

KURZ GEFASST

Kamillentee-Trinkerinnen leben länger

Howrey BT et al.: Chamomile consumption and mortality: A prospective study of mexican origin older adults. *The Gerontologist*, DOI: 10.1093/geront/gnv051

NACHLESE

Vom Zusammenhang zur Kausalität: Probiotika in der Grundlagenforschung
Internationales Yakult Symposium 2015

Internationales Yakult-Symposium, 23. und 24. April 2015 in Berlin

Ernährungsempfehlungen – Weniger ist mehr!
18. aid-Forum 2015

18. aid-Forum Ernährungsempfehlungen – Fette Ratschläge, magere Relevanz? 28. Mai in Bonn

Wahr oder falsch? – Mythen in der Adipositas therapie
5. Update Ernährungsmedizin

Update Ernährungsmedizin 17. und 18. Oktober 2014 in München

TITELTHEMA

Nahrungsergänzungsmittel im Sport
Bedeutung und praktische Hinweise

American College of Sports Medicine: Exercise and fluid replacement. *Med Sci Sports Exerc* 39, 377–390 (2007)

American College of Sports Medicine: Nutrition and athletic performance. *Med Sci Sports Exerc* 41, 709–731 (2009)

Australian Institute of Sport: Fact Sheet – Sports Supplements in Junior Athletes (2010); http://www.ausport.gov.au/ais/nutrition/factsheets/basics/supplements_and_young_athlete

Bailey SJ, Winyard PG, Vanhatalo A, Blackwell JR et al.: Dietary nitrate supplementation reduces the O₂ cost of low-intensity exercise in humans. *J Appl Physiol* 107, 1144–1155 (2009)

Bailey SJ, Winyard PG, Vanhatalo A, Blackwell JR et al.: Acute L-arginine supplementation reduces the O₂ cost of moderate-intensity exercise and enhances high-intensity exercise tolerance. *J Appl Physiol* 109, 1394–1403 (2010)

Beelen M, Burke LM, Gibala MJ, van Loon LJ: Nutritional strategies to promote postexercise recovery. *Int J Sport Nutr Exerc Metabol* 20, 515–532 (2010)

Braun H, Koehler K, Geyer H, Kleinert J et al.: Dietary supplement use among elite young German athletes. *Int J Sport Nutr Exerc Metabol* 19, 97–109 (2009)

Breuer C, Hallmann K: Dysfunktionen des Spitzensports – Doping, Match-Fixing und Gesundheitsgefährdungen aus Sicht von Bevölkerung und Athleten (2013); http://www.bisp.de/Shared-Docs/Downloads/Publikationen/sonstige_Publikationen_Ratgeber/Breuer_Dysfunktionen.html

Cockburn E, Bell PG, Stevenson E: Effect of milk on team sport performance following exercise-induced muscle damage. *Med Sci Sports Exerc* 45, 1585–1592 (2013)

Corrigan B, Kazlauskas R: Medication use in athletes selected for doping control at the Sydney Olympics 2000. *Clin J Sport Med* 13, 33–40 (2003)

De Hon O, Coumans B: The continuing story of nutritional supplements and doping infractions. *Br J Sport Med* 41, 800–805 (2007)

Diehl K, Thiel A, Zipfel S, Mayer J et al.: Elite adolescent athletes' use of dietary supplements: characteristics, opinions, and sources of supply and information. *Int J Sport Nutr Exerc Metab* 22 (3), 165–174 (2012)

Drogenreferat der Stadt Frankfurt: Jahresbericht 2007–2009. Frankfurt am Main (2010); https://www.frankfurt.de/sixcms/media.php/738/jahresbericht%2053a%202007_2009.pdf

Europäisches Parlament, Rat der Europäischen Union: Richtlinie 2002/46/EG vom 10. Juni 2002 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Nahrungsergänzungsmittel. *Amtsblatt der Europäischen Gemeinschaften* vom 12.07.2002, L 183/51 (2002)

Faude O, Fuhrmann M, Herrmann M, Kindermann W, Urhausen A: Ernährungsanalysen und Vitaminstatus bei deutschen Spitzensportlern. *Leistungssport* 35 (4), 4–9 (2005)

