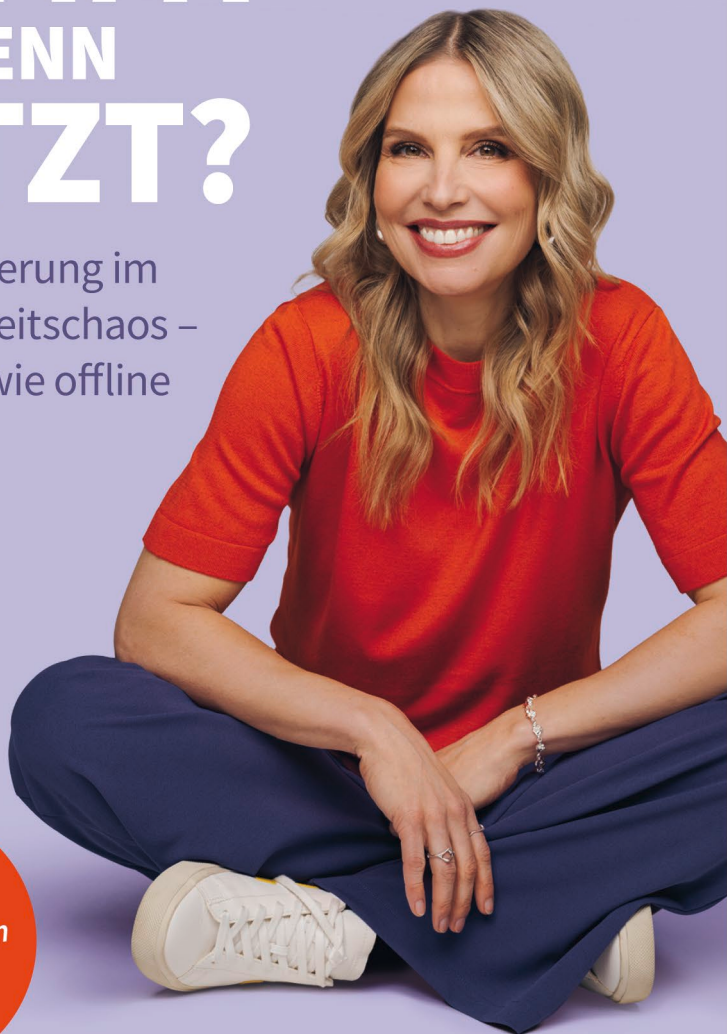


Dr. med. Julia Fischer

# WAS STIMMT DENN JETZT?

Orientierung im  
Gesundheitschaos –  
online wie offline



Plus die  
7 gesündesten  
Entscheidungen  
deines  
Lebens

**KNAUR**   
MENSSANA

Anmerkungen/Quellen zum Titel

**Dr. med. Julia Fischer**

# **WAS STIMMT DENN JETZT?**

**Orientierung im Gesundheitschaos –  
online wie offline**

1. Auflage September 2026

Originalausgabe September 2026

© 2026 Knaur Verlag

Ein Imprint der Verlagsgruppe

Droemer Knaur GmbH & Co. KG

Landsberger Straße 346, 80687 München

Alle Rechte vorbehalten. Das Werk darf – auch teilweise – nur mit

Genehmigung des Verlags wiedergegeben werden.

Die Nutzung dieses Werks für Text- und Data-Mining

im Sinne des § 44b UrhG bleibt explizit vorbehalten.

Redaktion: Nina Schnackenbeck

Covergestaltung: Alexandra Dohse | [www.grafikkiosk.de](http://www.grafikkiosk.de)

Coverabbildung: Vanessa Wunsch

ISBN 978-3-426-57216-0

Kontaktadresse nach EU-Produktsicherheitsverordnung:  
[produktsicherheit@droemer-knaur.de](mailto:produktsicherheit@droemer-knaur.de)

Die in diesem Buch enthaltenen Hinweise und Tipps wurden von der Autorin und dem Verlag sorgfältig geprüft und haben sich in der Praxis bewährt. Jedoch wird keine Gewähr für deren Richtigkeit, Vollständigkeit oder Aktualität übernommen. Druckfehler und Irrtümer bleiben vorbehalten.

Die Umsetzung der Anweisungen erfolgt auf eigenes Risiko.

Haftungsansprüche gegen die Autorin und/oder den Verlag sind ausgeschlossen, es sei denn, es liegt Vorsatz, grobe Fahrlässigkeit oder Arglist vor. Dieser Haftungsausschluss gilt nicht für Schäden an Leben, Körper oder Gesundheit.

# ANMERKUNGEN

## Einleitung – Der Kampf gegen Goliath

- 1 Cadegiani, F. A., & Kater, C. E. (2016). Adrenal fatigue does not exist: A systematic review. *BMC Endocrine Disorders*, 16(1), 48. <https://doi.org/10.1186/s12902-016-0128-4>
- 2 Bertelsmann Stiftung. (2025). Deutsche wünschen sich vertrauenswürdige Gesundheitsinformationen im Netz: Repräsentative Bevölkerungsbefragung in Deutschland.
- 3 Statista. (2022.). *Umfrage zu wichtigen Themen im Leben von Beschäftigten in Deutschland*. <https://de.statista.com/statistik/daten/studie/1392720/umfrage/umfrage-zu-wichtigen-themen-im-leben-von-beschaeftigten-in-deutschland/>
- 4 Jork, K., Kauffmann, B., Lobo, R., & Schuchardt, E. (Hrsg.). (2013). *Selbstverantwortliches Gesundsein*. In *Was macht den Menschen krank? 18 kritische Analysen* (Kap. 1). Birkhäuser. [https://doi.org/10.1007/978-3-0348-5228-9\\_1](https://doi.org/10.1007/978-3-0348-5228-9_1)
- 5 Technische Universität München. (2025, April 2). Gesundheitskompetenz in Deutschland weiter gesunken. <https://www.tum.de/aktuelles/alle-meldungen/pressemitteilungen/details/gesundheitskompetenz-in-deutschland-weiter-gesunken>
- 6 Schaeffer, D., Berens, E.-M., Vogt, D., & Hurrelmann, K. (2024). Gesundheitskompetenz der Bevölkerung in Deutschland: Ergebnisbericht der HLS-GER 2 Studie. Technische Universität München. <https://mediatum.ub.tum.de/download/1772956/1772956.pdf>
- 7 The HLS<sub>19</sub> Consortium of the WHO Action Network on Measuring Population and Organizational Health Literacy. (2021). International report on the methodology, results, and recom-

- mendations of the European Health Literacy Population Survey 2019–2021 (HLS<sub>19</sub>). <https://m-pohl.net/sites/m-pohl.net/files/inline-files/HLS19%20International%20Report.pdf>
- 8 Schüz, B., & Jones, C. (2024). Falsch- und Desinformation in sozialen Medien: Ansätze zur Minimierung von Risiken in digitaler Kommunikation über Gesundheit. *Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz*, 67(3), 300–307. <https://doi.org/10.1007/s00103-024-03836-2>
- 9 Hurrelmann, K., Klinger, J., & Schaeffer, D. (2020). *Gesundheitskompetenz der Bevölkerung in Deutschland: Vergleich der Erhebungen 2014 und 2020*. Interdisziplinäres Zentrum für Gesundheitskompetenzforschung (IZGK), Universität Bielefeld. <https://doi.org/10.4119/unibi/2950303>
- 10 Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, 359(6380), 1146–1151. <https://doi.org/10.1126/science.aap9559>
- 11 Suarez-Lledo, V., & Alvarez-Galvez, J. (2021). Prevalence of health misinformation on social media: Systematic review. *Journal of Medical Internet Research*, 23(1), e17187. <https://doi.org/10.2196/17187>
- 12 Johnson, S. B., Parsons, M., Dorff, T., Moran, M. S., Ward, J. H., Cohen, S. A., Akerley, W., Bauman, J., Hubbard, J., Spratt, D. E., Bylund, C. L., Swire-Thompson, B., Onega, T., Scherer, L. D., Tward, J., & Fagerlin, A. (2022). Cancer misinformation and harmful information on Facebook and other social media: A brief report. *Journal of the National Cancer Institute*, 114(7), 1036–1039. <https://doi.org/10.1093/jnci/djab141>
- 13 Baker, S. A. (2022). Alt health influencers: How wellness culture and web culture have been weaponised to promote conspiracy theories and far-right extremism during the COVID-19 pandemic. *European Journal of Cultural Studies*, 25(1), 3–24. <https://doi.org/10.1177/13675494211062623>
- 14 World Health Organization. (2022). *Infodemics and misinfor-*

- tion negatively affect people's health behaviours, new WHO review finds. <https://www.who.int/news/item/15-09-2022-info-demics-and-misinformation-negatively-affect-people-s-health-behaviours-new-who-review-finds>
- 15 Nan, X., Wang, Y., & Thier, K. (2022). Why do people believe health misinformation and who is at risk? A systematic review of individual differences in susceptibility to health misinformation. *Social Science & Medicine*, 314, 115398. <https://doi.org/10.1016/j.socscimed.2022.115398>
  - 16 Jia, K. M., Hanage, W. P., Lipsitch, M., Johnson, A. G., Amin, A. B., Ali, A. R., Scobie, H. M., & Swerdlow, D. L. (2023). Estimated preventable COVID-19-associated deaths due to non-vaccination in the United States. *European Journal of Epidemiology*, 38(11), 1125–1128. <https://doi.org/10.1007/s10654-023-01006-3>
  - 17 Johnson, S. B., Park, H. S., Gross, C. P., & Yu, J. B. (2018). Use of alternative medicine for cancer and its impact on survival. *Journal of the National Cancer Institute*, 110(1). <https://doi.org/10.1093/jnci/djx145>
  - 18 Usta Ulutaş, P., & Okan Bakır, B. (2025). The type of social media is a greater influential factor for orthorexia nervosa than the duration: A cross-sectional study. *BMC Public Health*, 25(1), 827. <https://doi.org/10.1186/s12889-025-21335-0>
  - 19 Vintró-Alcaraz, C., Ballero Reque, C., Paslakis, G., & Testa, G. (2026). Idealized body images and fitness lifestyles on social media: A systematic review exploring the link between social media use and symptoms of orthorexia nervosa and muscle dysmorphia. *European Eating Disorders Review*, 34(1), 256–280. <https://doi.org/10.1002/erv.70027>
  - 20 Blanchard, L., Conway-Moore, K., Aguiar, A., Önal, F., Rutter, H., Helleve, A., Nwosu, E., Falcone, J., Savona, N., Boyland, E., & Knai, C. (2023). Associations between social media, adolescent mental health, and diet: A systematic review.

