Souvenaid-vitteet – Nutricia Medical Oy

Muistihäiriöt

1.Feldman H och Gracon S. I: Gauthier S, ed. Clinical Diagnosis and Management of Alzheimer‘s Disease. Martin Dunitz: London; 1996:239-259.

2. Welsh KA, et al. A detection and staging of dementia in Alzheimer’s disease. Use of neuropsychological measure developed for the Consortium to Establish a Registry for Alzheimer’s disease. Arch Neurol. 1992;49:448-452.

3. Galasko D. An integrated approach to the management of Alzheimer's disease: assessing cognition, function and behaviour. Eur J Neurol. 1998;5(suppl 4):S9–17.

4. Gold CA och Budson AE. Memory loss in Alzheimer's disease: implications for development of therapeutics. Expert Rev. Neurother. 2008; 8:1879-1891

5. Sarazin M, et al. Neuropsychological predictors of dependency in patients with Alzheimer’s disease. Neurology. 2005;64:1027-31.

6. Amieva H, et al. Prodromal Alzheimer’s disease: progressive emergence of the clinical symptoms. Ann Neurol .2008;64:492-8.

7. Terry RD. Alzheimer’s disease and the aging brain. J Geriatr Psychiatry Neurol. 2006;19:125-128.

8. Scheff SW, et al. Hippocampal synaptic loss in early Alzheimer's disease and mild cognitive impairment. Neurobiol Aging. 2006;27:1372-1384.

9. Sperling RA, et al. Toward defining the preclinical stages of Alzheimer's disease: recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease. Alzheimers Dement. 2011;7:280-292.

Synapsikato ja muisti

1. Terry RD, et al. Physical basis of cognitive alterations in Alzheimer’s disease: Synapse loss is the major correlate of cognitive impairment. Ann Neurol 1991;30:572-580.

2. Terry RD. Alzheimer’s disease and the aging brain. J Geriatr Psychiatry Neurol 2006;19:125-128.

3. Scheff SW, et al. Hippocampal synaptic loss in early Alzheimer's disease and mild cognitive impairment. Neurobiol Aging 2006;27:1372-1384.

4. Sperling RA, et al. Toward defining the preclinical stages of Alzheimer's disease: recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease. Alzheimers Dement. 2011;7:280-292.

Ravintoaineet ja synapsien muodostus

1. Yi JJ och Ehlers MD. Ubiquitin and protein turnover in synapse function. Neuron. 2005;47:629-632.

2. Kennedy EP och Weiss SB. The function of cytidine coenzymes in the biosynthesis of phospholipides. J Biol Chem. 1956;222:193-214.

3. Wurtman RJ, et al. Synaptic proteins and phospholipids are increased in gerbil brain by administering uridine plus docosahexaenoic acid orally. Brain Res. 2006;1088:83-92.

4. Cansev M, et al. Restorative effects of uridine plus docosahexaenoic acid in a rat model of Parkinson's disease. Neurosci Res. 2008;62:206-209.

5. Sakamoto T, et al. Oral supplementation with docosahexaenoic acid and uridine-5'-monophosphate increases dendritic spine density in adult gerbil hippocampus. Brain Res. 2007;1182:50-59.

6. Holguin S, et al. Chronic administration of DHA and UMP improves the impaired memory of environmentally impoverished rats. Behav Brain Res. 2008;191:11-16.

7. Holguin S, et al. Dietary uridine enhances the improvement in learning and memory produced by administering DHA to gerbils. FASEB J. 2008;22:3938-3946.

8. Cansev M, et al. Giving uridine and/or docosahexaenoic acid orally to rat dams during gestation and nursing increases synaptic elements in brains of weanling pups. Dev Neurosci. 2009;31:181-192.

9. Cansev M och Wurtman RJ. Chronic administration of docosahexaenoic acid or eicosapentaenoic acid, but not arachidonic acid, alone or in combination with uridine, increases brain phosphatide and synaptic protein levels in gerbils. Neuroscience. 2007;148:421-431.