- Geyer H, Parr MK, Köhler K, Mareck U et al.: Nutritional supplements cross-contaminated and faked with doping substances. *J Mass Spectrom* 43, 892–902 (2008)
- Geyer H, Parr MK, Mareck U, Reinhart U et al.: Analysis of non-hormonal nutritional supplements for anabolic-androgenic steroids – results of an international study. *Int J Sports Med* 25, 124–129 (2004)
- Kläber M: Doping im Fitness-Studio. Transcript Verlag, Bielefeld (2010)
- Lansley KE, Winyard, PG, Fulford J, Vanhatalo A et al.: Dietary nitrate supplementation reduces the O_2 cost of walking and running – A placebo-controlled study. *J Appl Physiol* 110, 591–600 (2011)
- Larsen FJ, Ekblom B, Sahlin K, Lundberg JO, Weitzberg E: Effects of dietary nitrate on oxygen cost during exercise. *Acta Physiol* 191, 59–66 (2007)
- Larsen FJ, Weitzberg E, Lundberg JO, Ekblom B: Dietary nitrate reduces maximal oxygen consumption while maintaining work performance in maximal exercise. *Free Radic Biol Med* 48, 342–347 (2010)
- Maughan RJ, Depiesse F, Geyer H: The use of dietary supplements by athletes. *J Sports Sci* 25, S103–S113 (2007)
- Max Rubner-Institut: Nationale Verzehrsstudie II. Ergebnisbericht, Teil 2 (2008); http://www.was-esse-ich.de/uploads/media/NVSII_Abschlussbericht_Teil_2.pdf
- Offer AM, Schemmann S, Steuer M, Starischka S, Jakob E: Ernährung von Kindern und Jugendlichen in sportbetonten Schulen in NRW. Abstract zum Vortrag beim DSV-Symposium der Sektion Trainingswissenschaft der Fakultät für Sportwissenschaft der Ruhr-Universität Bochum am 07.–09.04.2005. Bochum (2005); <http://www.sportmedizin-hellersen.de/dfs/Abstract-dvs-Bochum-April-2005-Ernaehrung2.pdf>
- Robert Koch-Institut: Doping im Freizeit- und Breitensport. Gesundheitsberichterstattung des Bundes, Heft 34 (2006); http://edoc.rki.de/documents/rki_fv/ren4T3cctjHcA/PDF/26Herxag1MT4M_G36.pdf
- Röthig P, Prohl R: Sportwissenschaftliches Lexikon. Hofmann, Schorndorf (2003)
- Sammito S, Platzek AL, Holtherm C, Hutsteiner H et al.: Einnahme von Supplementen bei Teilnehmern am Übungsleiterlehrgang an der Sportschule der Bundeswehr. Poster beim 42. Kongress der Deutschen Gesellschaft für Wehrmedizin und Wehrpharmazie vom 13.–15.10.2011 in Erfurt. Warendorf (2011)
- Schek A: Nahrungsergänzungsmittel. *Leistungssport* 42 (4), 19–21 (2011)
- Schek A: Ernährung im Top-Sport. Aktuelle Richtlinien für Bestleistungen. Umschau Zeitschriftenverlag, Wiesbaden (2013)
- Shirreffs SM, Sawka MN: Fluid and electrolyte needs for training, competition, and recovery. *J Sports Sci* 29 (Suppl. 1), S39–S46 (2011)
- Smith JW, Zachwieja JJ, Horswill CA, Pascoe DD et al.: Evidence of a carbohydrate dose and prolonged exercise performance relationship (855.). *Med Sci Sports Exerc* 42 (Suppl. 1), 84 (2010)
- Tsitsimpikou C, Tsiokanos A, Tsaroukas K, Schamasch P et al.: Medication use by athletes at the Athens 2004 Summer Olympic Games. *Clin J Sport Med* 19 (1), 33–38 (2009)
- Vanhatalo A, Bailey SJ, Blackwell JR, DiMenna FJ et al.: Acute and chronic effects of dietary nitrate supplementation on blood pressure and the physiological responses to moderate-intensity and incremental exercise. *Am J Physiol: Regul Integr Comp Physiol* 299, R1121–1131 (2010)
- Verbraucherzentrale Nordrhein-Westfalen: Marktcheck – Internethandel mit Nahrungsergänzungsmitteln (2011); <http://www.vzbv.de/cps/rde/xbcr/vzbv/Nahrungsergaenzungsmittel-marktcheck-vz-nrw-2011.pdf>
- WADA (World Anti-Doping Agency): List of Prohibited Substances and Methods (2014); <http://list.wada-ama.org/>
- Williams MH, Anderson D, Rawson E: Nutrition for Health, Fitness and Sport. McGraw Hill, Roseville (2012)
- Wylie LJ, Kelly J, Bailey SJ, Blackwell JR et al.: Beetroot juice and exercise – pharmacodynamic and dose-response relationships. *J Appl Physiol* 115, 325–336 (2013)