- Obesity Reviews*, 24(Suppl 2), e13631. <https://doi.org/10.1111/obr.13631>
- 21 Denniss, E., & Lindberg, R. (2025). Social media and the spread of misinformation: Infectious and a threat to public health. *Health Promotion International*, 40(2), daaf023. <https://doi.org/10.1093/heapro/daaf023>
  - 22 World Economic Forum. (2025). *The global risks report 2025 (20th ed.)*. [https://reports.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2025.pdf](https://reports.weforum.org/docs/WEF_Global_Risks_Report_2025.pdf)
  - 23 Krebsinformationsdienst. (o.D.). *Krebsrisiko durch UV-Strahlung*. <https://www.krebsinformationsdienst.de/krebs-vorbeugen/krebsrisiko-uv-strahlung>
  - 24 Voleti, N., Reddy, S. P., & Ssentongo, P. (2022). Myocarditis in SARS-CoV-2 infection vs. COVID-19 vaccination: A systematic review and meta-analysis. *Frontiers in Cardiovascular Medicine*, 9, 951314. <https://doi.org/10.3389/fcvm.2022.951314>
  - 25 Immunize.org. (2023). *MMR vaccine does not cause autism: Examine the evidence!* <https://www.immunize.org/wp-content/uploads/catg.d/p4026.pdf>

### **Warum fallen wir auf falsche Informationen herein?**

- 1 Kahneman, Daniel (2011). Thinking Fast; Thinking Slow. *Farrar, Straus and Giroux*
- 2 West, R. F., Meserve, R. J., & Stanovich, K. E. (2012). Cognitive sophistication does not attenuate the bias blind spot. *Journal of Personality and Social Psychology*, 103(3), 506–519. <https://doi.org/10.1037/a0028857>
- 3 Kahneman, Daniel (2011). Thinking Fast; Thinking Slow. *Farrar, Straus and Giroux*;
- 4 Funkhouser, E. (2021). Evolutionary psychology, learning, and

- belief signaling. *Frontiers in Psychology*, 12, 722338. <https://doi.org/10.3389/fpsyg.2021.722338>
- 5 Mackie, D. M., Worth, L. T., & Asuncion, A. G. (1990). Processing of persuasive in-group messages. *Journal of Personality and Social Psychology*, 58, 812–822.
- 6 Briñol, P., & Petty, R. E. (2009). Source factors in persuasion: A self-validation approach. *European Review of Social Psychology*, 20, 49–96
- 7 Gulati, A., Martínez-García, M., Fernández, D., Lozano, M. A., Lepri, B., & Oliver, N. (2024). What is beautiful is still good: The attractiveness halo effect in the era of beauty filters. *Royal Society Open Science*, 11(11), 240882. <https://doi.org/10.1098/rsos.240882>
- 8 Barari, M. M., Ross, M., & Surachartkumtonkun, J. (2025). A meta-analysis of the effectiveness of social media influencers. *Journal of the Academy of Marketing Science*. <https://doi.org/10.1007/s11747-025-01107-3>
- 9 Statista. (2025, September 15). *Welchen demokratischen Institutionen vertrauen die Deutschen?* <https://de.statista.com/infografik/35132/umfrage-zum-vertrauen-in-oeffentliche-einrichtungen-und-institutionen/>
- 10 Hoffner, C. A., & Bond, B. J. (2022). Parasocial relationships, social media, and well-being. *Current Opinion in Psychology*, 45, 101306. <https://doi.org/10.1016/j.copsyc.2022.101306>
- 11 Bond, B. J. (2016). Following your »friend«: Social media and the strength of adolescents' parasocial relationships with media personae. *Cyberpsychology, Behavior, and Social Networking*, 19(10), 656–660. <https://doi.org/10.1089/cyber.2016.0355>
- 12 Breves, P., Liebers, N., Motschenbacher, B., & Reus, L. (2021). Reducing resistance: The impact of nonfollowers' and followers' parasocial relationships with social media influencers on persuasive resistance and advertising effectiveness. *Human Communication Research*, 47, 418–443. <https://doi.org/10.1093/hcr/hqab006>

- 13 Butler, L. H., Fay, N., & Ecker, U. K. H. (2022). Social endorsement influences the continued belief in corrected misinformation. *PsyArXiv*. <https://doi.org/10.31234/osf.io/3fv4d>
- 14 Klein, A. V., & Kiat, H. (2015). Detox diets for toxin elimination and weight management: A critical review of the evidence. *Journal of Human Nutrition and Dietetics*, 28(6), 675–686. <https://doi.org/10.1111/jhn.12286>
- 15 Verbraucherzentrale. (2026, Januar 9). *Detox – überflüssig oder doch gesünder durch Entgiftung?* <https://www.verbraucherzentrale.de/wissen/lebensmittel/nahrungsergaenzungsmittel/detox-ueberfluessig-oder-doch-gesuender-durch-entgiftung-25381>
- 16 Verbraucherzentrale Bundesverband. (2025, November 25). *Säure-Basen-Ausgleich durch Nahrungsergänzungsmittel – Wem nützt das?* <https://www.klartext-nahrungsergaenzung.de/wissen/lebensmittel/nahrungsergaenzungsmittel/saeurebasen-ausgleich-durch-nahrungsergaenzungsmittel-wem-nuetzt-das-65760>
- 17 de Berker, A. O., Rutledge, R. B., Mathys, C., Marshall, L., Cross, G. F., Dolan, R. J., & Bestmann, S. (2016). Computations of uncertainty mediate acute stress responses in humans. *Nature Communications*, 7, 10996. <https://doi.org/10.1038/ncomms10996>
- 18 De keersmaecker, J., Dunning, D., Pennycook, G., & Rand, D. G. (2020). Investigating the robustness of the illusory truth effect across individual differences in cognitive ability, need for cognitive closure, and cognitive style. *Personality and Social Psychology Bulletin*, 46, 204–215. <https://doi.org/10.1177/0146167219853844>
- 19 Cinelli, M., Morales, G. D. F., Galeazzi, A., Quattrocioni, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, 118(9), e2023301118. <https://doi.org/10.1073/pnas.2023301118>
- 20 Pennycook, G., & Rand, D. G. (2019). Lazy, not biased: Suscep-

- tibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*, 188, 39–50. <https://doi.org/10.1016/j.cognition.2018.06.011>
- 21 Stanley, M. L., Barr, N., Peters, K., & Seli, P. (2020). Analytic thinking predicts hoax beliefs and helping behaviors in response to the COVID-19 pandemic. *Thinking & Reasoning*, 27, 464–477. <https://doi.org/10.1080/13546783.2020.1742321>
  - 22 Kanoh, H. (2018). Why do people believe in fake news over the Internet? An understanding from the perspective of existence of the habit of eating and drinking. *Procedia Computer Science*, 126, 1704–1709. <https://doi.org/10.1016/j.procs.2018.08.107>
  - 23 Ecker, U. K. H., Lewandowsky, S., Cook, J., Schmid, P., Fazio, L. K., Brashier, N. M., Kendeou, P., Vraga, E. K., & Amazeen, M. A. (2022). The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology*, 1(1), 13–29. <https://doi.org/10.1038/s44159-021-00006-y>
  - 24 Baron, J. (2019). Actively open-minded thinking in politics. *Cognition*, 188, 8–18. <https://doi.org/10.1016/j.cognition.2018.10.004>
  - 25 Miura, N., Sugiura, M., Nozawa, T., Yamamoto, Y., Sasaki, Y., Hamamoto, Y., Yamazaki, S., Hirano, K., Takahashi, M., & Kawashima, R. (2020). Taking another’s perspective promotes right parieto-frontal activity that reflects open-minded thought. *Social Neuroscience*, 15(3), 282–295. <https://doi.org/10.1080/17470919.2019.1710249>
  - 26 Árvai, J., Cohen, A. S., Lutzke, L., & Otten, C. D. (2024). I think, therefore I act, revisited: Building a stronger foundation for risk analysis. *Risk Analysis*, 44(3), 513–520. <https://doi.org/10.1111/risa.14177>
  - 27 Prakash, S., Sladek, R. M., & Schuwirth, L. (2019). Interventions to improve diagnostic decision making: A systematic review and meta-analysis on reflective strategies. *Medical Teacher*, 41(5), 517–524. <https://doi.org/10.1080/0142159X.2018.1497786>

- 28 Reilly, J. B., Ogdie, A. R., Von Feldt, J. M., & Myers, J. S. (2013). Teaching about how doctors think: A longitudinal curriculum in cognitive bias and diagnostic error for residents. *BMJ Quality & Safety*, 22(12), 1044–1050. <https://doi.org/10.1136/bmjqs-2013-001987>
- 29 Boissin, E., & Pennycook, G. (2025). Who benefits from debiasing? *Cognition*, 262, 106166. <https://doi.org/10.1016/j.cognition.2025.106166>
- 30 Jackson, J. J., Hill, P. L., Payne, B. R., Roberts, B. W., & Stine-Morrow, E. A. L. (2012). Can an old dog learn (and want to experience) new tricks? Cognitive training increases openness to experience in older adults. *Psychology and Aging*, 27(2), 286–292. <https://doi.org/10.1037/a0025918>

### **Warum Überzeugung keine Expertise ist**

- 1 Rozenblit, L. and Keil, F. (2002), The misunderstood limits of folk science: an illusion of explanatory depth. *Cognitive Science*, 26: 521–562. [https://doi.org/10.1207/s15516709cog2605\\_1](https://doi.org/10.1207/s15516709cog2605_1)
- 2 Afflictor. (2011, April 7). »He was under the deeply misguided impression that rubbing one’s face with lemon juice rendered it invisible to video cameras.« <https://afflictor.com/tag/mcarthur-wheeler/>
- 3 Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one’s own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134. <https://doi.org/10.1037//0022-3514.77.6.1121>
- 4 Gaze, E. C. (2023, May 23). The Dunning-Kruger effect isn’t what you think it is. *Scientific American*. <https://www.scientificamerican.com/article/the-dunning-kruger-effect-isnt-what-you-think-it-is/>

- 5 Svenson, O. (1981). Are we all less risky and more skillful than our fellow drivers? *Acta Psychologica*, 47(2), 143-148. [https://doi.org/10.1016/0001-6918\(81\)90005-6](https://doi.org/10.1016/0001-6918(81)90005-6)
- 6 Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in Japan and North America: An investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, 81(4), 599–615. <https://doi.org/10.1037/0022-3514.81.4.599>

### **Ehrliche Lügen**

- 1 Lewandowsky, S. (o.D.). When liars are considered honest – How misinformation spreads and why people believe it [Video]. YouTube. <https://www.youtube.com/watch?v=1-UHUQSkRxM>
- 2 The Washington Post. (2021, January 24). *Trump's false or misleading claims total 30,573 over 4 years*. <https://www.washingtonpost.com/politics/2021/01/24/trumps-false-or-misleading-claims-total-30573-over-four-years/>
- 3 Greene, S. (2001). The role of character assessments in presidential approval. *American Politics Research*, 29(2), 196–210. <https://doi.org/10.1177/1532673X01029002004>
- 4 Cueto, I. (2024, December 3). *RFK Jr. was paid six figures by his vaccine-challenging group Children's Health Defense*. STAT. <https://www.statnews.com/2024/12/03/rfk-jr-maha-pay-vaccine-group-childrens-health-defense/>
- 5 Novelo, A. (2025, January 24). *RFK Jr's financial disclosures reveal millions in both debt and income as he awaits HHS confirmation*. CBS News. <https://www.cbsnews.com/news/rfk-jr-financial-disclosures-millions-in-both-debt-and-income-awaits-hhs-confirmation/>
- 6 Lewandowsky, S. (2025, June 13). Social media has changed

