

References Nutrition I-Mag May-June

Joint and bone health feature:

Dr Trygve Bergeland:

- [1] Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2017 (GBD 2017) Results. Institute for Health Metrics and Evaluation (IHME), Seattle, 2018.
- [1] A. Svedbom et al. Osteoporosis in the European Union: a compendium of country-specific reports. Archives of Osteoporosis, vol. 8, no. 137, 2013.
- [1] National Institute for Clinical Excellence (NICE). NICE impact falls and fragility fractures. NICE, London, 2018.
- [1] M. Iqbal. Osteoporosis: Epidemiology, Diagnosis, and Treatment. Southern Medical Journal, vol. 18, pp. 10-22, 2000.
- [1] Ushiroyama, T., Ikeda, A., & Ueki, M. (2002). Effect of continuous combined therapy with vitamin K2 and vitamin D3 on bone mineral density and coagulofibrinolysis function in postmenopausal women. Maturitas, 41(3), 211-221.
- [1] S.H. Ronn, et al., "Vitamin K2 (Menaquinone-7) Prevents Age-Related Deterioration of Trabecular Bone Microarchitecture at the Tibia in Postmenopausal Women," Eur. J. Endocrinol. 175(6), 541–549 (2016).
- [1] Zhang, Y., Liu, Z., Duan, L., Ji, Y., Yang, S., Zhang, Y., ... & Li, Y. (2020). Effect of Low-Dose Vitamin K2 Supplementation on Bone Mineral Density in Middle-Aged and Elderly Chinese: A Randomized Controlled Study. Calcified tissue international, 1-10.
- [1] Kanellakis, S., Moschonis, G., Tenta, R., Schaafsma, A., van den Heuvel, E. G., Papaioannou, N., ... & Manios, Y. (2012). Changes in parameters of bone metabolism in postmenopausal women following a 12-month intervention period using dairy products enriched with calcium, vitamin D, and phylloquinone (vitamin K 1) or menaquinone-7 (vitamin K 2): the Postmenopausal Health Study II. Calcified tissue international, 90(4), 251-262.
- [1] M.H.J. Knapen, et al., 'Menaquinone-7 Supplementation Improves Arterial Stiffness in Healthy Postmenopausal Women: Double-Blind Randomised Clinical Trial,' Thrombosis and Haemostasis 113(5), 1135-1144 (2015).
- [1] E. Theuwissen, E. Smit and C. Vermeer, 'The Role of Vitamin K in Soft-Tissue Calcification,' Adv. Nutr. 3(2), 166–173 (2012).
- [1] <https://www.bda.uk.com/resource/calcium.html>

Keeley Berry:

* <https://www.england.nhs.uk/blog/tackling-the-elephant-in-the-room/>

** <https://www.nbcnews.com/healthmain/rickets-making-comeback-uk-doctors-say-8c11561862>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6140170/#:~:text=The%20overconsumption%20of%20dietary%20sugar,bone%20formation%20by%20reducing%20osteoblast>

Dr Hogne Vik:

1 Shea MK , et al. J Nutr. 2011; 141: 1529-1534.

2 Knapen MHJ, et al. Osteoporosis Int. 24 (9), 2499–2507 (2013).

3 van Summeren, et al. Br J Nutr (2009) 102(8): 1171-8.
4 Theuwissen E, et al. Food Funct.5 (2), 229–234 (2014).

Men's health feature:

Louis Soteriou:

<https://www.menshealthforum.org.uk/key-data-understanding-health-and-access-services>

<https://www.bmihealthcare.co.uk/health-matters/mens-health/men-and-mental-health-a-damaging-stigma#gdpr-out>

<https://www.statnews.com/2017/02/14/living-longer-living-better-aging/>

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/articles/leadingcausesofdeathuk/2001to2018>

<https://www.menshealthforum.org.uk/covid-19-statistics-england-wales>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3614604/>

<https://pdfs.semanticscholar.org/5a6d/583aa0a0425b3bfa096d33b107fec752db14.pdf>

<https://pubmed.ncbi.nlm.nih.gov/22536767/>

<https://examine.com/supplements/pycnogenol/>

<https://pubmed.ncbi.nlm.nih.gov/25597308/>

<https://pubmed.ncbi.nlm.nih.gov/30215292/>

<https://pubmed.ncbi.nlm.nih.gov/30215292/>

Frank Brogan:

1. Impact of Coenzyme Q10 and Selenium on Seminal Fluid Parameters and Antioxidant Status in Men with Idiopathic Infertility - Ahmed T Alahmar, Pallav Sengupta PMID: 32572802 DOI: 10.1007/s12011-020-02251-3

2. Edda, A Benign prostatic hypertrophy: Pycnogenol® supplementation improves prostate symptoms and residual bladder volume. Minerva Med. 2018 Aug;109(4):280-284. doi: 10.23736/S0026-4806.18.05572-6.