10. Wang L, et al. Dietary supplementation with uridine-5'-monophosphate (UMP), a membrane phosphatide precursor, increases acetylcholine level and release in striatum of aged rat. Brain Res. 2007;1133:42-48.

11. Richardson UI, et al. Stimulation of CDP-choline synthesis by uridine or cytidine in PC12 rat pheochromocytoma cells. Brain Res. 2003;971:161-167.

12. Richardson UI och Wurtman RJ. Polyunsaturated fatty acids stimulate phosphatidylcholine synthesis in PC12 cells. Biochim Biophys Acta. 2007;1771:558-563.

13. van Wijk N, et al. Plasma choline concentration varies with different dietary levels of vitamins B6, B12 and folic acid in rats maintained on choline-adequate diets. Br J Nutr. 2012;107:1408-12.

14. Terry RD, et al. Physical basis of cognitive alterations in Alzheimer’s disease: Synapse loss is the major correlate of cognitive impairment. Ann Neurol. 1991;30:572-580.

15. Terry RD. Alzheimer’s disease and the aging brain. J Geriatr Psychiatry Neurol .2006;19:125-128.

16. Scheff SW, et al. Hippocampal synaptic loss in early Alzheimer's disease and mild cognitive impairment. Neurobiol Aging 2006;27:1372-1384.

17. Kamphuis PJ och Scheltens P. Can nutrients prevent or delay onset of Alzheimer's disease? J Alzheimers Dis. 2010;20:765-775.

18. Glasø M, et al. Reduced concentrations of several vitamins in normal weight patients with late-onset dementia of the Alzheimer type without vascular disease. J Nutr Health Aging 2004;8:407-413.

19. Köseoglu E och Karaman Y. Relations between homocysteine, folate and vitamin B12 in vascular dementia and in Alzheimer disease. Clin Biochem. 2007;40:859-863.

20. Polidori MC, et al. Plasma antioxidant status, immunoglobulin g oxidation and lipid peroxidation in demented patients: relevance to Alzheimer disease and vascular dementia. Dement Geriatr Cogn Disord. 2004;18:265-270.

21. Conquer JA, et al. Fatty acid analysis of blood plasma of patients with Alzheimer's disease, other types of dementia, and cognitive impairment. Lipids. 2000;35:1305-1312.

22. Ravaglia G, et al. Plasma amino acid concentrations in patients with amnestic mild cognitive impairment or Alzheimer disease. Am J Clin Nutr.2004;80:483-488.

23. Corrigan FM, et al. Tin and fatty acids in dementia. Prostaglandins Leukot Essent Fatty Acids. 1991;43:229-238.

24. Corrigan FM, et al. Abnormal content of n-6 and n-3 long-chain unsaturated fatty acids in the phosphoglycerides and cholesterol esters of parahippocampal cortex from Alzheimer's disease patients and its relationship to acetyl CoA content. Int J Biochem Cell Biol. 1998;30:197-207.

25. Sijben JWC, et al. A multi nutrient concept to enhance synapse formation and function: science behind a medical food for Alzheimer’s disease. OCL . 2011;18:267-270.

26. Sijben JWC, et al. Nutritional intervention with Fortasyn Connect: beneficial effects in experimental models of Alzheimer’s pathology and functional decline. EFNS 2012.P1019

27. Astarita G, et al. Deficient liver biosynthesis of docosahexaenoic acid correlates with cognitive impairment in Alzheimer's disease. PLoS One. 2010;5:e12538.

28. Lopes Da Silva S, et al. Plasma nutrient status of Alzheimer’s disease patients compared to cognitive intact elderly controls: A systematic review and metaanalysis. European Geriatric Medicine. 2012;3:85.

29. Pooler AM, et al. Uridine enhances neurite outgrowth in nerve growth factordifferentiated PC12. Neuroscience. 2005;134:207-214.

30. Scheltens P, et al. Efficacy of a medical food in mild Alzheimer's disease: A randomized, controlled trial. Alzheimers Dement. 2010;6:1-10.e1.

31. Scheltens P, et al. Efficacy of Souvenaid in mild Alzheimer's disease: results from a randomized, controlled trial. J Alzheimer’s Dis. 2012;31:225–236.