- how politicians communicate (Episode 33). In Ratio Podcast: Agent 001. <https://open.spotify.com/episode/2m6lonL2gyL1Qj1fvDsBDe>
- 7 Simmank, J. (2025, 21. August). Stephan Lewandowsky: »Kennedy läuft Amok« [Interview]. *DIE ZEIT*, Nr. 36/2025
  - 8 Lewandowsky, S. (2020). Willful construction of ignorance: A tale of two ontologies. In R. Hertwig & C. Engel (Eds.), *Deliberate ignorance: Choosing not to know* (pp. 101–117). MIT Press.
  - 9 Varshizky, A. (2012). Alfred Rosenberg: The Nazi *Weltanschauung* as modern gnosis. *Politics, Religion & Ideology*, 13, 311–331. <https://doi.org/10.1080/21567689.2012.705669>
  - 10 Arendt, H. (1968). Truth and politics. In *Between past and future: Eight exercises in political thought* (pp. 227–264). Viking Press.
  - 11 Lewandowsky, S., Garcia, D., Simchon, A., & Carrella, F. (2024). When liars are considered honest. *Trends in Cognitive Sciences*, 28(5), 383–385. <https://doi.org/10.1016/j.tics.2024.03.005>
  - 12 Lasser, J., Aroyehun, S., Carrella, F., Simchon, A., Garcia, D., & Lewandowsky, S. (2023). From alternative conceptions of honesty to alternative facts in communications by US politicians. *Nature Human Behaviour*, 7, 1–12. <https://doi.org/10.1038/s41562-023-01691-w>
  - 13 Lasser, J., Aroyehun, S. T., Simchon, A., Carrella, F., Garcia, D., & Lewandowsky, S. (2022). Social media sharing of low-quality news sources by political elites. *PNAS Nexus*, 1(4), pgac186. <https://doi.org/10.1093/pnasnexus/pgac186>
  - 14 Aroyehun, S. T., Simchon, A., Carrella, F., Garcia, D., & Lewandowsky, S. (2025). Computational analysis of US congressional speeches reveals a shift from evidence to intuition. *Nature Human Behaviour*, 9, 1122–1133. <https://doi.org/10.1038/s41562-025-02136-2>
  - 15 Lewandowsky, S. (o. D.). When liars are considered honest –

- How misinformation spreads and why people believe it [Video]. YouTube. <https://www.youtube.com/watch?v=1-UHUQSkRxM>
- 16 American Academy of Pediatrics. (2025, September 26). Majority of »eco-influencer« TikToks contain contradictory medical information. <https://www.eurekalert.org/news-releases/1098951>
  - 17 Nickel, B., Moynihan, R., Gram, E. G., et al. (2025). Social media posts about medical tests with potential for overdiagnosis. *JAMA Network Open*, 8(2), e2461940. <https://doi.org/10.1001/jamanetworkopen.2024.61940>
  - 18 Nguyen, V., Testa, L., Smith, A.L., Ellis, L.A., Dunn, A.G., Braithwaite, J., & Sarkies, M. (2022). Unravelling the truth: Examining the evidence for health-related claims made by naturopathic influencers on social media: A retrospective analysis. *Health Promotion Perspectives*, 12(4), 372–380. <https://doi.org/10.34172/hpp.2022.49>
  - 19 Schindler, J., Schindler, S., & Pfattheicher, S. (2021). The role of intuition in vaccination attitudes. *Journal of Health Psychology*, 26(14), 2950–2957. <https://doi.org/10.1177/1359105320925160>
  - 20 Martel, C., Pennycook, G., & Rand, D.G. (2020). Reliance on emotion promotes belief in fake news. *Cognitive Research: Principles and Implications*, 5, 47. <https://doi.org/10.1186/s41235-020-00252-3>
  - 21 Huttunen, K.J.A., & Lewandowsky, S. (2026). Tolerance for democratic norm violations increases when sincerity replaces accuracy as a marker of honesty. *Communications Psychology*. <https://doi.org/10.1038/s44271-026-00407-w>

## Mechanismen der Überzeugung

- 1 Raghuraman, N., & Colloca, L. (2025). Clinical neuroscience and neurobiology of placebo and nocebo effects. *International Review of Neurobiology*, 184, 179–197. <https://doi.org/10.1016/bs.irn.2025.09.001>
- 2 Frisaldi, E., Shaibani, A., Benedetti, F., & Pagnini, F. (2023). Placebo and nocebo effects and mechanisms associated with pharmacological interventions: An umbrella review. *BMJ Open*, 13(10), e077243. <https://doi.org/10.1136/bmjopen-2023-077243>
- 3 Trummer, U. F., Mueller, U. O., Nowak, P., Stidl, T., & Pelikan, J. M. (2006). Does physician–patient communication that aims at empowering patients improve clinical outcome? A case study. *Patient Education and Counseling*, 61(2), 299–306. <https://doi.org/10.1016/j.pec.2005.04.009>
- 4 Lindberg, K., Bjørnsen, T., Vårvik, F. T., Paulsen, G., Joensen, M., Kristoffersen, M., Sveen, O., Gundersen, H., Slettaløkken, G., Brankovic, R., & Solberg, P. (2023). The effects of being told you are in the intervention group on training results: A pilot study. *Scientific Reports*, 13(1), 1972. <https://doi.org/10.1038/s41598-023-29141-7>
- 5 Colloca, L., & Barsky, A. J. (2020). Placebo and nocebo effects. *New England Journal of Medicine*, 382(6), 554–561. <https://doi.org/10.1056/NEJMr1907805>
- 6 Blythe, J. S., Thomaidou, M. A., Peerdeman, K. J., van Laarhoven, A. I. M., van Schothorst, M. M. E., Veldhuijzen, D. S., & Evers, A. W. M. (2023). Placebo effects on cutaneous pain and itch: A systematic review and meta-analysis of experimental results and methodology. *Pain*, 164(6), 1181–1199. <https://doi.org/10.1097/j.pain.0000000000002820>
- 7 Lembo, A., Kelley, J. M., Nee, J., Ballou, S., Iturrino, J., Cheng, V., Rangan, V., Katon, J., Hirsch, W., Kirsch, I., Hall, K., Davis, R. B., & Kaptchuk, T. J. (2021). Open-label placebo vs double-blind

- placebo for irritable bowel syndrome: A randomized clinical trial. *Pain*, 162(9), 2428–2435. <https://doi.org/10.1097/j.pain.0000000000002234>
- 8 Chen, P. A., Cheong, J. H., Jolly, E., Elhence, H., Wager, T. D., & Chang, L. J. (2019). Socially transmitted placebo effects. *Nature Human Behaviour*, 3(12), 1295–1305. <https://doi.org/10.1038/s41562-019-0749-5>
  - 9 Czerniak, E., Oberlander, T. F., Weimer, K., Kossowsky, J., & Enck, P. (2020). “Placebo by proxy” and “nocebo by proxy” in children: A review of parents’ role in treatment outcomes. *Frontiers in Psychiatry*, 11, 169. <https://doi.org/10.3389/fpsyt.2020.00169>
  - 10 Raghuraman, N., & Colloca, L. (2025). Clinical neuroscience and neurobiology of placebo and nocebo effects. *International Review of Neurobiology*, 184, 179–197. <https://doi.org/10.1016/bs.irn.2025.09.001>
  - 11 Benedetti, F., Pollo, A., Lopiano, L., Lanotte, M., Vighetti, S., & Rainero, I. (2003). Conscious expectation and unconscious conditioning in analgesic, motor, and hormonal placebo/nocebo responses. *Journal of Neuroscience*, 23(10), 4315–4323.
  - 12 Haas, J. W., Bender, F. L., Ballou, S., Kelley, J. M., Wilhelm, M., Miller, F. G., Rief, W., & Kaptchuk, T. J. (2022). Frequency of adverse events in the placebo arms of COVID-19 vaccine trials: A systematic review and meta-analysis. *JAMA Network Open*, 5(1), e2143955. <https://doi.org/10.1001/jamanetworkopen.2021.43955>
  - 13 Wood, F. A., Howard, J. P., Finegold, J. A., Nowbar, A. N., Thompson, D. M., Arnold, A. D., Rajkumar, C. A., Connolly, S., Cegla, J., Stride, C., Sever, P., Norton, C., Thom, S. A. M., Shun-Shin, M. J., & Francis, D. P. (2020). N-of-1 trial of a statin, placebo, or no treatment to assess side effects. *New England Journal of Medicine*, 383(22), 2182–2184. <https://doi.org/10.1056/NEJMc2031173>

- 14 Bechler, S. (2003). *Steve Bechler*. In *Wikipedia*. [https://en.wikipedia.org/wiki/Steve\\_Bechler](https://en.wikipedia.org/wiki/Steve_Bechler)
- 15 Haller, C. A., & Benowitz, N. L. (2000). Adverse cardiovascular and central nervous system events associated with dietary supplements containing ephedra alkaloids. *New England Journal of Medicine*, 343(25), 1833–1838.
- 16 U.S. Food and Drug Administration. (2004). Final rule declaring dietary supplements containing ephedrine alkaloids adulterated because they present an unreasonable risk. *Federal Register*, 69(28), 6788–6854.
- 17 Lee, W. R., & Marschalck, P. (2002). Infant mortality in Bremen in the 19th century. *The History of the Family*, 7(4), 557–583. [https://doi.org/10.1016/S1081-602X\(02\)00127-6](https://doi.org/10.1016/S1081-602X(02)00127-6)
- 18 Pozzi, L., & Fariñas, D.-R. (2015). Infant and child mortality in the past. *Annales de démographie historique*, 129(1), 55–75. <https://doi.org/10.3917/adh.129.0055>
- 19 UK woman who refused cancer drugs was influenced by mother, inquest finds. (2025, October 2). *The Guardian*
- 20 Shemirani, K. (n.d.). *Kate Shemirani*. In *Wikipedia*. [https://en.wikipedia.org/wiki/Kate\\_Shemirani](https://en.wikipedia.org/wiki/Kate_Shemirani)
- 21 World Health Organization. *Vaccine safety basics: What are the risks of vaccines?* <https://vaccine-safety-training.org/what-are-the-risks-of-vaccines.html>
- 22 Glette-Iversen, I., Aven, T., & Flage, R. (2024). A risk science perspective on vaccines. *Risk Analysis*, 44(12), 2780–2796. <https://doi.org/10.1111/risa.14228>
- 23 Know & Grow. (2025, June 23). *Gottes Nahrung = ES?* <https://play.funk.net/channel/know-grow-12344/gottes-nahrung-es--2075148>
- 24 Centers for Disease Control and Prevention (CDC): Centers for Disease Control and Prevention. (n.d.). *U.S. Public Health Service syphilis study at*
- 25 Center for Countering Digital Hate. (2021). *Pandemic profiteers:*

- The business of anti-vaxx.* <https://counterhate.com/research/pandemic-profiteers/>
- 26 Gauch, E. C., & Smollich, M. (2025). Fehl- und Desinformation zu Nahrungsergänzungsmitteln in den sozialen Medien: Risiken begrenzen, Chancen nutzen, Strukturen gestalten [Misinformation and disinformation about dietary supplements in social media: Limiting the risks, seizing the opportunities, and shaping structures]. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz*, 68(11), 1283–1290. <https://doi.org/10.1007/s00103-025-04138-x>
  - 27 Europäische Kommission. (2024, Januar 16). *Influencer machen kommerzielle Inhalte selten transparent* (Pressemitteilung). [https://ec.europa.eu/commission/presscorner/detail/de/ip\\_24\\_708](https://ec.europa.eu/commission/presscorner/detail/de/ip_24_708)
  - 28 Euronews. (2026, February 23). *How deepfake scams are reaching record levels by targeting social media users*. <https://www.euronews.com/my-europe/2026/02/23/how-deepfake-scams-are-reaching-record-levels-by-targeting-social-media-users>

## **Das Projekt »Ich«**

- 1 Klein, N. (2023). *Doppelgänger: A trip into the mirror world*. Farrar, Straus and Giroux

## **Wissenschaft als Werkzeug**

- 1 Light, N., Fernbach, P. M., Rabb, N., Geana, A., & Sloman, S. A. (2022). Knowledge overconfidence is associated with anti-consensus views on controversial scientific issues. *Science Advances*, 8(29), eabo0038. <https://doi.org/10.1126/sciadv.abo0038>
- 2 Brown University. (2022, August 9). People who disagree with scientists often overestimate their own scientific knowledge, stu-

