

Exploring the Connection Between the Microbiome and Allergy Development

- Berni Canani R, Di Costanzo M, Bedogni G, et al. Extensively hydrolyzed casein formula containing *Lactobacillus rhamnosus* GG reduces the occurrence of other allergic manifestations in children with cow's milk allergy: 3-year randomized controlled trial. *J Allergy Clin Immunol.* 2017;139(6):1906-1913.e4. doi:10.1016/j.jaci.2016.10.050
- Bilaver L, Thivalapill N, Jiang J, et al. The Economic Burden of Childhood Food Allergies on Households in the FORWARD Study. *J Allergy Clin Immunol.* 2023;151(2):AB186.
- Bunyavanich S, Shen N, Grishin A, et al. Early-life gut microbiome composition and milk allergy resolution. *J Allergy Clin Immunol.* 2016;138(4):1122-1130. doi:10.1016/j.jaci.2016.03.041
- Burks AW, Jones SM, Boyce JA, et al. NIAID-sponsored 2010 guidelines for managing food allergy: applications in the pediatric population. *Pediatrics.* 2011;128(5):955-965. doi:10.1542/peds.2011-0539
- Burks AW, Tang M, Sicherer S, et al. ICON: food allergy. *J Allergy Clin Immunol.* 2012;129(4):906-920. doi:10.1016/j.jaci.2012.02.001
- Carroccio A, Montalto G, Custro N, et al. Evidence of very delayed clinical reactions to cow's milk in cow's milk-intolerant patients. *Allergy.* 2000;55(6):574-579. doi:10.1034/j.1398-9995.2000.00417.x
- Chatchatee P, Nowak-Wegrzyn A, Lange L, et al. Tolerance development in cow's milk-allergic infants receiving amino acid-based formula: A randomized controlled trial. *J Allergy Clin Immunol.* 2022;149(2):650-658.e5. doi:10.1016/j.jaci.2021.06.025
- Di Costanzo M, Vella A, Infantino C, et al. Probiotics in Infancy and Childhood for Food Allergy Prevention and Treatment. *Nutrients.* 2024;16(2):297. doi:10.3390/nu16020297
- Di Vincenzo F, Del Gaudio A, Petito V, Lopetuso LR, Scaldaferrri F. Gut microbiota, intestinal permeability, and systemic inflammation: a narrative review. *Intern Emerg Med.* 2024;19(2):275-293. doi:10.1007/s11739-023-03374-w
- Flom JD, Sicherer SH. Epidemiology of Cow's Milk Allergy. *Nutrients.* 2019;11(5):1051. doi:10.3390/nu11051051
- Guest JF, Panca M, Ovcinnikova O, Nocerino R. Relative cost-effectiveness of an extensively hydrolyzed casein formula containing the probiotic *Lactobacillus rhamnosus* GG in managing infants with cow's milk allergy in Italy. *Clinicoecon Outcomes Res.* 2015;7:325-336. doi:10.2147/CEOR.S80130
- Guest JF, Singh H. Cost-effectiveness of using an extensively hydrolyzed casein formula supplemented with *Lactobacillus rhamnosus* GG in managing IgE-mediated cow's milk protein allergy in the UK. *Curr Med Res Opin.* 2019;35(10):1677-1685. doi:10.1080/03007995.2019.1612339
- Gupta RS, Warren CM, Smith BM, et al. The Public Health Impact of Parent-Reported Childhood Food Allergies in the United States. *Pediatrics.* 2018;142(6):e20181235. doi:10.1542/peds.2018-1235

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Han X, Lee A, Huang S, Gao J, Spence JR, Owyang C. Lactobacillus rhamnosus GG prevents epithelial barrier dysfunction induced by interferon-gamma and fecal supernatants from irritable bowel syndrome patients in human intestinal enteroids and colonoids. *Gut Microbes*. 2019;10(1):59-76.

doi:10.1080/19490976.2018.1479625

Hojsak I, Snovak N, Abdović S, Szajewska H, Misak Z, Kolacek S. Lactobacillus GG in the prevention of gastrointestinal and respiratory tract infections in children who attend day care centers: a randomized, double-blind, placebo-controlled trial. *Clin Nutr*. 2010;29(3):312-316. doi:10.1016/j.clnu.2009.09.008

Kinashi Y, Hase K. Partners in Leaky Gut Syndrome: Intestinal Dysbiosis and Autoimmunity. *Front Immunol*. 2021;12:673708. doi:10.3389/fimmu.2021.673708

