang QL, Rothenbacher D (2008) Prevalence of chronic kidney disease in population-based studies: systematic review. *BMC Public Health* 8: 117
3. Hallan SI, Ritz E, Lydersen S et al. (2009) Combining GFR and albuminuria to classify CKD improves prediction of ESRD. *J Am Soc Nephrol* 20: 1069–1077
4. Singh AK (2013) Protein Restriction and progression of chronic kidney disease. In: UpToDate. URL: www.uptodate.com/contents/protein-restriction-and-progression-of-chronic-kidney-disease?source=search_result&search=Protein+Restriction+and+progression+of+chronic+kidney+disease&selectedTitle=1%7E150
5. Rosman JB, Langer K, Brandl M et al. (1989) Protein-restricted diets in chronic renal failure: a four year follow-up shows limited indications. *Kidney Int Suppl* 27: S96–S102
6. Zeller K, Whittaker E, Sullivan L et al. (1991) Effect of restricting dietary protein on the progression of renal failure in patients with insulin-dependent diabetes mellitus. *N Engl J Med* 324: 78–84
7. Walker JD, Bending JJ, Dodds RA et al. (1989) Restriction of dietary protein and progression of renal failure in diabetic nephropathy. *Lancet* 2: 1411–1415
8. Ihle BU, Becker GJ, Whitworth JA et al. (1989) The effect of protein restriction on the progression of renal insufficiency. *N Engl J Med* 321: 1773–1777
9. Locatelli F, Alberti D, Graziani G et al. (1991) Prospective, randomised, multicentre trial of effect of protein restriction on progression of chronic renal insufficiency. Northern Italian Cooperative Study Group. *Lancet* 337: 1299–1304
10. Klahr S, Levey AS, Beck GJ et al. (1994) The effects of dietary protein restriction and blood-pressure control on the progression of chronic renal disease. Modification of Diet in Renal Disease Study Group. *N Engl J Med* 330: 877–884
11. Menon V, Kopple JD, Wang X et al. (2009) Effect of a very low-protein diet on outcomes: long-term follow-up of the Modification of Diet in Renal Disease (MDRD) Study. *Am J Kidney Dis* 53: 208–217
12. Levey AS, Greene T, Sarnak MJ et al. (2006) Effect of dietary protein restriction on the progression of kidney disease: long-term follow-up of the Modification of Diet in Renal Disease (MDRD) Study. *Am J Kidney Dis* 48: 879–888
13. D'Amico G, Gentile MG, Fellin G et al. (1994) Effect of dietary protein restriction on the progression of renal failure: a prospective randomized trial. *Nephrol Dial Transplant* 9: 1590–1594
14. Fouque D, Laville M, Boissel JP (2006) Low protein diets for chronic kidney disease in non diabetic adults. *Cochrane Database Syst Rev*: CD001892
15. Fink HA, Ishani A, Taylor BC et al. (2012) Screening for, monitoring, and treatment of chronic kidney disease stages 1 to 3: a systematic review for the U.S. Preventive Services Task Force and for an American College of Physicians Clinical Practice Guideline. *Ann Intern Med* 156: 570–581
16. Knight EL, Stampfer MJ, Hankinson SE et al. (2003) The impact of protein intake on renal function decline in women with normal renal function or mild renal insufficiency. *Ann Intern Med* 138: 460–467
17. Vegter S, Perna A, Postma MJ et al. (2012) Sodium intake, ACE inhibition, and progression to ESRD. *J Am Soc Nephrol* 23: 165–173
18. Jones-Burton C, Mishra SI, Fink JC et al. (2006) An in-depth review of the evidence linking dietary salt intake and progression of chronic kidney disease. *Am J Nephrol* 26: 268–275
19. Swift PA, Markandu ND, Sagnella GA et al. (2005) Modest salt reduction reduces blood pressure and urine protein excretion in black hypertensives: a randomized control trial. *Hypertension* 46: 308–312
20. Goraya N, Simoni J, Jo C, Wesson DE (2012) Dietary acid reduction with fruits and vegetables or bicarbonate attenuates kidney injury in patients with a moderately reduced glomerular filtration rate due to hypertensive nephropathy. *Kidney Int* 81: 86–93