- dy finds. Brown University News. <https://www.brown.edu/news/2022-08-09/overconfidence>
- 3 Rapp, D. N., Hinze, S. R., Kohlhepp, K., & Ryskin, R. A. (2014). Reducing reliance on inaccurate information. *Memory & Cognition*, 42(1), 11–26. <https://doi.org/10.3758/s13421-013-0339-0>
  - 4 Pennycook, G., McPhetres, J., Zhang, Y., Lu, J. G., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy-nudge intervention. *Psychological Science*, 31(7), 770–780. <https://doi.org/10.1177/0956797620939054>
  - 5 Sinatra, G. M., & Lombardi, D. (2020). Evaluating sources of scientific evidence and claims in the post-truth era may require reappraising plausibility judgments. *Educational Psychologist*, 55(3), 120–131. <https://doi.org/10.1080/00461520.2020.1730181>
  - 6 Kozyreva, A., Lewandowsky, S., & Hertwig, R. (2020). Citizens versus the internet: Confronting digital challenges with cognitive tools. *Psychological Science in the Public Interest*, 21(3), 103–156. <https://doi.org/10.1177/1529100620946707>
  - 7 Wineburg, S., McGrew, S., Breakstone, J., & Ortega, T. (2016). *Evaluating information: The cornerstone of civic online reasoning*. Stanford Digital Repository. <https://purl.stanford.edu/fv751yt5934>
  - 8 Lewandowsky, S., Cook, J., Ecker, U. K. H., Albarracín, D., AMAZEEN, M. A., Kendeou, P., Lombardi, D., Newman, E. J., Pennycook, G., Porter, E., Rand, D. G., Rapp, D. N., Reifler, J., Roozenbeek, J., Schmid, P., Seifert, C. M., Sinatra, G. M., Swire-Thompson, B., van der Linden, S., Vraga, E. K., Wood, T. J., & Zaragoza, M. S. (2020). *The debunking handbook 2020*. <https://doi.org/10.17910/b7.1182>
  - 9 Faunalytics. (2025, August 6). *How Instagram influencers spread nutrition misinformation*. <https://faunalytics.org/how-instagram-influencers-spread-nutrition-misinformation/>
  - 10 Kozyreva, A., Lorenz-Spreen, P., Herzog, S. M., Ecker, U. K. H.,

- Lewandowsky, S., Hertwig, R., van der Linden, S., & Arechar, A. A. (2024). Toolbox of individual-level interventions against on-line misinformation. *Nature Human Behaviour*, 8, 1044–1052. <https://doi.org/10.1038/s41562-024-01881-0>
- 11 Ecker, U. K. H., Lewandowsky, S., Cook, J., Schmid, P., Fazio, L. K., Brashier, N., Kendeou, P., Vraga, E. K., & Amazeen, M. A. (2022). The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology*, 1, 13–29. <https://doi.org/10.1038/s44159-021-00006-y>
  - 12 Lewandowsky, S., Cook, J., Ecker, U. K. H., Albarracín, D., Amazeen, M. A., Kendeou, P., Lombardi, D., Newman, E. J., Pennycook, G., Porter, E., Rand, D. G., Rapp, D. N., Reifler, J., Roozenbeek, J., Schmid, P., Seifert, C. M., Sinatra, G. M., Swire-Thompson, B., van der Linden, S., Vraga, E. K., Wood, T. J., & Zaragoza, M. S. (2020). *Widerlegen, aber richtig: Ein Leitfaden zum Umgang mit Falschinformationen. Deutsche Ausgabe des Debunking Handbook 2020*. <https://sks.to/db2020-german>
  - 13 Scheufele, D. A., & Krause, N. M. (2019). Science audiences, misinformation, and fake news. *Proceedings of the National Academy of Sciences*, 116(16), 7662–7669. <https://doi.org/10.1073/pnas.1805871115>
  - 14 Schmid, P. (2025). Debunking health misinformation with empathy. *Current Opinion in Psychology*, 67, 102213. <https://doi.org/10.1016/j.copsyc.2025.102213>

## **Cortisol – Mehr als nur ein Stresshormon**

- 1 O’Byrne, N. A., Yuen, F., Butt, W. Z., & Liu, P. Y. (2021). Sleep and circadian regulation of cortisol: A short review. *Current Opinion in Endocrine and Metabolic Research*, 18, 178–186. <https://doi.org/10.1016/j.coemr.2021.03.011>
- 2 Hirotsu, C., Tufik, S., & Andersen, M. L. (2015). Interactions

- between sleep, stress, and metabolism: From physiological to pathological conditions. *Sleep Science*, 8(3), 143–152. <https://doi.org/10.1016/j.slsci.2015.09.002>
- 3 Thau, L., Gandhi, J., & Sharma, S. (2023, August 28). *Physiology, cortisol*. In *StatPearls* [Internet]. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK538239/>
  - 4 Schommer, N. C., Hellhammer, D. H., & Kirschbaum, C. (2003). Dissociation between reactivity of the hypothalamus-pituitary-adrenal axis and the sympathetic-adrenal-medullary system to repeated psychosocial stress. *Psychosomatic Medicine*, 65(3), 450–460. <https://doi.org/10.1097/01.PSY.0000035721.12441.17>
  - 5 Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: A theoretical integration and meta-analysis. *Psychological Bulletin*, 130(3), 355–391. <https://doi.org/10.1037/0033-2909.130.3.355>
  - 6 Russell, G., & Lightman, S. (2019). The human stress response. *Nature Reviews Endocrinology*, 15(9), 525–534. <https://doi.org/10.1038/s41574-019-0228-0>
  - 7 Reincke, M., & Fleseriu, M. (2023). Cushing syndrome: A review. *JAMA*, 330(2), 170–181. <https://doi.org/10.1001/jama.2023.11305>
  - 8 Caplin, A., Chen, F. S., Beauchamp, M. R., & Puterman, E. (2021). The effects of exercise intensity on the cortisol response to a subsequent acute psychosocial stressor. *Psychoneuroendocrinology*, 131, 105336. <https://doi.org/10.1016/j.psyneuen.2021.105336>
  - 9 De Nys, L., Anderson, K., Ofori, E. F., Ryde, G. C., Connelly, J., & Whittaker, A. C. (2022). The effects of physical activity on cortisol and sleep: A systematic review and meta-analysis. *Psychoneuroendocrinology*, 143, 105843. <https://doi.org/10.1016/j.psyneuen.2022.105843>
  - 10 Anderson, T., & Wideman, L. (2017). Exercise and the cortisol

- awakening response: A systematic review. *Sports Medicine - Open*, 3, 37. <https://doi.org/10.1186/s40798-017-0102-3>
- 11 De Nys, L., Anderson, K., Ofosu, E. F., Ryde, G. C., Connelly, J., & Whittaker, A. C. (2022). The effects of physical activity on cortisol and sleep: A systematic review and meta-analysis. *Psychoneuroendocrinology*, 143, 105843. <https://doi.org/10.1016/j.psyneuen.2022.105843>
  - 12 Ungvari, Z., & Kunutsor, S. K. (2024). Coffee consumption and cardiometabolic health: A comprehensive review of the evidence. *GeroScience*, 46(6), 6473–6510
  - 13 Carlström, M., & Larsson, S. C. (2018). Coffee consumption and reduced risk of developing type 2 diabetes: A systematic review with meta-analysis. *Nutrition Reviews*, 76(6), 395–417. <https://doi.org/10.1093/nutrit/nuy014>
  - 14 Malerba, S., Turati, F., Galeone, C., Pelucchi, C., Verga, F., La Vecchia, C., & Tavani, A. (2013). A meta-analysis of prospective studies of coffee consumption and mortality for all causes, cancers and cardiovascular diseases. *European Journal of Epidemiology*, 28(7), 527–539. <https://doi.org/10.1007/s10654-013-9834-7>
  - 15 Antonio, J., Newmire, D. E., Stout, J. R., Antonio, B., Gibbons, M., Lowery, L. M., Harper, J., Willoughby, D., Evans, C., Anderson, D., Goldstein, E., Rojas, J., Monsalves-Álvarez, M., Forbes, S. C., Gomez Lopez, J., Ziegenfuss, T., Moulding, B. D., Candow, D., Sagner, M., & Arent, S. M. (2024). Common questions and misconceptions about caffeine supplementation: What does the scientific evidence really show? *Journal of the International Society of Sports Nutrition*, 21(1), 2323919. <https://doi.org/10.1080/15502783.2024.2323919>
  - 16 Nieman, L. K., Biller, B. M. K., Findling, J. W., Newell-Price, J., Savage, M. O., Stewart, P. M., & Montori, V. M. (2008). The diagnosis of Cushing's syndrome: An Endocrine Society clinical practice guideline. *Journal of Clinical Endocrinology & Metabolism*, 93(5), 1526–1540. <https://doi.org/10.1210/jc.2008-0125>

## Heiliges Protein? – Vom Hype zur Wahrheit

- 1 EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA). (2012). Scientific opinion on dietary reference values for protein. *EFSA Journal*, 10(2), 2557. <https://doi.org/10.2903/j.efsa.2012.2557>
- 2 Richter, M., Baerlocher, K., Bauer, J. M., Elmadfa, I., Heseker, H., Leschik-Bonnet, E., Linseisen, J., Schulze, M., Strohmann, D., Virmani, K., Watzl, B., & for the German Nutrition Society (DGE). (2019). Revised reference values for the intake of protein. *Annals of Nutrition and Metabolism*, 74(3), 242–250. <https://doi.org/10.1159/000499374>
- 3 Wilson, J., & Wilson, G. J. (2006). Contemporary issues in protein requirements and consumption for resistance trained athletes. *Journal of the International Society of Sports Nutrition*, 3(1), 7–27. <https://doi.org/10.1186/1550-2783-3-1-7>
- 4 National Academies Press Institute of Medicine. (2005). Dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids. National Academies Press. <https://doi.org/10.17226/10490>
- 5 Max Rubner-Institut. (2008). *Nationale Verzehrsstudie II: Ergebnisbericht, Teil 2*. [https://www.bmel.de/SharedDocs/Downloads/DE/\\_Ernaehrung/NVS\\_ErgebnisberichtTeil2.pdf?\\_\\_blob=publicationFile&v=2](https://www.bmel.de/SharedDocs/Downloads/DE/_Ernaehrung/NVS_ErgebnisberichtTeil2.pdf?__blob=publicationFile&v=2)
- 6 Deutsche Gesellschaft für Ernährung. (2021). *Ausgewählte Fragen und Antworten zu Protein und unentbehrlichen Aminosäuren*. <https://www.dge.de/gesunde-ernaehrung/faq/ausgewaehlte-fragen-und-antworten-zu-protein-und-unentbehrlichen-aminosaeuern/>
- 7 Kerstetter, J. E., O'Brien, K. O., & Insogna, K. L. (2011). Dietary protein and skeletal health: A review of recent human research. *Current Opinion in Lipidology*, 22(1), 16–20. <https://doi.org/10.1097/MOL.0b013e328341e1e2>