Überprüfung des Hydratationsstatus von Ausdauersportlern Entwicklung eines Selbsttests

- American College of Sports Medicine, Sawka MN, Burke LM, Eichner ER et al.: American College of Sports Medicine position stand. Exercise and fluid replacement. *Med Sci Sports Exerc* 39, 377–500 (2007)
- Armstrong L, Assessing Hydration Status: The Elusive Gold Standard. *J Am Coll Nutr* 26, 575S–584S (2007)
- Armstrong L, Maresh C, Castellani J et al.: Urinary indices of hydration status. In: Maughan R, Shirreffs S: Development of hydration strategies to optimize performance for athletes in high-intensity sports and in sports with repeated intense efforts. *Scand J Med Sci Sports* 20, 59–69 (2010)
- Brandenburg J, Gaetz M: Fluid balance of elite female basketball players before and during game play. *Int J Sport Nutr Exerc Metab* 22, 347–52 (2012)
- Casa D, Clarkson P, Roberts W: American College of Sports Medicine, Roundtable on Hydration and Physical Activity: Consensus Statements. *Curr Sports Med Rep* 4, 115–27 (2005)
- Kavouras S: Assessing Hydration Status. *Curr Opin Clin Nutr Metab Care* 5, 519–24 (2002)
- Maughan R, Shirreffs S: Development of hydration strategies to optimize performance for athletes in high-intensity sports and in sports with repeated intense efforts. *Scandinavian Journal of Medicine & Science in Sports* 20, 59–69 (2010)
- Murray B: Fluid, Electrolytes and Exercise. In: Dunford M: Sports Nutrition: A practice manual for professionals. Chicago, IL. *J Am Diet Assoc* 50–60 (2006)
- Hermann B: Wie kann man das durchhalten? *Süddeutsche Zeitung* 121, 39 (2012)

EXTRA

Sportliche Aktivität und Ernährung

„Essen – Trinken – klar zum Start!“ 17. Journalisten-Workshop des Instituts Danone Ernährung für Gesundheit e. V. am 4./5. Mai 2015 in Köln

WISSEN FÜR DIE PRAXIS

Rotes Fleisch verursacht Darmkrebs – oder doch nicht?

Alexander DD et al.: Red meat and colorectal cancer: A quantitative update on the state of the epidemiologic science. *Journal of the American College of Nutrition* (2015) [Epub ahead of print] 05.05.2015, 1–23, DOI: 10.1080/07315724.2014.99255

NEUES AUS DER FORSCHUNG

Küche oder Fitnessstudio?

Tumin R et al.: Are food and fitness competing claims on adults' time. The Ohio State University; <http://paa2013.princeton.edu/papers/132495>

Nicht nur für Bodybuilder: Beta-Alanin hält alte Menschen fit

Stout JR et al.: The effect of beta-alanine supplementation on neuromuscular fatigue in elderly (55–92 Years): a double-blind randomized study. *Journal of the International Society of Sports Nutrition* 5, 5–21 (2008), DOI:10.1186/1550-2783-5-21; <http://www.jissn.com/content/5/1/21>

Gehen macht kreativ

Oppezzo M, Schwartz DL: Give your ideas some legs: The positive effect of walking on creative thinking. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 40 (4), 1142–1152 (2014), DOI: 10.1037/a0036577

Link:
Stanford University, Graduate School of Education: <https://ed.stanford.edu>

Bestimmen Darmbakterien, was uns schmeckt?

Alcock J, Maley CC, Aktipis CA: Is eating behavior manipulated by the gastrointestinal microbiota? Evolutionary pressures and potential mechanisms. *BioEssays* 36 (10), 940–949 (2014), DOI: 10.1002/bies.201400071

Link:
University of California San Francisco, Center for Evolution and Cancer: <http://cancer.ucsf.edu/evolution>

Bestimmte Emulgatoren schädigen Darmflora und fördern Adipositas

Chassaing B et al.: Dietary emulsifiers impact the mouse gut microbiota promoting colitis and metabolic syndrome. *Nature* 519 (7541) 92–96; DOI 10.1038/nature14232.