21. de Brito-Ashurst I, Varaganam M, Raftery MJ, Yaqoob MM (2009) Bicarbonate supplementation slows progression of CKD and improves nutritional status. *J Am Soc Nephrol* 20: 2075–2084
22. Floege J, Kim JG, Ireland E et al. (2011) Serum iPTH, calcium and phosphate, and the risk of mortality in a European haemodialysis population. *Nephrol Dial Transplant* 26: 1948–1955
23. Tonelli M, Sacks F, Pfeffer M et al. (2005) Relation between serum phosphate level and cardiovascular event rate in people with coronary disease. *Circulation* 112: 2627–2633
24. Kandula P, Dobre M, Schold JD et al. (2011) Vitamin D supplementation in chronic kidney disease: a systematic review and meta-analysis of observational studies and randomized controlled trials. *Clin J Am Soc Nephrol* 6: 50–62
25. Palmer SC, McGregor DO, Craig JC et al. (2009) Vitamin D compounds for people with chronic kidney disease not requiring dialysis. *Cochrane Database Syst Rev*: CD008175
26. Herzog CA, Mangrum JM, Passman R. Treatment and Prevention of sudden cardiac arrest in dialysis patients. In: UpToDate. URL: www.uptodate.com/contents/treatment-and-prevention-of-sudden-cardiac-arrest-in-dialysis-patients?source=search_result&search=Treatment+and+Prevention+of+sudden+cardiac+arrest+in+dialysis+patients&selectedTitle=1%7E150

27. Chazot C, Gassia JP, Di Benedetto A et al. (2009) Is there any survival advantage of obesity in Southern European haemodialysis patients? *Nephrol Dial Transplant* 24: 2871–2876
28. Schmidt DS, Salahudeen AK (2007) Obesity-survival paradox—still a controversy? *Semin Dial* 20: 486–492
29. Bailey JL, Wang X, England BK et al. (1996) The acidosis of chronic renal failure activates muscle proteolysis in rats by augmenting transcription of genes encoding proteins of the ATP-dependent ubiquitin-proteasome pathway. *J Clin Invest* 97: 1447–1453
30. Szeto CC, Wong TY, Chow KM et al. (2003) Oral sodium bicarbonate for the treatment of metabolic acidosis in peritoneal dialysis patients: a randomized placebo-control trial. *J Am Soc Nephrol* 14: 2119–2126
31. Movilli E, Gaggia P, Zubani R et al. (2007) Association between high ultrafiltration rates and mortality in uraemic patients on regular haemodialysis. A 5-year prospective observational multicentre study. *Nephrol Dial Transplant* 22: 3547–3552
32. Kimmel PL, Varela MP, Peterson RA et al. (2000) Interdialytic weight gain and survival in hemodialysis patients: effects of duration of ESRD and diabetes mellitus. *Kidney Int* 57: 1141–1151
33. Sherman RA, Cody RP, Rogers ME, Solanchick JC (1995) Interdialytic weight gain and nutritional parameters in chronic hemodialysis patients. *Am J Kidney Dis* 25: 579–583
34. Kopple JD, Shinaberger JH, Coburn JW et al. (1969) Optimal dietary protein treatment during chronic hemodialysis. *Trans Am Soc Artif Intern Organs* 15: 302–308
35. Borah MF, Schoenfeld PY, Gotch FA et al. (1978) Nitrogen balance during intermittent dialysis therapy of uremia. *Kidney Int* 14: 491–500
36. Lim VS, Flanigan MJ, Zavala DC, Freeman RM (1985) Protective adaptation of low serum triiodothyronine in patients with chronic renal failure. *Kidney Int* 28: 541–549
37. Rao M, Sharma M, Juneja R et al. (2000) Calculated nitrogen balance in hemodialysis patients: influence of protein intake. *Kidney Int* 58: 336–345
38. Foley RN, Gilbertson DT, Murray T, Collins AJ (2011) Long interdialytic interval and mortality among patients receiving hemodialysis. *N Engl J Med* 365: 1099–1107
39. Lynch KE, Lynch R, Curhan GC, Brunelli SM (2011) Prescribed dietary phosphate restriction and survival among hemodialysis patients. *Clin J Am Soc Nephrol* 6: 620–629
40. Kuhlmann MK, Landthaler I, Höchst S (2005) PEP – Das Phosphat-Einheiten-Programm. *Ernährungs Umschau* 52(4): 152–154
41. K/DOQI, National Kidney Foundation (2000) Clinical practice guidelines for nutrition in chronic renal failure. *Am J Kidney Dis* 35: S1–140