- 8 Halton, T. L., & Hu, F. B. (2004). The effects of high protein diets on thermogenesis, satiety and weight loss: A critical review. *Journal of the American College of Nutrition*, 23(5), 373–385. <https://doi.org/10.1080/07315724.2004.10719381>
- 9 Kim, J., Lee, C., & Lee, J. (2017). Effect of timing of whey protein supplement on muscle damage markers after eccentric exercise. *Journal of Exercise Rehabilitation*, 13(4), 436–440. <https://doi.org/10.12965/jer.1735028.514>
- 10 Morton, R. W., Murphy, K. T., McKellar, S. R., Schoenfeld, B. J., Henselmans, M., Helms, E., Aragon, A. A., Devries, M. C., Banfield, L., Krieger, J. W., & Phillips, S. M. (2018). A systematic review, meta-analysis and meta-regression of the effect of protein supplementation on resistance training-induced gains in muscle mass and strength. *British Journal of Sports Medicine*, 52(6), 376–384. <https://doi.org/10.1136/bjsports-2017-097608>
- 11 König, D. et al. (2020). Proteinzufuhr im Sport: Position der Arbeitsgruppe Sporternährung der Deutschen Gesellschaft für Ernährung e. V. (DGE). *Ernährungs Umschau*, 67(7), 132–139.
- 12 Jäger, R., Kerksick, C. M., Campbell, B. I., Cribb, P. J., Wells, S. D., Skwiat, T. M., Purpura, M., Ziegenfuss, T. N., Ferrando, A. A., Arent, S. M., Smith-Ryan, A. E., et al. (2017). International Society of Sports Nutrition position stand: Protein and exercise. *Journal of the International Society of Sports Nutrition*, 14, 20. <https://doi.org/10.1186/s12970-017-0177-8>
- 13 Morton, R. W., Murphy, K. T., McKellar, S. R., Schoenfeld, B. J., Henselmans, M., Helms, E., Aragon, A. A., Devries, M. C., Banfield, L., Krieger, J. W., & Phillips, S. M. (2018). A systematic review, meta-analysis and meta-regression of the effect of protein supplementation on resistance training-induced gains in muscle mass and strength in healthy adults. *British Journal of Sports Medicine*, 52(6), 376–384. <https://doi.org/10.1136/bjsports-2017-097608>

- 14 Mathias, D. (2012). Bewegung. In Fit von 1 bis Hundert: Ernährung und Bewegung – Aktuelles medizinisches Wissen zur Gesundheit (S. 47–88). Springer Berlin Heidelberg.
- 15 Robert Koch-Institut. (2020). *Gesundheitliche Lage der Frauen in Deutschland* (GBE-Bericht). <https://www.rki.de/DE/Themen/Gesundheit-und-Gesellschaft/Gesundheitsberichterstattung/Berichte/Frauenbericht/Gesundheitliche-Lage-Frauen.html?nn=16778824>
- 16 Jjang, Y. J. (2023). The effects of protein and supplements on sarcopenia in human clinical studies: How older adults should consume protein and supplements. *Journal of Microbiology and Biotechnology*, 33(2), 143–150. <https://doi.org/10.4014/jmb.2209.09024>
- 17 Paulussen, K. J. M., Mann, Z. M., Mooney, A. R., & Koopman, R. (2021). Anabolic resistance of muscle protein turnover comes in various shapes and sizes. *Frontiers in Nutrition*, 8, 615849. <https://doi.org/10.3389/fnut.2021.615849>
- 18 Chapman, I., Kim, I. Y., & Kim, D. H. (2021). Rational use of protein supplements in the elderly—Relevance of gastrointestinal mechanisms. *Nutrients*, 13(4), 1227. <https://doi.org/10.3390/nu13041227>
- 19 Deutsche Gesellschaft für Ernährung. (2020). Proteinzufuhr bei Kindern und Jugendlichen – zwischen Bedarf, Verzehrgegewohnheiten und ökologischer Nachhaltigkeit. [https://www.dge.de/fileadmin/dok/wissenschaft/dgewissen/DGEwissen-Protein\\_zufuhr\\_bei\\_KundJ-11-2020-S112-117.pdf](https://www.dge.de/fileadmin/dok/wissenschaft/dgewissen/DGEwissen-Protein_zufuhr_bei_KundJ-11-2020-S112-117.pdf)
- 20 Kühn, T., Kalotai, N., Amini, A. M., Haardt, J., Lehmann, A., Schmidt, A., Buyken, A. E., Egert, S., Ellinger, S., Kroke, A., Lorkowski, S., Louis, S., Schulze, M. B., Schwingshackl, L., Siener, R., Stangl, G. I., Watzl, B., Zittermann, A., Nimptsch, K., & German Nutrition Society. (2024). Protein intake and cancer: An umbrella review of systematic reviews for the evidence-based guideline of the German Nutrition Society. *European Journal of*

- Nutrition*, 63(5), 1471–1486. <https://doi.org/10.1007/s00394-024-03380-4>
- 21 Naghshi, S., Sadeghi, O., Willett, W. C., & Esmailzadeh, A. (2020). Dietary intake of total, animal, and plant proteins and risk of all cause, cardiovascular, and cancer mortality: Systematic review and dose-response meta-analysis of prospective cohort studies. *BMJ*, 370, m2412. <https://doi.org/10.1136/bmj.m2412>
  - 22 Papanikolaou, Y., Phillips, S. M., & Fulgoni, V. L. (2025). Animal and plant protein usual intakes are not adversely associated with all-cause, cardiovascular disease-, or cancer-related mortality risk: An NHANES III analysis. *Applied Physiology, Nutrition, and Metabolism*, 50, 1–8. <https://doi.org/10.1139/apnm-2023-0594>
  - 23 Pinckaers, P. J. M., Trommelen, J., Snijders, T., van Vliet, S., Burd, N. A., Verdijk, L. B., & van Loon, L. J. C. (2023). The muscle protein synthetic response to the ingestion of a plant-derived protein blend does not differ from an equivalent amount of milk protein in healthy young males. *The Journal of Nutrition*, 152(12), 2734–2743. <https://doi.org/10.1093/jn/nxac173>
  - 24 Ardisson Korat, A. V., Willett, W. C., & Hu, F. B. (2024). Dietary protein intake in midlife in relation to healthy aging: Results from the prospective Nurses' Health Study cohort. *The American Journal of Clinical Nutrition*, 119(2), 271–282. <https://doi.org/10.1016/j.ajcnut.2023.10.010>
  - 25 Wu, G. (2016). Dietary protein intake and human health. *Food & Function*, 7(3), 1251–1265. <https://doi.org/10.1039/C5FO015>
  - 26 Remer, T., et al. (2023). Protein intake and risk of urolithiasis and kidney diseases: An umbrella review of systematic reviews for the evidence-based guideline of the German Nutrition Society. *European Journal of Nutrition*, 62(5), 1957–1975. <https://doi.org/10.1007/s00394-023-03151-7>
  - 27 National Kidney Foundation. (2022). Nutrition: Kidney Disease

- and Protein. Verfügbar unter: [https://www.kidney.org/sites/default/files/kidney\\_disease\\_and\\_protein.pdf](https://www.kidney.org/sites/default/files/kidney_disease_and_protein.pdf)
- 28 Gosby, A. K., Conigrave, A. D., Lau, N. S., & Raubenheimer, D. (2011). Testing protein leverage in lean humans: A randomised controlled experimental study. *PLOS ONE*, 6(10), e25929. <https://doi.org/10.1371/journal.pone.0025929>
  - 29 Chambers, L., McCrickerd, K., & Yeomans, M. R. (2015). Optimising foods for satiety. *Trends in Food Science & Technology*, 41(2), 149–160. <https://doi.org/10.1016/j.tifs.2014.10.007>
  - 30 Helms, E. R., Aragon, A. A., & Fitschen, P. J. (2014). A systematic review of dietary protein during caloric restriction in resistance trained lean athletes: A case for higher intakes. *International Journal of Sport Nutrition and Exercise Metabolism*, 24(2), 127–138. <https://doi.org/10.1123/ijsnem.2013-0054>
  - 31 Forde, C. G., & Decker, E. A. (2022). The importance of food processing and eating behavior in promoting healthy and sustainable diets. *Annual Review of Nutrition*, 42, 377–399. <https://doi.org/10.1146/annurev-nutr-062320-112652>
  - 32 Bundesinstitut für Risikobewertung. (n.d.). *Aromastoffe und Aromen*. [https://www.bfr.bund.de/de/aromastoffe\\_und\\_aromen-54440.html](https://www.bfr.bund.de/de/aromastoffe_und_aromen-54440.html)
  - 33 Cox, S., Sandall, A., Smith, L., & Rossi, M. (2021). Food additive emulsifiers: A review of their role in foods, legislation and classifications, presence in food supply, dietary exposure, and safety assessment. *Nutrition Reviews*, 79(6), 726–741. <https://doi.org/10.1093/nutrit/nuaa038>
  - 34 Verbraucherzentrale Hessen. (2022). *Wozu dienen Verdickungsmittel und Emulgatoren in Nahrungsmitteln?* <https://verbraucherfenster.hessen.de/ernaehrung/inhaltstoffe/wozu-dienen-verdickungsmittel-und-emulgatoren-in-nahrungsmitteln>
  - 35 Verbraucherservice Bayern. (2021). *Künstliche Farbstoffe in Lebensmitteln*. <https://www.verbraucherservice-bayern.de/themen/ernaehrung/kuenstliche-farbstoffe-in-lebensmitteln>

- 36 Bundesinstitut für Risikobewertung. (2023). *Süßungsmittel: Mehrheit der Studien bestätigt keine Gesundheitsbeeinträchtigung – allerdings ist die Studienlage unzureichend*. <https://www.bfr.bund.de/cm/343/suessungsmittel-mehrheit-der-studien-bestaetigt-keine-gesundheitsbeeintraechtigung-allerdings-ist-die-studienlage-unzureichend.pdf>

### **Kohlenhydrate im Kreuzfeuer – Wie gefährlich sind Blutzuckerschwankungen wirklich**

- 1 Inchauspé, Jessie (2022): Der Glukosetrick. Schluss mit Heißhunger, schlechter Haut und Stimmungstiefs – Wie man der Achterbahn des Blutzuckerspiegels entkommt. Heyne.
- 2 Kubota, S., Liu, Y., Iizuka, K., Kuwata, H., Seino, Y., & Yabe, D. (2020). A review of recent findings on meal sequence: An attractive dietary approach to prevention and management of type 2 diabetes. *Nutrients*, 12(9), 2502. <https://doi.org/10.3390/nu12092502>
- 3 Santos, H. O., de Moraes, W. M. A. M., da Silva, G. A. R., Prestes, J., & Schoenfeld, B. J. (2019). Vinegar (acetic acid) intake on glucose metabolism: A narrative review. *Clinical Nutrition ESPEN*, 32, 1–7. <https://doi.org/10.1016/j.clnesp.2019.05.008>
- 4 Erratum: Santos, H. O., de Moraes, W. M. A. M., da Silva, G. A. R., Prestes, J., & Schoenfeld, B. J. (2024). *Clinical Nutrition ESPEN*, 64, 92. <https://doi.org/10.1016/j.clnesp.2024.09.013>
- 5 BMJ Nutrition, Prevention & Health. (2025). Retraction: Apple cider vinegar for weight management in Lebanese adolescents and young adults with overweight and obesity: A randomised, double-blind, placebo-controlled study. <https://doi.org/10.1136/bmjnph-2023-000823ret>
- 6 Kang, J., Fardman, B. M., Ratamess, N. A., Faigenbaum, A. D., & Bush, J. A. (2023). Efficacy of postprandial exercise in mitigating glycemic responses in overweight individuals and individu-