Link:
Georgia State University, Institute for Biomedical Sciences: <http://biomedical.gsu.edu>

WUNSCHTHEMA

Foodtrucks erobern Deutschland

Interviews mit

- Volker Beck, Roka Werk GmbH, www.roka-werk.de, am 15.03.2015
- Jan Dinter, Burrito Bande Systemgastronomie GmbH, www.burritobande.de, am 26.03.2015
- Roland Glöggler, www.guerillagroestl.de, am 26.03.2015
- Isabella Hener, www.die-intolerante-isi.de, am 26.03.2015
- Kerstin Maida, www.cookadoo.de, am 29.03.2015
- Jochen Manske, www.lunch-karawane.de, am 15.03.2015
- Klaus P. Wünsch, www.foodtrucksdeutschland.de, am 24.03.2015

FORUM

SAFARI-Kids auf Entdeckungstour

Ein ressourcenorientiertes Ernährungs- und Bewegungsprogramm zur Prävention von Übergewicht und Bewegungsmangel bei Kindern

Brehm W, Bös K: Gesundheitssport. Ein zentrales Element der Prävention und der Gesundheitsförderung. In Bös K, Brehm W (Hrsg.): Handbuch Gesundheitssport, Hofmann, Schorndorf, 7–30 (2006)

Doak CM, Visscher TL, Renders CM, Seidell JC: The prevention of overweight and obesity in children and adolescents: a review of interventions and programmes. *Obesity Reviews* 7, 111–136 (2006)

Fuchs R: Verhaltensänderungsmodelle und Konsequenzen für Interventionen zur sportlichen Aktivierung. In Bös K, Brehm W (Hrsg.): Handbuch Gesundheitssport: Hofmann, Schorndorf, 211–221 (2006)

Pfeifer K: Ziele und Aufgaben der Arbeitsgruppe „Bewegungstherapie“ in der Deutschen Gesellschaft für Rehabilitationswissenschaften (DGRW). *Die Rehabilitation* 48 (4), 252–255 (2009)

Wagner P, Baumgärtner T, Jaitner A: Safari-TurnKids auf Entdeckungstour. Bewegungsprogramm zur Prävention von Übergewicht bei Kindern. Meyer & Meyer, Aachen (2009)

Wulff H, Grützmacher N, Müller K, Wagner P: SAFARIKIDS – Ein Programm zur Prävention von Übergewicht und Adipositas. *Adipositas* 9 (1), 16–20 (2015)

ZWISCHENRUF

Substanzmissbrauch im Breitensport

Donnelly AE, McCormick K, Maughan RJ, Whiting PH, Clarkson PM: Effects of a non-steroidal anti-inflammatory drug on delayed onset muscle soreness and indices of damage. *Br J Sports Med* 22 (1), 35–38 (1988)

Zahlen zum Berlin-Marathon 2014: <http://www.bmw-berlin-marathon.com/zahlen-und-fakten/statistik-und-geschichte/>

Zahlen zu Anmeldungen in Fitness-Studios: http://www.dssv.de/index.php?id=368&tx_felogin_pi1%5Bforgot%5D=1

Hasson SM, Daniels JC, Divine JG, Niebuhr BR et al.: Effect of ibuprofen use on muscle soreness, damage, and performance: a preliminary investigation. *Med Sci Sports Exerc* 25 (1), 9–17 (1993)

Küster M, Brune K, Schmerzmittel im Breitensport – fataler Einsatz? *Schmerztherapie* 26 (3), 2–5 (2010); http://www.praxis-kuester.de/bonn/downloads/2010_07_29_Sportmedizin.pdf

Lecomte JM, Lacroix VJ, Montgomery DL: A randomized controlled trial of the effect of naproxen on delayed onset muscle soreness and muscle strength. *Clin J Sport Med* 8 (2), 82–87 (1998)

Müller-Platz C, Boos C, Müller KR: Doping im Freizeit- und Breitensport. Gesundheitsberichterstattung des Bundes Heft 34. Robert Koch-Institut, Berlin (2006); http://edoc.rki.de/documents/rki_fv/ren4T3cctjHcA/PDF/26Herxag1MT4M_G36.pdf

Niemann DC, Henson DA, Dumke CL, Oley K et al.: Ibuprofen use, endotoxemia, inflammation, and plasma cytokines during ultramarathon competition. *Brain Behav Immun* 20 (6), 578–584 (2006)

PRÄVENTION & THERAPIE

Probiotika: Sinnvolle Therapie bei Reizdarmsyndrom?