Ravitsemus Alzheimerin taudissa

1. Kamphuis PJ och Scheltens P. Can nutrients prevent or delay onset of Alzheimer's disease? J Alzheimers Dis. 2010;20:765-775.

2. Igarashi M, et al. Disturbed choline plasmalogen and phospholipid fatty acid concentrations in Alzheimer's disease prefrontal cortex. J Alzheimers Dis. 2011;24:507-517.

3. Pettegrew JW, et al. Brain membrane phospholipid alterations in Alzheimer's disease. Neurochem Res. 2001;26:771-782.

4. Mulder C, et al. Decreased lysophosphatidylcholine/phosphatidylcholine ratio in cerebrospinal fluid in Alzheimer's disease. J Neural Transm. 2003;110:949-955.

5. Lopes Da Silva S, et al. Plasma nutrient status of Alzheimer’s disease patients compared to cognitive intact elderly controls: A systematic review and metaanalysis. European Geriatric Medicine. 2012;3:85.

6. Corrigan FM, et al. Abnormal content of n-6 and n-3 long-chain unsaturated fatty acids in the phosphoglycerides and cholesterol esters of parahippocampal cortex from Alzheimer's disease patients and its relationship to acetyl CoA content. Int J Biochem Cell Biol. 1998;30:197-207.

7. Glasø M, et al. Reduced concentrations of several vitamins in normal weight patients with late-onset dementia of the Alzheimer type without vascular disease. J Nutr Health Aging 2004;8:407-413.

8. Köseoglu E och Karaman Y. Relations between homocysteine , folate and vitamin B12 in vascular dementia and in Alzheimer disease. Clin Biochem. 2007;40:859-863.

9. Polidori MC, et al. Plasma antioxidant status, immunoglobulin g oxidation and lipid peroxidation in demented patients: relevance to Alzheimer disease and vascular dementia. Dement Geriatr Cogn Disord. 2004;18:265-270.

10. Conquer JA, et al. Fatty acid analysis of blood plasma of patients with Alzheimer's disease, other types of dementia, and cognitive impairment. Lipids. 2000;35:1305-1312.

11. Ravaglia G, et al. Plasma amino acid concentrations in patients with amnestic mild cognitive impairment or Alzheimer disease. Am J Clin Nutr.2004;80:483-488.

12. Corrigan FM, et al. Tin and fatty acids in dementia. Prostaglandins Leukot Essent Fatty Acids. 1991;43:229-238.

13. Astarita G, et al. Deficient liver biosynthesis of docosahexaenoic acid correlates with cognitive impairment in Alzheimer's disease. PLoS One. 2010;5:e12538.

14. Goodenowe DB, et al. Peripheral ethanolamine plasmalogen deficiency: a logical causative factor in Alzheimer's disease and dementia. J Lipid Res. 2007;48:2485-498.

15. Van Dam F och Van Gool WA. Hyperhomocysteinemia and Alzheimer's disease: A systematic review. Arch Gerontol Geriatr. 2009;48:425-430.

Tietoa Souvenaidista

1. Scheltens P, et al. Efficacy of a medical food in mild Alzheimer's disease: A randomized, controlled trial. Alzheimers Dement. 2010;6:1-10.e1.

2. Scheltens P, et al. Efficacy of Souvenaid in mild Alzheimer's disease: results from a randomized, controlled trial. J Alzheimer’s Dis. 2012;31:225–236.

3. Sijben JWC, et al. A multi nutrient concept to enhance synapse formation and function: science behind a medical food for Alzheimer’s disease. OCL . 2011;18:267-270.

Souvenaidin kliiniset tutkimukset

1. Scheltens P, et al. Efficacy of a medical food in mild Alzheimer's disease: A randomized, controlled trial. Alzheimers Dement. 2010;6:1-10.e1.

2. Scheltens P, et al. Efficacy of Souvenaid in mild Alzheimer's disease: results from a randomized, controlled trial. J Alzheimer’s Dis. 2012;31:225–236.