Skin conditions feature:

Andrea Burton:

Centre H and SCI. Hospital Episode Statistics. Admitted Patient Care, England 2014 - 2015.

Schofield J, Grindlay D, Williams H. Skin conditions in the UK : a Health Care Needs Assessment. Univ Nottingham, Cent Evid Based Dermatology UK. 2009;

Garg N, Silverberg JI. Epidemiology of childhood atopic dermatitis. Clin Dermatol. 2015;33(3):281-8

Hay RJ, Johns NE, Williams HC, et al. The Global Burden of Skin Disease in 2010: An Analysis of the Prevalence and Impact of Skin Conditions. J Invest Dermatol 2014; 134: 1527–34.

Tizek L, Schielein MC, Seifert F, Biedermann T, Böhner A, Zink A. Skin diseases are more common than we think: screening results of an unreferral population at the Munich Oktoberfest. J Eur Acad Dermatology Venereol 2019; 33: 1421–8.

Jiang W, Ni B, Liu Z, et al. The Role of Probiotics in the Prevention and Treatment of Atopic Dermatitis in Children: An Updated Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Pediatr Drugs*. 2020;22:535–49.

Reddel S, Del Chierico F, Quagliariello A, et al. Gut microbiota profile in children affected by atopic dermatitis and evaluation of intestinal persistence of a probiotic mixture. *Sci Rep*. 2019;9:4996.

Vaughn AR, Notay M, Clark AK, Sivamani RK. Skin-gut axis: The relationship between intestinal bacteria and skin health. *World J Dermatology* 2017; 6: 52–8.

Park K. Role of micronutrients in skin health and function. *Biomol Ther (Seoul)* 2015; 23: 207–17.

Pappas A, Liakou A, Zouboulis CC. Nutrition and skin. *Ver. Endocr. Metab. Disord*. 2016; 17: 443-8.

Huang T-H, Wang P-W, Yang S-C, Chou W-L, Fang J-Y. Cosmetic and Therapeutic Applications of Fish Oil's Fatty Acids on the Skin. *Mar Drugs* 2018; 16. DOI:10.3390/md16080256.

O'Neill CA, Monteleone G, McLaughlin JT, Paus R. The gut-skin axis in health and disease: A paradigm with therapeutic implications. *BioEssays* 2016; 38: 1167–76.

Vaughn AR, Sivamani RK. Effects of Fermented Dairy Products on Skin: A Systematic Review. *J Altern Complement Med* 2015; 21: 380–5.

Schagen SK, Zampeli VA, Makrantonaki E, Zouboulis CC. Discovering the link between nutrition and skin aging. *Dermatoendocrinol* 2012; 4: 298.

Vitamin E and Skin Health | Linus Pauling Institute | Oregon State University. <http://lpi.oregonstate.edu/mic/health-disease/skin-health/vitamin-E> (accessed March 31, 2021).

Salem I, Ramser A, Isham N, Ghannoum MA. The Gut Microbiome as a Major Regulator of the Gut-Skin Axis. *Front Microbiol* 2018; 9: 1459.

Kim J, Ko Y, Park Y-K, Kim N-I, Ha W-K, Cho Y. Dietary effect of lactoferrin-enriched fermented milk on skin surface lipid and clinical improvement of acne vulgaris. *Nutrition* 2010; 26: 902–9.

Amalia N, Orchard D, Francis KL, King E. Systematic review and meta-analysis on the use of probiotic supplementation in pregnant mother, breastfeeding mother and infant for the prevention of atopic dermatitis in children. *Australasian Journal of Dermatology*.

Jiang W, Ni B, Liu Z, et al. The Role of Probiotics in the Prevention and Treatment of Atopic Dermatitis in Children: An Updated Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Pediatr Drugs*. 2020;22:535–49.