Agrawal A, Houghton LA, Morris J, Reilly B, Guyonnet D, Goupil Feuillerat N, Schlumberger S, Whorwell PJ.: Clinical trial: the effects of a fermented milk product containing *Bifidobacterium lactis* DN-173 010 on abdominal distension and gastrointestinal transit in irritable bowel syndrome with constipation. *Alimentary Pharmacology & Therapeutics* 29, 104–114 (2009)

Begtrup LM, de Muckadell OB, Kjeldsen J, Christensen RD, Jarbøl DE: Long-term treatment with probiotics in primary care patients with irritable bowel syndrome – a randomised, double-blind, placebo controlled trial. *Scand J Gastroenterol* 48, 1127–1135 (2013)

Brenner DM, Moeller MJ, Chey WD, Schoenfeld PS: The utility of probiotics in the treatment of irritable bowel syndrome: a systematic review. *The American Journal of Gastroenterology* 104, 1033–1049 (2009)

Charbonneau D, Gibb RD, Quigley EMM: Fecal excretion of *Bifidobacterium infantis* 35624 and changes in fecal microbiota after eight weeks of oral supplementation with encapsulated probiotic. *Gut Microbes* 4, 201–211 (2013)

Cui S, Hu Y: Multistrain probiotic preparation significantly reduces symptoms of irritable bowel syndrome in a double-blind placebo-controlled study. *Int J Exp Med* 5, 238–244 (2012)

Dai C, Zheng C-Q, Jiang M, Ma X-Y, Jiang L-J: Probiotics and irritable bowel syndrome. *World Journal of Gastroenterology* 19, 5973–5980 (2013)

Dapoigny M, Piche T, Ducrotte P, Linaud B, Cardot J-M, Bernalier-Donadille A: Efficacy and safety profile of LCR35 complete freeze-dried culture in irritable bowel syndrome: a randomized, double-blind study. *World Journal of Gastroenterology* 18, 2067–2075 (2012)

Dolin BJ: Effects of a proprietary *Bacillus coagulans* preparation on symptoms of diarrhea-predominant irritable bowel syndrome. *Methods and Findings in Experimental and Clinical Pharmacology* 31, 655–659 (2009)

Drouault-Holowacz S, Bieuvelet S, Burckel A, Cazaubiel M, Dray X, Marteau P: A double blind randomized controlled trial of a probiotic combination in 100 patients with irritable bowel syndrome. *Gastroentérologie Clinique et Biologique* 32, 147–152 (2008)

Ducrotté P, Sawant P, Jayanthi V: Clinical trial: *Lactobacillus plantarum* 299v (DSM 9843) improves symptoms of irritable bowel syndrome. *World Journal of Gastroenterology* 18, 4012–4018 (2012)

Enck P, Zimmermann K, Menke G, Müller-Lissner S, Martens U, Klosterhalfen S: A mixture of *Escherichia coli* (DSM 17252) and *Enterococcus faecalis* (DSM 16440) for treatment of the irritable bowel syndrome – a randomized controlled trial with primary care physicians. *Neurogastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society* 20, 1103–1109 (2008)

Enck P, Zimmermann K, Menke G, Klosterhalfen S: Randomized controlled treatment trial of irritable bowel syndrome with a probiotic *E-coli* preparation (DSM17252) compared to placebo. *Zeitschrift für Gastroenterologie* 47, 209–214 (2009)

Ford AC, Quigley MME, Lacy BE, Lembo AJ, Saito YA, Schiller LR, Soffer EE, Spiegel BMR, Moayyedi P: Efficacy of prebiotics, probiotics, and synbiotics in irritable bowel syndrome and chronic idiopathic constipation: systematic review and meta-analysis. *The American Journal of Gastroenterology* 109, 1547–1561 (2014)