Prekliiniset tutkimukset

1. van Wijk N, et al. Plasma choline concentration varies with different dietary levels of vitamins B6, B12 and folic acid in rats maintained on choline-adequate diets. Br J Nutr. 2012;107:1408-12.

2. van Wijk et al. Combined dietary folate, vitamin B-12, and vitamin B-6 intake influences plasma docosahexaenoic acid concentration in rats. Nutr Metab (Lond). 2012;30;9:49.

3. Cansev M, et al. Oral uridine-5'-monophosphate (UMP) increases brain CDP-choline levels in gerbils. Brain Res. 2005;1058:101-108.

4. Ulus IH, et al. Cytidine and uridine increase striatal CDP-choline levels without decreasing acetylcholine synthesis or release. Cell Mol Neurobiol. 2006;26:563-577.

5. Wurtman RJ, et al. Synaptic proteins and phospholipids are increased in gerbil brain by administering uridine plus docosahexaenoic acid orally. Brain Res. 2006;1088:83-92.

6. Cansev M, Wurtman RJ. Chronic administration of docosahexaenoic acid or eicosapentaenoic acid, but not arachidonic acid, alone or in combination with uridine, increases brain phosphatide and synaptic protein levels in gerbils. Neuroscience. 2007;148:421-431.

7. Sakamoto T, et al. Oral supplementation with docosahexaenoic acid and uridine-5'-monophosphate increases dendritic spine density in adult gerbil hippocampus. Brain Res. 2007;1182:50-59.

8. Wang L, et al. Dietary uridine-5'-monophosphate supplementation increases potassium-evoked dopamine release and promotes neurite outgrowth in aged rats. J Mol Neurosci. 2005;27:137-145.

9. Pooler AM, et al. Uridine enhances neurite outgrowth in nerve growth factordifferentiated PC12. Neuroscience. 2005;134:207-214.

10. Cansev M, et al. Giving uridine and/or docosahexaenoic acid orally to rat dams during gestation and nursing increases synaptic elements in brains of weanling pups. Dev Neurosci. 2009;31:181-192.

11. Farkas E, et al. Dietary long chain PUFAs differentially affect hippocampal muscarinic 1 and serotonergic 1A receptors in experimental cerebral hypoperfusion. Brain Res. 2002;954:32-41.

12. Wang L, et al. Dietary supplementation with uridine-5'-monophosphate (UMP), a membrane phosphatide precursor, increases acetylcholine level and release in striatum of aged rat. Brain Res. 2007;1133:42-48.

13. Savelkoul P, et al. A specific multi-nutrient formulation enhances M1 muscarinic acetylcholine receptor responses in vitro. J Neurochem. 2012;120:631-640.

14. Teather LA, Wurtman RJ. Chronic administration of UMP ameliorates the impairment of hippocampal-dependent memory in impoverished rats. J Nutr. 2006;136:2834-2837.

15. de Wilde MC, et al. Dietary fatty acids alter blood pressure, behavior and brain membrane composition of hypertensive rats.Brain Res. 2003;988:9-19.

16. de Wilde MC, et al. The effect of n-3 polyunsaturated fatty acid-rich diets on cognitive and cerebrovascular parameters in chronic cerebral hypoperfusion Brain Res. 2002 Aug 30;947(2):166-73.

17. De Bruin NM, et al. Combined uridine and choline administration improves cognitive deficits in spontaneously hypertensive rats. Neurobiol Learn Mem. 2003;80:63-79.

18. Holguin S, et al. Chronic administration of DHA and UMP improves the impaired memory of environmentally impoverished rats. Behav Brain Res. 2008;191:11-16.

19. Broersen L, et al. Special lipid-based diets alleviate cognitive deficits in the APPswe/PS1dE9 transgenic mouse model of Alzheimer's disease independent of brain amyloid deposition. Alzheimers Dement. 2011;7:S650.

20. de Wilde MC, et al. Neuroprotective effects of a specific multi-nutrient intervention against Aβ42-induced toxicity in rats. J Alzheimers Dis. 2011;27:327-339.