Tan-Lim CSC, Esteban-Ipac NAR, Mantaring JB V., et al. Comparative effectiveness of probiotic strains for the treatment of pediatric atopic dermatitis: A systematic review and network meta-analysis. *Pediatr Allergy Immunol*. 2020

Korthuis RJ. San Rafael (CA): Morgan & Claypool Life Sciences; 2011. [Environ Health Perspect](#). 2008 Apr; 116(4): A160–A167.doi: [10.1289/ehp.116-a160](https://doi.org/10.1289/ehp.116-a160)

Oyetaquin-White P, Suggs A, Koo B, Matsui MS, Yarosh D, Cooper KD, Baron ED. Does poor sleep quality affect skin ageing? *Clin Exp Dermatol*. 2015 Jan;40(1):17-22. doi: 10.1111/ced.12455. Epub 2014 Sep 30. PMID: 25266053.

Juhl CR, Bergholdt HKM, Miller IM, Jemec GBE, Kanters JK, Ellervik C. Dairy Intake and Acne Vulgaris: A Systematic Review and Meta-Analysis of 78,529 Children, Adolescents, and Young Adults. *Nutrients*. 2018;10(8):1049. Published 2018 Aug 9. doi:10.3390/nu10081049

Cao C, Xiao Z, Wu Y, Ge C. Diet and Skin Aging-From the Perspective of Food Nutrition. *Nutrients*. 2020;12(3):870. Published 2020 Mar 24. doi:10.3390/nu12030870

Rose Holmes:

1 Pullar JM, Carr AC, Vissers MCM (2017) The Roles of Vitamin C in Skin Health. *Nutrients* 9:866.

Ask the experts:

Dr Trygve Bergeland:

[1] M.H.J. Knapen, et al., 'Menaquinone-7 Supplementation Improves Arterial Stiffness in Healthy Postmenopausal Women: Double-Blind Randomised Clinical Trial,' *Thrombosis and Haemostasis* 113(5), 1135-1144 (2015).

[1] E. Theuvsissen, E. Smit and C. Vermeer, 'The Role of Vitamin K in Soft-Tissue Calcification,' *Adv. Nutr.* 3(2), 166–173 (2012).

[1] Ueland, T., et al., Undercarboxylated matrix Gla protein is associated with indices of heart failure and mortality in symptomatic aortic stenosis. *J Intern Med*, 2010. 268(5): p. 483-92.

[1] J.M. Geleijnse, et al., 'Dietary Intake of Menaquinone is Associated with a Reduced Risk of Coronary Heart Disease: The Rotterdam Study,' *J. Nutr.* 134, 3100–3105 (2004).

[1] G.C. Gast, et al., 'A High Menaquinone Intake Reduces the Incidence of Coronary Heart Disease,' *Nutr. Metab. Cardiovasc. Dis.* 19, 504–510 (2009).

[1] S.H. Ronn, et al., "Vitamin K2 (Menaquinone-7) Prevents Age-Related Deterioration of Trabecular Bone Microarchitecture at the Tibia in Postmenopausal Women," *Eur. J. Endocrinol.* 175(6), 541–549 (2016).

[1] Zhang, Y., Liu, Z., Duan, L., Ji, Y., Yang, S., Zhang, Y., ... & Li, Y. (2020). Effect of Low-Dose Vitamin K2 Supplementation on Bone Mineral Density in Middle-Aged and Elderly Chinese: A Randomized Controlled Study. *Calcified tissue international*, 1-10.

[1] Kanellakis, S., Moschonis, G., Tenta, R., Schaafsma, A., van den Heuvel, E. G., Papaioannou, N., ... & Manios, Y. (2012). Changes in parameters of bone metabolism in postmenopausal women following a 12-month intervention period using dairy products enriched with calcium, vitamin D, and phylloquinone (vitamin K 1) or menaquinone-7 (vitamin K 2): the Postmenopausal Health Study II. *Calcified tissue international*, 90(4), 251-262.

[1] Dofferhoff ASM et al. "Reduced Vitamin K Status as a Potentially Modifiable Risk Factor of Severe Coronavirus Disease 2019." *Clin Infect Dis*. 2020:ciaa1258.

[1] Linneberg, A., Kampmann, F. B., Israelsen, S. B., Andersen, L. R., Joergensen, H. L., Sandholt, H., ... & Benfield, T. (2020). Low vitamin K status predicts mortality in a cohort of 138 hospitalized patients with COVID-19. *medRxiv*.

[1] Janssen R et al. "Vitamin K metabolism as the potential missing link between lung damage and thromboembolism in Covid-19." *Br J Nutr*. 2020;1-25.