42. Suki WN, Zabaneh R, Cangiano JL et al. (2007) Effects of sevelamer and calcium-based phosphate binders on mortality in hemodialysis patients. *Kidney Int* 72: 1130–1137
43. Tattersall J, Martin-Malo A, Pedrini L (2007) European best practice guidelines on haemodialysis. *Nephrol Dial Transplant* 22: S1–S40
44. Fouque D, Vennegeoor M, ter Wee P et al. (2007) EBPG guideline on nutrition. *Nephrol Dial Transplant* 22(Suppl 2): ii45–87
45. Khajehdehi P, Mojerlou M, Behzadi S, Rais-Jalali GA (2001) A randomized, double-blind, placebo-controlled trial of supplementary vitamins E, C and their combination for treatment of haemodialysis cramps. *Nephrol Dial Transplant* 16: 1448–1451
46. Miller ER, 3rd, Pastor-Barriuso R, Dalal D et al. (2005) Meta-analysis: high-dosage vitamin E supplementation may increase all-cause mortality. *Ann Intern Med* 142: 37–46
47. Boaz M, Smetana S, Weinstein T et al. (2000) Secondary prevention with antioxidants of cardiovascular disease in endstage renal disease (SPACE): randomised placebo-controlled trial. *Lancet* 356: 1213–1218
48. Sprenger K, Bunschau D, Lewis K (1983) Improvement of uremic neuropathy and hypogeusia by dialysate zinc supplementation: a double blind study *Kidney Int* 24: S315–S318
49. Wanner C, Krane V, Marz W et al. (2005) Atorvastatin in patients with type 2 diabetes mellitus undergoing hemodialysis. *N Engl J Med* 353: 238–248
50. Fellstrom BC, Jardine AG, Schmieder RE et al. (2009) Rosuvastatin and cardiovascular events in patients undergoing hemodialysis. *N Engl J Med* 360: 1395–1407
51. Baigent C, Landray MJ, Reith C et al. (2011) The effects of lowering LDL cholesterol with simvastatin plus ezetimibe in patients with chronic kidney disease (Study of Heart and Renal Protection): a randomised placebo-controlled trial. *Lancet* 377: 2181–2192
52. Wolfson M. Assessment of nutritional status in end-stage renal disease. In: UpToDate. October 18 2012. URL: www.uptodate.com/contents/assessment-of-nutritional-status-in-end-stage-renal-disease
53. Stenvinkel P, Ketteler M, Johnson RJ et al. (2005) IL-10, IL-6, and TNF-alpha: central factors in the altered cytokine network of uremia—the good, the bad, and the ugly. *Kidney Int* 67: 1216–1233
54. Raff AC, Lieu S, Melamed ML et al. (2008) Relationship of impaired olfactory function in ESRD to malnutrition and retained uremic molecules. *Am J Kidney Dis* 52: 102–110
55. Fouque D, Pelletier S, Mafra D, Chauveau P (2011) Nutrition and chronic kidney disease. *Kidney Int* 80: 348–357
56. Fouque D, Kalantar-Zadeh K, Kopple J et al. (2008) A proposed nomenclature and diagnostic criteria for protein-energy wasting in acute and chronic kidney disease. *Kidney Int* 73: 391–398
57. de Mutsert R, Grootendorst DC, Boeschoten EW et al. (2009) Subjective global assessment of nutritional status is strongly associated with mortality in chronic dialysis patients. *Am J Clin Nutr* 89: 787–793
58. Steiber AL, Kalantar-Zadeh K, Secker D et al. (2004) Subjective Global Assessment in chronic kidney disease: a review. *J Ren Nutr* 14: 191–200
59. Detsky AS, McLaughlin JR, Baker JP et al. (1987) What is subjective global assessment of nutritional status? *JPEN J Parenter Enteral Nutr* 11: 8–13
60. Cano NJ, Fouque D, Roth H et al. (2007) Intradialytic parenteral nutrition does not improve survival in malnourished hemodialysis patients: a 2-year multicenter, prospective, randomized study. *J Am Soc Nephrol* 18: 2583–2591
61. Stratton RJ, Bircher G, Fouque D et al. (2005) Multinutrient oral supplements and tube feeding in maintenance dialysis: a systematic review and meta-analysis. *Am J Kidney Dis* 46: 387–405
62. Dong J, Ikizler TA (2009) New insights into the role of anabolic interventions in dialysis patients with protein energy wasting. *Curr Opin Nephrol Hypertens* 18: 469–475
63. Brown R, Compher C (2010) A.S.P.E.N. Clinical Guidelines: Nutrition Support in Adult Acute and Chronic Renal Failure. *J Parent Ent Nutrition* 34: 366–677