Gassler N, Rohr C, Schneider A, Kartenbeck J, Bach A, Obermüller N, Otto HF, Autschbach F: Inflammatory bowel disease is associated with changes of enterocytic junctions. *Am J Physiol Gastrointest Liver Physiol* 281, G228 (2001)

Gunnarsson J, Simrén M: Peripheral factors in the pathophysiology of irritable bowel syndrome. *Digestive and Liver Disease* 41, 788–793 (2009)

Farup PG, Jacobsen M, Ligeard SC, Rudi K: Probiotics, symptoms, and gut microbiota: what are the relations? A randomized controlled trial in subjects with irritable bowel syndrome. *Gastroenterology Research and Practice* 12 (2012)

Guyonnet D, Chassany O, Ducrotte P, Picard C, Mouret M, Mercier C-H, Matuchansky C: Effect of a fermented milk containing *Bifidobacterium animalis* DN-173 010 on the health-related quality of life and symptoms in irritable bowel syndrome in adults in primary care: a multicentre, randomized, double-blind, controlled trial. *Alimentary Pharmacology & Therapeutics* 26, 475–86 (2007)

Hong KS, Kang HW, Im JP, Ji GE, Kim SG, Jung HC, Song IS, Sung Kim JS: Effect of probiotics on symptoms in Korean adults with irritable bowel syndrome. *Gut Liver*: 101–7 (2009)

Hong SN, Rhee P-L: Unraveling the ties between irritable bowel syndrome and intestinal microbiota. *World Journal of Gastroenterology* 20, 2470–81 (2014)

Hong YS, Hong KS, Park MH, Ahn YT, Lee JH, Huh CS, Lee J, Kim IK, Hwang GS, Kim JS: Metabolomics understanding of probiotic effects in humans with irritable bowel syndrome. *J Clin Gastroenterol* 45, 415–425 (2011)

Hoveyda N, Heneghan C, Mahtani KR, Perera R, Roberts N, Glasziou P: A systematic review and meta-analysis: probiotics in the treatment of irritable bowel syndrome. *BMC Gastroenterology* 3, 101–107 (2009)

Hun L: Original Research: *Bacillus coagulans* significantly improved abdominal pain and bloating in patients with IBS. *Postgraduate Medicine* 121, 119–124 (2009)

Jafari E, Vahedi H, Merat S, Momtahan S, Riahi A: Therapeutic effects, tolerability and safety of a multi-strain probiotic in Iranian adults with irritable bowel syndrome and bloating. *Archives of Iranian Medicine* 17, 466–470 (2014)

Kajander K, Hatakka K, Poussa T, Färkkilä M, Korpela R: A probiotic mixture alleviates symptoms in irritable bowel syndrome patients: a controlled 6-month intervention. *Alimentary Pharmacology & Therapeutics* 22, 387–394 (2005)

Kajander K, Myllyluoma E, Rajilić-Stojanović M, Kyrönpalo S, Rasmussen M, Järvenpää S, Zoetendal EG, De Vos WM, Vapaatalo H, Korpela R: Clinical trial: multispecies probiotic supplementation alleviates the symptoms of irritable bowel syndrome and stabilizes intestinal microbiota. *Alimentary Pharmacology & Therapeutics* 27, 48–57 (2008)

Ki Cha B, Mun Jung S, Hwan Choi C, Song ID, Woong Lee H, Joon Kim H, Hyuk J, Kyung Chang S, Kim K, Chung WS, Seo JG: The effect of a multispecies probiotic mixture on the symptoms and fecal microbiota in diarrhea-dominant irritable bowel syndrome: a randomized, double-blind, placebo-controlled trial. *J Clin Gastroenterol* 46, 220–227 (2012)

Kim HJ, Vazquez Roque MI, Camilleri M, Stephens D, Burton DD, Baxter K, Thomforde G, Zinsmeister AR: A randomized controlled trial of a probiotic combination VSL# 3 and placebo in irritable bowel syndrome with bloating. *Neurogastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society* 17, 687–696 (2005)

Koloski NA, Talley NJ, Boyce PM: The impact of functional gastrointestinal disorders on quality of life. *The American Journal of Gastroenterology* 95, 67–71 (2000)