- als with obesity and type 2 diabetes—a systematic review and meta-analysis. *Nutrients*, 15(20), 4489. <https://doi.org/10.3390/nu15204489>
- 7 Buffey, A. J., Herring, M. P., Langley, C. K., Donnelly, A. E., & Carson, B. P. (2022). The acute effects of interrupting prolonged sitting time in adults with standing and light-intensity walking on biomarkers of cardiometabolic health in adults: A systematic review and meta-analysis. *Sports Medicine*, 52(8), 1765–1787. <https://doi.org/10.1007/s40279-022-01649-4>
  - 8 Richardson, R. R. (2025). Normal reference range for glucose rates of change in nondiabetic individuals using continuous glucose monitoring. *Diabetes Technology & Therapeutics*. <https://doi.org/10.1177/15209156251390822>
  - 9 Hall, H., Perelman, D., Breschi, A., Limcaoco, P., Kellogg, R., McLaughlin, T., & Snyder, M. (2018). Glucotypes reveal new patterns of glucose dysregulation. *PLOS Biology*, 16(7), e2005143. <https://doi.org/10.1371/journal.pbio.2005143>
  - 10 Shah, V. N., DuBose, S. N., Li, Z., Beck, R. W., Peters, A. L., Weinstock, R. S., Kruger, D., Tansey, M., Sparling, D., Woerner, S., Vendrame, F., Bergenstal, R., Tamborlane, W. V., Watson, S. E., & Sherr, J. (2019). Continuous glucose monitoring profiles in healthy nondiabetic participants: A multicenter prospective study. *The Journal of Clinical Endocrinology & Metabolism*, 104(10), 4356–4364. <https://doi.org/10.1210/jc.2018-02763>  
 Erratum: Shah, V. N., DuBose, S. N., Li, Z., Beck, R. W., Peters, A. L., Weinstock, R. S., Kruger, D., Tansey, M., Sparling, D., Woerner, S., Vendrame, F., Bergenstal, R., Tamborlane, W. V., Watson, S. E., & Sherr, J. (2022). Erratum: Continuous glucose monitoring profiles in healthy nondiabetic participants: A multicenter prospective study. *The Journal of Clinical Endocrinology & Metabolism*, 107(4), e1775–e1776. <https://doi.org/10.1210/clinem/dgab837>
  - 11 Keshet, A., Shilo, S., Godneva, A., Talmor-Barkan, Y., Aviv, Y.,

- Segal, E., & Rossman, H. (2023). CGMap: Characterizing continuous glucose monitor data in thousands of non-diabetic individuals. *Cell Metabolism*, 35(5), 758–769.e3. <https://doi.org/10.1016/j.cmet.2023.04.002>
- 12 Sacks, D. B., Arnold, M., Bakris, G. L., Bruns, D. E., Horvath, A. R., Lernmark, Å., Metzger, B. E., Nathan, D. M., & Kirkman, M. S. (2023). Guidelines and recommendations for laboratory analysis in the diagnosis and management of diabetes mellitus. *Diabetes Care*, 46(10), e151–e199. <https://doi.org/10.2337/dci23-0036>
- 13 Milajerdi, A., Saneei, P., Larijani, B., & Esmailzadeh, A. (2018). The effect of dietary glycemic index and glycemic load on inflammatory biomarkers: A systematic review and meta-analysis of randomized clinical trials. *The American Journal of Clinical Nutrition*, 107(4), 593–606. <https://doi.org/10.1093/ajcn/nqx042>
- 14 Akintola, A. A., Noordam, R., Jansen, S. W., de Craen, A. J., Balleux, B. E., Cobbaert, C. M., Mooijaart, S. P., Pijl, H., Westendorp, R. G., & van Heemst, D. (2015). Accuracy of continuous glucose monitoring measurements in normo-glycemic individuals. *PLOS ONE*, 10(10), e0139973. <https://doi.org/10.1371/journal.pone.0139973>
- 15 Hutchins, K. M., Betts, J. A., Thompson, D., Hengist, A., & Gonzalez, J. T. (2025). Continuous glucose monitor overestimates glycemia, with the magnitude of bias varying by postprandial test and individual—A randomized crossover trial. *The American Journal of Clinical Nutrition*, 121(5), 1025–1034. <https://doi.org/10.1016/j.ajcnut.2025.02.024>
- 16 Ardisson Korat, A. V., et al. (2024). Dietary protein intake in midlife in relation to healthy aging: Results from the prospective Nurses' Health Study cohort. *The American Journal of Clinical Nutrition*.

## **Süßstoffe – Harmloses Risiko oder versteckte Gefahr?**

- 1 Statistisches Bundesamt. (2025). *Pro-Kopf-Konsum von Zucker in Deutschland bis 2023/24*. Statista. <https://de.statista.com/statistik/daten/studie/175483/umfrage/pro-kopf-verbrauch-von-zucker-in-deutschland/>
- 2 Pimpin, L., Wu, J. H. Y., Haskelberg, H., et al. (2016). Is butter back? A systematic review and meta-analysis of butter consumption and risk of cardiovascular disease, diabetes, and total mortality. *PLOS ONE*, 11, e0158118. <https://doi.org/10.1371/journal.pone.0158118>
- 3 Benatar, J. R., Sidhu, K., & Stewart, R. A. H. (2013). Effects of high and low fat dairy food on cardio-metabolic risk factors: A meta-analysis of randomized studies. *PLOS ONE*, 8, e76480. <https://doi.org/10.1371/journal.pone.0076480>
- 4 World Health Organization. (2023). Summary of findings of the evaluation of aspartame at the IARC Monographs Programme 134th Meeting and the 96th JECFA Meeting. <https://www.who.int/publications/>
- 5 World Health Organization. (2023, May 15). *Use of non-sugar sweeteners: WHO guideline*. <https://www.who.int/publications/item/9789240073616>
- 6 Sylvetsky, A. C., & Rother, K. I. (2018). Nonnutritive sweeteners in weight management and chronic disease: A review. *Obesity*, 26(4), 635–640. <https://doi.org/10.1002/oby.22139>
- 7 Ashwell, M., Gibson, S., Bellisle, F., et al. (2020). Expert consensus on low-calorie sweeteners: Facts, research gaps and suggested actions. *Nutrition Research Reviews*, 33, 1–10. <https://doi.org/10.1017/S0954422419000282>
- 8 Ayoub-Charette, S., Kavanagh, M., Khan, T., & Sievenpiper, J. (2025). Reconciling conflicting evidence on low- and no-calorie sweeteners and cardiometabolic outcomes: An umbrella review

- using naïve and bias-adjusted methods. *Applied Physiology, Nutrition, and Metabolism*, 50, 1–26. <https://doi.org/10.1139/apnm-2025-0068>
- 9 Zhang, R., Noronha, J. C., Khan, T. A., et al. (2023). The effect of non-nutritive sweetened beverages on postprandial glycemic and endocrine responses: A systematic review and network meta-analysis. *Nutrients*, 15(4), 1050. <https://doi.org/10.3390/nu15041050>
  - 10 Boxall, L. R., Eskandari, F., Wallis, J., Bielat, A. D., & Appleton, K. M. (2025). The effects of aspartame on glucose, insulin, and appetite-regulating hormone responses in humans: Systematic review and meta-analyses. *Advances in Nutrition*, 16(7), 100449. <https://doi.org/10.1016/j.advnut.2025.100449>
  - 11 Deutsche Diabetes Gesellschaft (DDG). (2023). *Praxisempfehlungen 2023*. [https://www.ddg.info/fileadmin/user\\_upload/05\\_Behandlung/01\\_Leitlinien/Praxisempfehlungen/2023/dus\\_2023\\_Praxisempfehlungen\\_Ausgabe\\_gesamt.pdf](https://www.ddg.info/fileadmin/user_upload/05_Behandlung/01_Leitlinien/Praxisempfehlungen/2023/dus_2023_Praxisempfehlungen_Ausgabe_gesamt.pdf)
  - 12 Rogers, P. J., Hogenkamp, P. S., de Graaf, C., et al. (2016). Does low-energy sweetener consumption affect energy intake and body weight? A systematic review, including meta-analyses, of the evidence from human and animal studies. *International Journal of Obesity*, 40, 381–394. <https://doi.org/10.1038/ijo.2015.177>
  - 13 Fantino, M., Fantino, A., Matray, M., et al. (2018). Beverages containing low energy sweeteners do not differ from water in their effects on appetite, energy intake and food choices in healthy, non-obese French adults. *Appetite*, 125, 557–565. <https://doi.org/10.1016/j.appet.2018.02.033>
  - 14 Bellisle, F. (2015). Intense sweeteners, appetite for the sweet taste, and relationship to weight management. *Current Obesity Reports*, 4, 106–110. <https://doi.org/10.1007/s13679-014-0138-7>
  - 15 World Health Organization. (2023, May 15). *Use of non-sugar sweeteners: WHO guideline*. <https://www.who.int/publications/item/9789240073616>
  - 16 Pereira, M. A. (2014). Sugar-sweetened and artificially-sweet-

- tened beverages in relation to obesity risk. *Advances in Nutrition*, 5(6), 797–808. <https://doi.org/10.3945/an.114.007062>
- 17 Ayoub-Charette, S., Kavanagh, M., Khan, T., & Sievenpiper, J. (2025). Reconciling conflicting evidence on low- and no-calorie sweeteners and cardiometabolic outcomes: An umbrella review using naïve and bias-adjusted methods. *Applied Physiology, Nutrition, and Metabolism*, 50, 1–26. <https://doi.org/10.1139/apnm-2025-0068>
  - 18 Deutsche Adipositas-Gesellschaft (DAG). (2024, October). S3-Leitlinie Adipositas – Prävention und Therapie (Version 5.0, AWMF-Registernummer 050-001). <https://register.awmf.org/de/leitlinien/detail/050-001>
  - 19 Sun, Y., & Xu, B. (2025). A critical review on effects of artificial sweeteners on gut microbiota and gastrointestinal health. *Journal of the Science of Food and Agriculture*, 105(5), 2737–2747. <https://doi.org/10.1002/jsfa.14148>
  - 20 Bielat, A. D., Rogers, P. J., & Appleton, K. M. (2025). Effects of a six-day, whole-diet sweet taste intervention on pleasantness, desire for and intakes of sweet foods: A randomised controlled trial. *British Journal of Nutrition*, 133(2), 277–288. <https://doi.org/10.1017/S0007114524003209>
  - 21 Grembecka, M. (2015). Sugar alcohols—their role in the modern world of sweeteners: A review. *European Food Research and Technology*, 241, 1–14. <https://doi.org/10.1007/s00217-015-2437-7>

## **Pflanzenöle – Der goldene Tod?**

- 1 Kelley, D. S., Taylor, P. C., Nelson, G. J., & Mackey, B. E. (1998). Arachidonic acid supplementation enhances synthesis of eicosanoids without suppressing immune functions in young healthy men. *Lipids*, 33, 125–130. <https://doi.org/10.1007/s11745-998-0187-9>

- 2 Calder, P. C., Campoy, C., Eilander, A., et al. (2019). A systematic review of the effects of increasing arachidonic acid intake on PUFA status, metabolism and health-related outcomes in humans. *British Journal of Nutrition*, 121(11), 1201–1214. <https://doi.org/10.1017/S0007114519000692>
- 3 Thies, F., Miles, E. A., Nebe-von-Caron, G., et al. (2001). Influence of dietary supplementation with long-chain n–3 or n–6 polyunsaturated fatty acids on blood inflammatory cell populations and functions and on plasma soluble adhesion molecules in healthy adults. *Lipids*, 36, 1183–1193. <https://doi.org/10.1007/s11745-001-0831-4>
- 4 Kakutani, S., Ishikura, Y., Tateishi, N., et al. (2011). Supplementation of arachidonic acid-enriched oil increases arachidonic acid contents in plasma phospholipids, but does not increase their metabolites and clinical parameters in Japanese healthy elderly individuals: A randomized controlled study. *Lipids in Health and Disease*, 10, 241. <https://doi.org/10.1186/1476-511X-10-241>
- 5 Sadeghi, R., Norouzzadeh, M., HasanRashedi, M., et al. (2025). Dietary and circulating omega-6 fatty acids and their impact on cardiovascular disease, cancer risk, and mortality: A global meta-analysis of 150 cohorts and meta-regression. *Journal of Translational Medicine*, 23, 314. <https://doi.org/10.1186/s12967-025-06336-2>
- 6 Takic, M., Pokimica, B., Petrovic-Oggiano, G., & Popovic, T. (2022). Effects of dietary  $\alpha$ -linolenic acid treatment and the efficiency of its conversion to eicosapentaenoic and docosahexaenoic acids in obesity and related diseases. *Molecules*, 27(14), 4471. <https://doi.org/10.3390/molecules27144471>
- 7 Wood, K. E., Mantzioris, E., Gibson, R. A., Ramsden, C. E., & Muhlhauser, B. S. (2015). The effect of modifying dietary LA and ALA intakes on omega-3 long chain polyunsaturated fatty acid (n-3 LCPUFA) status in human adults: A systematic review