[1] <https://www.clinicaltrials.gov/ct2/show/NCT04770740?term=NCT04770740>

Jo Sharp:

Stark, K.D., Van Elswyk, M.E., Higgins, M.R., Weatherford, C.A. and Salem, N. (2016). Global survey of the omega-3 fatty acids, docosahexaenoic acid and

eicosapentaenoic acid in the blood stream of healthy adults. *Progress in Lipid Research*, [online] 63, pp.132–152.

Kuratko CN. Et al. The relationship of docosahexaenoic acid (DHA) with learning and behaviour in healthy children: a review. *Nutrients*. 2013; 5: 2777-2810.

Lauritzen, L., Brambilla, P., Mazzocchi, A., Harsløf, L., Ciappolino, V. and Agostoni, C. (2016). DHA Effects in Brain Development and Function. *Nutrients*, 8(1), p.6.

Weiser, M., Butt, C. and Mohajeri, M. (2016). Docosahexaenoic Acid and Cognition throughout the Lifespan. *Nutrients*, 8(2), p.99.

O'Muircheartaigh, J., Dean, D.C., Ginestet, C.E., Walker, L., Waskiewicz, N., Lehman, K., Dirks, H., Piryatinsky, I. and Deoni, S.C.L. (2014). White matter development and early cognition in babies and toddlers. *Human Brain Mapping*, 35(9), pp.4475–4487.

Bray, S., Krongold, M., Cooper, C. and Lebel, C. (2015). Synergistic Effects of Age on Patterns of White and Gray Matter Volume across Childhood and Adolescence. *eneuro*, 2(4), p.ENEURO.0003-15.2015.

Jennings, S., Stentiford, G.D., Leocadio, A.M., Jeffery, K.R., Metcalfe, J.D., Katsiadaki, I., Auchterlonie, N.A., Mangi, S.C., Pinnegar, J.K., Ellis, T., Peeler, E.J., Luisetti, T., Baker-Austin, C., Brown, M., Catchpole, T.L., Clyne, F.J., Dye, S.R., Edmonds, N.J., Hyder, K. and Lee, J. (2016). Aquatic food security: insights into challenges and solutions from an analysis of interactions between fisheries, aquaculture, food safety, human health, fish and human welfare, economy and environment. *Fish and Fisheries*, 17(4), pp.893–938.

Colette Healy:

Bhardwaj N, Katyal P, Sharma AK. Suppression of inflammatory and allergic responses by pharmacologically potent fungus *Ganoderma lucidum*. *Recent Pat Inflamm Allergy Drug Discov*. 2014;8(2):104-17.

Biedron, R., et al. "Agaricus blazei Murill-immunomodulatory properties and health benefits." *Functional Foods in Health and Disease* 2.11 (2012): 428-447.

Ellertsen LK, Hetland G. An extract of the medicinal mushroom *Agaricus blazei* Murill can protect against allergy. *Clin Mol Allergy*. 2009;7:6. Published 2009 May 5.

Hetland G, Tangen JM, Mahmood F, et al. Antitumor, Anti-Inflammatory and Antiallergic Effects of *Agaricus blazei* Mushroom Extract and the Related Medicinal Basidiomycetes Mushrooms, *Hericium erinaceus* and *Grifolafrondosa*: A Review of Preclinical and Clinical Studies. *Nutrients*. 2020;12(5):1339. Published 2020 May 8.

Hetland G, Johnson E, Lyberg T, Kvalheim G. The Mushroom *Agaricus blazei* Murill Elicits Medicinal Effects on Tumor, Infection, Allergy, and Inflammation through Its Modulation of Innate Immunity and Amelioration of Th1/Th2 Imbalance and Inflammation. *Adv Pharmacol Sci*. 2011;2011:157015.

Mahmood F, Hetland G, Nentwich I, Mirlashari MR, Ghiasvand R, Nissen-Meyer LSH. *Agaricus blazei*-Based Mushroom Extract Supplementation to Birch Allergic Blood Donors: A Randomized Clinical Trial. *Nutrients*. 2019 Oct 2;11(10):2339.

Ingredient spotlight:

1 Aune D et al, 2017, Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all-cause mortality – a systematic review and dose-response meta-analysis of prospective studies, *Int J Epidemiol*, 46, 3, 1029-1056

2 Oyebode O et al, 2014, Fruit and vegetable consumption and all-cause, cancer and CVD mortality: analysis of Health Survey for England dates, *J Epidemiol Comm Health*, 68, 856-862

3 Heaney RP et al, 2011, Vitamin D3 is more potent than vitamin D2 in humans, J Clin Endocrinol Metab, 96, 3, E447-52