- König J, Brummer RJ: Alteration of the intestinal microbiota as a cause of and a potential therapeutic option in irritable bowel syndrome. *Beneficial Microbes* 5, 247–261 (2014)
- Kruis W, Chrubasik S, Boehm S, Stange C, Schulze J: A double-blind placebo-controlled trial to study therapeutic effects of probiotic *Escherichia coli* Nissle 1917 in subgroups of patients with irritable bowel syndrome. *International Journal of Colorectal Disease* 27, 467–474 (2012)
- Layer P, Andresen V, Pehl C, Allescher H, Bischoff SC, Claßen M, Enck P, Frieling T, Haag S, Holtmann G, Karaus M, Kathemann S, Keller J, Kuhlbusch-Zicklam R, Kruis W, Langhorst J, Matthes H, Mönnikes H, Müller-Lissner S, Musial F, Otto F, Rosenberger C, Schemann M, van der Voort I, Dathe K, Preiß JC: S3-Leitlinie Reizdarmsyndrom: Definition, Pathophysiologie, Diagnostik und Therapie. Gemeinsame Leitlinie der Deutschen Gesellschaft für Verdauungs- und Stoffwechselkrankheiten (DGVS) und der Deutschen Gesellschaft für Neurogastroenterologie und Motilität (DGNM). *Z Gastroentero* 49, 237–293 (2011)
- Ligaarden SC, Axelsson L, Naterstad K, Lydersen S, Farup PG: A candidate probiotic with unfavourable effects in subjects with irritable bowel syndrome: a randomised controlled trial. *BMC Gastroenterology* 10 (2010)
- Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC: Functional bowel disorders. *Gastroenterology* 130, 1480–1491 (2006)
- Lorenzo-Zúñiga V, Llop E, Suárez C, Álvarez B, Abreu L, Espadaler J, Serra J: A new combination of probiotics, improves irritable bowel syndrome-related quality of life. *World J Gastroenterol* 20, 8709–8716 (2014)
- Ludidi S, Jonkers DM, Koning CJ, Kruijmel JW, Mulder L, van der Vaart IB, Conchillo JM, Masclee AA: Randomized clinical trial on the effect of a multispecies probiotic on visceroperception in hypersensitive IBS patients. *Neurogastroenterol Motil* 26, 705–714 (2014)
- McFarland LV, Dublin S: Meta-analysis of probiotics for the treatment of irritable bowel syndrome. *World J Gastroenterol* 14, 2650–2661 (2008)
- Michail S, Kenche H: Gut microbiota is not modified by randomized, double-blind, placebo-controlled trial of VSL#3 in diarrhea-predominant irritable bowel syndrome. *Probiotics Antimicrob Proteins* 3, 1–7 (2011)
- Neidl D, Ledochowski M: Reizdarmsyndrom. In: Ledochowski M (Hrsg.): *Klinische Ernährungsmedizin*. Springer-Verlag, Wien, 181–193 (2010)
- Niedzielin K, Kordecki H, Birkenfeld B: A controlled, double blind, randomized study on the efficacy of *Lactobacillus plantarum* 299V in patients with irritable bowel syndrome *Eur J Gastroenterol Hepatol* 13, 1143–1147 (2001)
- Niv E, Naftali T, Hallak R, Vaisman N: The efficacy of *Lactobacillus reuteri* ATCC 55730 in the treatment of patients with irritable bowel syndrome. A double blind, placebo-controlled, randomized study. *Clinical Nutrition* 24, 925–931 (2005)
- O'Mahony L, McCarthy J, Kelly P, Hurley G, Luo F, Chen K, O'Sullivan GC, Kiely B, Collins K, Shanahan F, Quigley EMM: *Lactobacillus* and *bifidobacterium* in irritable bowel syndrome: Symptom responses and relationship to cytokine profiles. *Gastroenterology* 128, 541–551 (2005)
- Ortiz-Lucas M, Tobias A, Saz P, Sebastián JJ: Effect of probiotic species on irritable bowel syndrome symptoms: A bring up to date meta-analysis. *Rev Esp Enferm Dig* 105, 19–36 (2013)
- Roberts LM, McCahon D, Holder R, Wilson S, Hobbs FDR: A randomised controlled trial of a probiotic “functional food” in the management of irritable bowel syndrome. *BMC Gastroenterology* 13 (2013)