- and commentary. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 95, 47–55. <https://doi.org/10.1016/j.plefa.2015.01>
- 8 Gutierrez-Guerra, A., Cambron-Mora, D., Rodriguez-Echevarria, R., Hernández-Bello, J., Campos-Pérez, W., Canales-Aguirre, A. A., Pérez-Robles, M., & Martinez-Lopez, E. (2025). Dietary n-6:n-3 PUFA ratio modulates inflammation-related gene expression and influences improvements in biochemical parameters in a murine model of diet-induced obesity. *Nutrients*, 17(12), 1996. <https://doi.org/10.3390/nu17121996>
  - 9 Johnson, G. H., & Fritsche, K. (2012). Effect of dietary linoleic acid on markers of inflammation in healthy persons: A systematic review of randomized controlled trials. *Journal of the Academy of Nutrition and Dietetics*, 112(7), 1029–1041.e15. <https://doi.org/10.1016/j.jand.2012.03.029>
  - 10 Kim, H. K., Kang, E. Y., & Go, G. W. (2022). Recent insights into dietary  $\omega$ -6 fatty acid health implications using a systematic review. *Food Science and Biotechnology*, 31(11), 1365–1376. <https://doi.org/10.1007/s10068-022-01152-6>
  - 11 European Commission. (n.d.). *Dietary fats – recommendations*. Knowledge for Policy. [https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/dietary-fats-recommendations\\_en](https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/dietary-fats-recommendations_en)
  - 12 Harris, W. S. (2018). The omega-6:omega-3 ratio: A critical appraisal and possible successor. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 132, 34–40. <https://doi.org/10.1016/j.plefa.2018.03.003>
  - 13 Schulze, M. B., Miniñane, A. M., Saleh, R. N. M., & Risérus, U. (2020). Intake and metabolism of omega-3 and omega-6 polyunsaturated fatty acids: Nutritional implications for cardiometabolic diseases. *The Lancet Diabetes & Endocrinology*, 8(11), 915–930. [https://doi.org/10.1016/S2213-8587\(20\)30148-0](https://doi.org/10.1016/S2213-8587(20)30148-0)
  - 14 Griffin, B. A. (2008). How relevant is the ratio of dietary n-6 to n-3 polyunsaturated fatty acids to cardiovascular disease risk?

- Evidence from the OPTILIP study. *Current Opinion in Lipidology*, 19(1), 57–62. <https://doi.org/10.1097/MOL.0b013e-3282f2e2a8>
- 15 Lenighan, Y. M., McNulty, B. A., & Roche, H. M. (2019). Dietary fat composition: Replacement of saturated fatty acids with PUFA as a public health strategy, with an emphasis on  $\alpha$ -linolenic acid. *Proceedings of the Nutrition Society*, 78(2), 234–245. <https://doi.org/10.1017/S0029665118002793>
  - 16 Harris, W. S., & von Schacky, C. (2004). The Omega-3 Index: A new risk factor for death from coronary heart disease? *Circulation*, 109(7), 830–835. <https://doi.org/10.1161/01.CIR.0000120854>.
  - 17 Harris, W. S., & von Schacky, C. (2004). The Omega-3 index: A new risk factor for death from coronary heart disease? *Circulation*, 109(7), 830–835. <https://doi.org/10.1161/01.CIR.0000120854.63841.4F>
  - 18 Abdelhamid, A. S., et al. (2020). Omega-3 fatty acids for the primary and secondary prevention of cardiovascular disease. *Cochrane Database of Systematic Reviews*. <https://doi.org/10.1002/14651858.CD003177.pub5>
  - 19 Shen, J., Liu, Y., Wang, X., Bai, J., Lin, L., Luo, F., & Zhong, H. (2023). A comprehensive review of health-benefiting components in rapeseed oil. *Nutrients*, 15(4), 999. <https://doi.org/10.3390/nu15040999>
  - 20 Deutsche Gesellschaft für Ernährung (DGE). (2015). Fettzufuhr und Prävention ausgewählter ernährungsmitbedingter Krankheiten: Evidenzbasierte Leitlinie. <https://www.dge.de/wissen/schafft/leitlinien/leitlinie-fett/>
  - 21 Zhang, Y., et al. (2025). Butter and plant-based oils intake and mortality. *JAMA Internal Medicine*, 185(5), 549–560. <https://doi.org/10.1001/jamainternmed.2025.0205>
  - 22 Voon, P. T., et al. (2024). Health effects of various edible vegetable oil: An umbrella review. *Advances in Nutrition*, 15(9), 100276. <https://doi.org/10.1016/j.advnut.2024.100276>

- 23 Katsiki, N., Pérez-Martínez, P., & López-Miranda, J. (2021). Olive oil intake and cardiovascular disease prevention: »Seek and you shall find«. *Current Cardiology Reports*, 23(6), 64. <https://doi.org/10.1007/s11886-021-01496-1>
- 24 Petersen, K. S., et al. (2024). Perspective on the health effects of unsaturated fatty acids and commonly consumed plant oils high in unsaturated fat. *British Journal of Nutrition*, 132(8), 1039–1050. <https://doi.org/10.1017/S0007114524002459>
- 25 Neelakantan, N., Seah, J. Y. H., & van Dam, R. M. (2020). The effect of coconut oil consumption on cardiovascular risk factors: A systematic review and meta-analysis of clinical trials. *Circulation*, 141(10), 803–814. <https://doi.org/10.1161/CIRCULATIONAHA.119.043052>
- 26 Mohammadifard, N., Hosseini, M., Sajjadi, F., Maghroun, M., Boshtam, M., & Nouri, F. (2013). Comparison of effects of soft margarine, blended, ghee, and unhydrogenated oil with hydrogenated oil on serum lipids: A randomized clinical trial. *ARYA Atherosclerosis*, 9(6), 363–371. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3933054/>
- 27 Weber, C., Harnack, L., Johnson, A., Jasthi, B., Pettit, J., & Stevenson, J. (2022). Nutrient comparisons of margarine/margarine-like products, butter blend products and butter in the US marketplace in 2020 post-FDA ban on partially hydrogenated oils. *Public Health Nutrition*, 25(5), 1123–1130. <https://doi.org/10.1017/S136898002>

### **Hochverarbeitete Lebensmittel – Zwischen Dämonisierung und Realität**

- 1 Monteiro, C. A. (2009). Nutrition and health. The issue is not food, nor nutrients, so much as processing. *Public Health Nutrition*, 12(5), 729–731. <https://doi.org/10.1017/S1368980009005291>

- 2 Lawrence, M. A., & Baker, P. I. (2019). Ultra-processed food and adverse health outcomes. *BMJ*, 365, 12289. <https://doi.org/10.1136/bmj.12289>
- 3 Elizabeth, L., Machado, P., Zinöcker, M., Baker, P., & Lawrence, M. (2020). Ultra-processed foods and health outcomes: A narrative review. *Nutrients*, 12(7), 1955. <https://doi.org/10.3390/nu12071955>
- 4 Chen, X., Zhang, Z., Yang, H., et al. (2020). Consumption of ultra-processed foods and health outcomes: A systematic review of epidemiological studies. *Nutrition Journal*, 19, 86. <https://doi.org/10.1186/s12937-020-00604-1>
- 5 Lane, M. M., Davis, J. A., Beattie, S., et al. (2021). Ultraprocessed food and chronic noncommunicable diseases: A systematic review and meta-analysis of 43 observational studies. *Obesity Reviews*, 22, e13146. <https://doi.org/10.1111/obr.13146>
- 6 Mertens, E., Colizzi, C., & Peñalvo, J. L. (2022). Ultra-processed food consumption in adults across Europe. *European Journal of Nutrition*, 61, 1521–1539. <https://doi.org/10.1007/s00394-021-02733-7>
- 7 Baraldi, L. G., Martinez Steele, E., Canella, D. S., & Monteiro, C. A. (2018). Consumption of ultra-processed foods and associated sociodemographic factors in the USA between 2007 and 2012: Evidence from a nationally representative cross-sectional study. *BMJ Open*, 8(3), e020574. <https://doi.org/10.1136/bmjopen-2017-020574>
- 8 Scrinis, G., Popkin, B., Corvalán, C., Duran, A., Nestle, M., Lawrence, M., Baker, P., Monteiro, C., Millett, C., Moubarac, J.-C., Jaime, P., & Khandpur, N. (2025). Policies to halt and reverse the rise in ultra-processed food production, marketing, and consumption. *The Lancet*, 406. [https://doi.org/10.1016/S0140-6736\(25\)01566-1](https://doi.org/10.1016/S0140-6736(25)01566-1)
- 9 Weaver, C. M., Dwyer, J., Fulgoni, V. L. 3rd, King, J. C., Leveille, G. A., MacDonald, R. S., Ordovas, J., & Schnakenberg, D. (2014).

- Processed foods: Contributions to nutrition. *The American Journal of Clinical Nutrition*, 99(6), 1525–1542. <https://doi.org/10.3945/ajcn.114.089284>
- 10 Monteiro, C. A., Cannon, G., Levy, R. B., et al. (2019). Ultra-processed foods: What they are and how to identify them. *Public Health Nutrition*, 22, 936–941. <https://doi.org/10.1017/S1368980018003762>
  - 11 Fazzino, T. L., Dorling, J. L., Apolzan, J. W., et al. (2021). Meal composition during an ad libitum buffet meal and longitudinal predictions of weight and percent body fat change: The role of hyper-palatable, energy dense, and ultra-processed foods. *Appetite*, 167, 105592. <https://doi.org/10.1016/j.appet.2021.105592>
  - 12 Hall, K. D., et al. (2020). Ultra-processed diets cause excess calorie intake and weight gain: An inpatient randomized controlled trial of ad libitum food intake. *Cell Metabolism*, 32(4), 690–702. <https://doi.org/10.1016/j.cmet.2020.08.014>
  - 13 Romero Ferreiro, C., Lora Pablos, D., & Gómez de la Cámara, A. (2021). Two dimensions of nutritional value: Nutri-Score and NOVA. *Nutrients*, 13(8), 2783. <https://doi.org/10.3390/nu13082783>
  - 14 Osté, M. C., Duan, M.-J., Gomes-Neto, A. W., et al. (2022). Ultra-processed foods and risk of all-cause mortality in renal transplant recipients. *The American Journal of Clinical Nutrition*, 115, 1646–1657. <https://doi.org/10.1093/ajcn/nqac053>
  - 15 Taneri, P. E., Wehrli, F., Roa-Díaz, Z. M., et al. (2022). Association between ultra-processed food intake and all-cause mortality: A systematic review and meta-analysis. *American Journal of Epidemiology*, 191(7), 1323–1335. <https://doi.org/10.1093/aje/kwac039>
  - 16 Chang, K., Gunter, M. J., Rauber, F., Levy, R. B., Huybrechts, I., Kliemann, N., Millett, C., & Vamos, E. P. (2023). Ultra-processed food consumption, cancer risk and cancer mortality: A large-scale prospective analysis within the UK Biobank. *EClinicalMedicine*, 56, 101840. <https://doi.org/10.1016/j.eclnm.2023.101840>