Nixon AF, Cunningham SJ, Cohen HW, Crain EF. The effect of Lactobacillus GG on acute diarrheal illness in the pediatric emergency department. *Pediatr Emerg Care*. 2012;28(10):1048-1051.

doi:10.1097/PEC.0b013e31826cad9f

Nocerino R, Bedogni G, Carucci L, et al. The Impact of Formula Choice for the Management of Pediatric Cow's Milk Allergy on the Occurrence of Other Allergic Manifestations: The Atopic March Cohort Study. *J Pediatr*. 2021;232:183-191.e3. doi:10.1016/j.jpeds.2021.01.059

Nocerino R, Coppola S, Carucci L, et al. The step-down approach in children with cow's milk allergy: Results of a randomized controlled trial. *Allergy*. 2023;78(9):2477-2486. doi:10.1111/all.15750

Ovcinnikova O, Panca M, Guest JF. Cost-effectiveness of using an extensively hydrolyzed casein formula plus the probiotic Lactobacillus rhamnosus GG compared to an extensively hydrolyzed formula alone or an amino acid formula as first-line dietary management for cow's milk allergy in the US. *Clinicoecon Outcomes Res*. 2015;7:145-152. doi:10.2147/CEOR.S75071

Parkin K, Christophersen CT, Verhasselt V, Cooper MN, Martino D. Risk Factors for Gut Dysbiosis in Early Life. *Microorganisms*. 2021;9(10):2066. doi:10.3390/microorganisms9102066

Protudjer JLP, Olén O, Vetander M, et al. Milk-Related Symptoms and Immunoglobulin E Reactivity in Swedish Children from Early Life to Adolescence. *Nutrients*. 2018;10(5):651. doi:10.3390/nu10050651

Samadi N, Klems M, Untersmayr E. The role of gastrointestinal permeability in food allergy. *Ann Allergy Asthma Immunol*. 2018;121(2):168-173. doi:10.1016/j.anai.2018.05.010

Sanidad KZ, Zeng MY. Neonatal gut microbiome and immunity. *Curr Opin Microbiol*. 2020;56:30-37. doi:10.1016/j.mib.2020.05.011

Skripak JM, Matsui EC, Mudd K, Wood RA. The natural history of IgE-mediated cow's milk allergy. *J Allergy Clin Immunol*. 2007;120(5):1172-1177. doi:10.1016/j.jaci.2007.08.023

Spergel JM. Nonimmunoglobulin e-mediated immune reactions to foods. *Allergy Asthma Clin Immunol*. 2006;2(2):78-85. doi:10.1186/1710-1492-2-2-78

Suratannon N, Prapansilp P, Srinarongsook A, Tanpowpong P, Chatchatee P, Pongpirul K. Cost-effectiveness of therapeutic infant formulas for cow's milk protein allergy management. *Front Nutr*. 2023;10:1099462. doi:10.3389/fnut.2023.1099462

Vandenplas Y. Prevention and Management of Cow's Milk Allergy in Non-Exclusively Breastfed Infants. *Nutrients*. 2017;9(7):731. doi:10.3390/nu9070731

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Vandenplas Y, Broekaert I, Domellöf M, et al. An ESPGHAN position paper on the diagnosis, management, and prevention of cow's milk allergy. *J Pediatr Gastroenterol Nutr.* 2024;78(2):386-413.

doi:10.1097/MPG.0000000000003897

Vanto T, Helppilä S, Juntunen-Backman K, et al. Prediction of the development of tolerance to milk in children with cow's milk hypersensitivity. *J Pediatr.* 2004;144(2):218-222. doi:10.1016/j.jpeds.2003.10.063

Venter C, Brown T, Meyer R, et al. Better recognition, diagnosis and management of non-IgE-mediated cow's milk allergy in infancy: iMAP—an international interpretation of the MAP (Milk Allergy in Primary Care) guideline [published correction appears in *Clin Transl Allergy.* 2018 Jan 25;8:4]. *Clin Transl Allergy.* 2017;7:26. doi:10.1186/s13601-017-0162-y

Warren CM, Agrawal A, Gandhi D, Gupta RS. The US population-level burden of cow's milk allergy. *World Allergy Organ J.* 2022;15(4):100644. Published 2022 Apr 21. doi:10.1016/j.waojou.2022.100644

Xiong Y, Xu G, Chen M, Ma H. Intestinal Uptake and Tolerance to Food Antigens. *Front Immunol.* 2022;13:906122. doi:10.3389/fimmu.2022.906122



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