- Schaub N, Degen L: Reizdarmsyndrom: Ein Überblick über Pathophysiologie und Therapie. *Schweizer Zeitschrift für Ernährungsmedizin* 3, 6–10 (2013)
- Shanahan F: Probiotics in perspective. *Gastroenterology* 139, 1808–1812 (2010)
- Simrén M, Ohman L, Olsson J, Svensson U, Ohlson K, Posserud I, Strid H: Clinical trial: the effects of a fermented milk containing three probiotic bacteria in patients with irritable bowel syndrome – a randomized, double-blind, controlled study. *Alimentary Pharmacology & Therapeutics* 31, 218–227 (2010)
- Sinn DH, Song JH, Kim HJ, Lee JH, Son HJ, Chang DK, Kim Y-H, Kim JJ, Rhee JC, Rhee P-L: Therapeutic effect of *Lactobacillus acidophilus*-SDC 2012, 2013 in patients with irritable bowel syndrome. *Digestive Diseases and Sciences* 53, 2714–2718 (2008)
- Sisson G, Ayis S, Sherwood RA, Bjarnason I: Randomised clinical trial: A liquid multi-strain probiotic vs placebo in the irritable bowel syndrome. A 12 week double-blind study. *Aliment Pharmacol Ther* 40, 52–62 (2014)
- Søndergaard B, Olsson J, Ohlson K, Svensson U, Bytzer P, Ekesbo R: Effects of probiotic fermented milk on symptoms and intestinal flora in patients with irritable bowel syndrome: a randomized, placebo-controlled trial. *Scandinavian Journal of Gastroenterology* 46, 663–72 (2011)
- Spiller R, Garsed K: Postinfectious irritable bowel syndrome *Gastroenterology* 136, 1979–1988 (2009)
- Stevenson C, Blaauw R, Fredericks E, Visser J, Roux S: Randomized clinical trial: effect of *Lactobacillus plantarum* 299 v on symptoms of irritable bowel syndrome. *Nutrition* 30, 1151–1157 (2014)
- Whorwell P J, Altringer L, Morel J, Bond Y, Charbonneau D, O'Mahony L, Kiely B, Shanahan F, Quigley EMM: Efficacy of an encapsulated probiotic *Bifidobacterium infantis* 35624 in women with irritable bowel syndrome. *The American Journal of Gastroenterology* 101, 1581–1590 (2006)
- Williams EA, Stimpson J, Wang D, Plummer S, Garaiova I, Barker ME, Corfe BM, Clinical trial: A multistrain probiotic preparation significantly reduces symptoms of irritable bowel syndrome in a double-blind placebo-controlled study. *Alimentary Pharmacology & Therapeutics* 29, 97–103 (2009)
- World Health Organization (WHO): Food and Agriculture organization of the United Nations (FAO). *Probiotics In: Food Health And Nutritional Properties And Guidelines For Evaluation*. Rome (2006)
- Yoon JS, Sohn W, Lee OY, Lee SP, Lee KN, Jun DW, Lee HL, Yoon BC, Choi HS, Chung W-S, Seo J-G: Effect of multispecies probiotics on irritable bowel syndrome: a randomized, double-blind, placebo-controlled trial. *Journal of Gastroenterology and Hepatology* 29, 52–59 (2014)
- Zeng J, Li Y-Q, Zuo X-L, Zhen Y-B, Yang J, Liu C-H: Clinical trial: effect of active lactic acid bacteria on mucosal barrier function in patients with diarrhoea-predominant irritable bowel syndrome. *Alimentary Pharmacology & Therapeutics* 28, 994–1002 (2008)

ERNÄHRUNGSPSYCHOLOGIE

Systemische Ansätze: Der Klient – das unbekannte Wesen

Khan MMR: Erfahrungen im Möglichkeitsraum. Suhrkamp, Frankfurt (1990)

Watzlawick P: Anleitung zum Unglücklichsein. Piper, München (2009)

Watzlawick P, Beavin JH, Jackson DD: Menschliche Kommunikation – Formen, Störungen, Paradoxien. 4. Aufl., Verlag Hans Huber, Bern, Stuttgart, Wien (1974)

Nietzsche F: Also sprach Zarathustra. Kritische Studienausgabe. Band 4. de Gruyter, Berlin, New York (1999)

Watzlawick P, Beavin JH, Jackson DD: Menschliche Kommunikation. Verlag Hans Huber, Bern (1974)