- 17 Cordova, R., et al. (2023). Consumption of ultra-processed foods and risk of multimorbidity of cancer and cardiometabolic diseases: A multinational cohort study. *The Lancet Regional Health – Europe*, 35, 100771. <https://doi.org/10.1016/j.lanepe.2023.100771>
- 18 Gehring, J., Touvier, M., Baudry, J., Julia, C., Buscail, C., Srour, B., Hercberg, S., Péneau, S., Kesse-Guyot, E., & Allès, B. (2021). Consumption of ultra-processed foods by pesco-vegetarians, vegetarians, and vegans: Associations with duration and age at diet initiation. *The Journal of Nutrition*, 151(1), 120–131. <https://doi.org/10.1093/jn/nxaa196>
- 19 EFSA Panel on Food Additives and Nutrient Sources added to Food (ANS). (2014). Statement on a conceptual framework for the risk assessment of certain food additives re-evaluated under Commission Regulation (EU) No 257/2010. *EFSA Journal*, 12(9), 3697. <https://doi.org/10.2903/j.efsa.2014.3697>
- 20 Hasenböhler A, Javaux G, Payen de la Garanderie M, de Edelenyi F S, Yvroud-Hoyos P, Agaësse C, et al. (2026). Intake of food additive preservatives and incidence of cancer: results from the NutriNet-Santé prospective cohort. *BMJ*, 392, e084917. <https://doi.org/10.1136/bmj-2025-084917>
- 21 Braesco V, et al. (2022). Ultra-processed foods: how functional is the NOVA system? *European Journal of Clinical Nutrition*, 76(9), 1245–1253. <https://doi.org/10.1038/s41430-022-01099-1>
- 22 Whelan K, Bancel A. S., Lindsay J. O., & Chassaing B. (2024). Ultra-processed foods and food additives in gut health and disease. *Nature Reviews Gastroenterology & Hepatology*, 21(6), 406–427. <https://doi.org/10.1038/s41575-024-00893-5>
- 23 Vergeer L, Gillis G, Rynard V. L., Vanderlee L., White C. M., Nieto C., Hammond D., & Potvin Kent M. (2025). The association between exposure to food marketing and dietary intake among youth in six countries. *International Journal of Behavioral Nutrition and Physical Activity*, 22(1), 130. <https://doi.org/10.1186/s12966-025-01828-2>

## **Nahrungsergänzungsmittel – Zwischen Bedarf, Mythos und Marketing**

- 1 Gauch E. C., & Smollich M. (2025). Fehl- und Desinformation zu Nahrungsergänzungsmitteln in den sozialen Medien: Risiken begrenzen, Chancen nutzen, Strukturen gestalten. *Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz*, 68(11), 1283–1290
- 2 Smollich M, Wefers D. (o. J.). *Wirksame Nahrungsergänzungsmittel oder Arzneimittel?* Springer Medizin. <https://www.springermedizin.de/ernaehrung/innere-medicin/wirksame-nahrungsergaenzungsmittel-oder-arzneimittel/15764838>
- 3 Deutsches Apothekenportal. (o. J.). *Arbeitshilfe 90: Nahrungsergänzungsmittel – rechtliche Einordnung und Stellungnahmen*. Zugriff am TT.MM.JJJJ, von [https://www.deutschesapothekenportal.de/download/public/arbeitshilfen/dap\\_arbeitshilfe\\_90.pdf](https://www.deutschesapothekenportal.de/download/public/arbeitshilfen/dap_arbeitshilfe_90.pdf)
- 4 Verbraucherzentrale. (2024, 10. Dezember). Nahrungsergänzungsmittel beim Sport – Mit Pillen als Erster durch das Ziel? Verbraucherzentrale.
- 5 Stiftung Warentest. (2025, Dezember). Vitamin D im Test: Viele Präparate zu hoch dosiert. Stiftung Warentest. <https://www.test.de/Vitamin-D-Praeparate-im-Test-6257752-0/>
- 6 Verordnung (EG) Nr. 1924/2006 des Europäischen Parlaments und des Rates vom 20. Dezember 2006 über nährwert- und gesundheitsbezogene Angaben über Lebensmittel (»Health-Claims-Verordnung«). (2006). *Amtsblatt der Europäischen Union*, L 404, 9–25.
- 7 Verbraucherzentrale. (o. J.). *Lebensmittel mit Gesundheitsversprechen*. <https://www.verbraucherzentrale.de/wissen/lebensmittel/kennzeichnung-und-inhaltsstoffe/lebensmittel-mit-gesundheitsversprechen-11035>
- 8 Verordnung (EU) Nr. 432/2012 der Kommission vom 16. Mai 2012 zur Festlegung einer Liste zulässiger anderer gesundheits-

- bezogener Angaben über Lebensmittel als Angaben über die Reduzierung eines Krankheitsrisikos sowie die Entwicklung und die Gesundheit von Kindern. (2012). *Amtsblatt der Europäischen Union*, L 136, 1–40. <https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX:32012R0432>
- 9 Verbraucherzentrale Bundesverband e. V. (vzbv). (o. J.). Werbung mit Gesundheit: Meist zu viel versprochen – Projekt »Klartext Nahrungsergänzungsmittel«. <https://www.vzbv.de/>
  - 10 Chemisches und Veterinäruntersuchungsamt Stuttgart (CVUA). (2022). Werbung für Nahrungsergänzungsmittel in sozialen Medien – Bewertung gesundheitsbezogener Angaben nach der Health-Claims-Verordnung. <https://www.ua-bw.de/pub/beitrag.asp?ID=4185&subid=1>
  - 11 foodwatch e. V. (2025). Zu #gesund um wahr zu sein? Influencer-Marketing für Nahrungsergänzungsmittel auf Instagram. [https://www.foodwatch.org/fileadmin/-DE/Themen/Gesundheitsschwindel/2025-06\\_Health-Claims-Report.pdf](https://www.foodwatch.org/fileadmin/-DE/Themen/Gesundheitsschwindel/2025-06_Health-Claims-Report.pdf)
  - 12 NetInfluencer. (2024). *Food supplement influencers face 90 percent health claims violation rate in Germany*. <https://www.netinfluencer.com/food-supplement-influencers-face-90-percent-health-claims-violation-rate-in-germany/>
  - 13 Ricke, J.-N., & Seifert, R. (2024). Disinformation on dietary supplements by German influencers on Instagram. *Naunyn-Schmiedeberg's Archives of Pharmacology*. <https://doi.org/10.1007/s00210-024-03616-4>
  - 14 Basch C. H., Mongiovi J., Berdnik A., & Basch C. E. (2016). The most widely viewed YouTube videos with content related to multivitamins. *Health Promotion Perspectives*, 6, 213–216. <https://doi.org/10.15171/hpp.2016.35>
  - 15 Gauch E. C., & Smollich M. (2025). Fehl- und Desinformation zu Nahrungsergänzungsmitteln in den sozialen Medien: Risiken begrenzen, Chancen nutzen, Strukturen gestalten. *Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheits-*

- schutz*, 68(11), 1283–1290. <https://doi.org/10.1007/s00103-025-04138-x>
- 16 Winzer E, Naderer B, Klein S, Lercher L, Wakolbinger M. (2022). Promotion of food and beverages by German-speaking influencers popular with adolescents on TikTok, YouTube and Instagram. *International Journal of Environmental Research and Public Health*, 19(17), 10911. <https://doi.org/10.3390/ijerph191710911>
  - 17 Raffoul A., Santoso M., Lu J., Duran V., & Austin S. B. (2024). Diet pills and deception: A content analysis of weight-loss, muscle-building, and cleanse and detox supplements videos on TikTok. *Eating Behaviors*, 55, 101911. <https://doi.org/10.1016/j.eatbeh.2024.101911>
  - 18 Eisend M., Van Reijmersdal E. A., Boerman S. C., & Tarrahi F. (2020). A meta-analysis of the effects of disclosing sponsored content. *Journal of Advertising*, 49(3), 1–23. <https://doi.org/10.1080/00913367.2020.1765909>
  - 19 Zühlendorf A., Jürkenbeck K., Schulze M., Schäfer A., & Spiller A. (2025). Nahrungsergänzungsmittel: Verbraucherverhalten und Gesundheitsversprechen (Ergebnisbericht). Verbraucherzentrale Bundesverband e. V. [https://www.vzbv.de/sites/default/files/2025-05/Ergebnisbericht%20zur%20Studie%20NEM\\_28052025\\_0.pdf](https://www.vzbv.de/sites/default/files/2025-05/Ergebnisbericht%20zur%20Studie%20NEM_28052025_0.pdf)
  - 20 Statista GmbH. (o. J.). *Umsatz mit Nahrungsergänzungsmitteln in Deutschland*. Statista. <https://de.statista.com/themen/10611/nahrungsergaenzungsmittel/>
  - 21 Nathan J. P., Kudadjie-Gyamfi E., Halberstam L., & Wright J. T. (2020). Consumers' information-seeking behaviors on dietary supplements. *International Quarterly of Community Health Education*, 40(3), 171–176. <https://doi.org/10.1177/0272684X19874967>
  - 22 Leismann K., & Godemann J. (2025). Food-related information-seeking behaviour in social media: Representative online survey on usage and perceived value. *Ernährungs Umschau*, 72, 18–29. <https://doi.org/10.4455/eu.2025.005>

- 23 Gauch E. C., & Smollich M. (2025). Fehl- und Desinformation zu Nahrungsergänzungsmitteln in den sozialen Medien: Risiken begrenzen, Chancen nutzen, Strukturen gestalten. *Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz*, 68(11), 1283–1290. <https://doi.org/10.1007/s00103-025-04138-x>
- 24 Max Rubner-Institut (MRI). (2008). *Nationale Verzehrsstudie II*. Karlsruhe, Deutschland.
- 25 EFSA Panel on Nutrition, Novel Foods and Food Allergens (NDA); Turck D, Bohn T, Castenmiller J, de Henauw S, Hirsch-Ernst K. I., Knutsen H. K., Maciuk A, Mangelsdorf I, McArdle H. J., Pentieva K, Siani A, Thies F, Tsabouri S, Vinceti M, Lanham-New S, Passeri G, Craciun I, Fabiani L, De Sousa R. F., Martino L, Martínez S. V., Naska A. (2023). Scientific opinion on the tolerable upper intake level for vitamin D, including the derivation of a conversion factor for calcidiol monohydrate. *EFSA Journal*, 21(8), e08145. <https://doi.org/10.2903/j.efsa.2023.8145>
- 26 Millbank A., Millbank L., Malerich M., Trautmann L., & Thornton G. (2025). *Nutrition misinformation in the digital age (2024–2025)*. Rooted Research Collective.
- 27 European Commission. (o. J.). *EU register of nutrition and health claims*. [https://food.ec.europa.eu/food-safety/labelling-and-nutrition/nutrition-and-health-claims/eu-register-health-claims\\_en](https://food.ec.europa.eu/food-safety/labelling-and-nutrition/nutrition-and-health-claims/eu-register-health-claims_en)

### **Klares aus dem Hahn – Wie gut ist unser Leitungswasser?**

- 1 Deutschlandfunk Nova. (2024, 11. Februar). *Finfluencer »Hoss und Hopf«: Wer hinter dem Podcast steckt*. [https://share.deutschlandradio.de/dlf-audiothek-audio-teilen.html?audio\\_id=dira\\_DRW\\_0e496a0c](https://share.deutschlandradio.de/dlf-audiothek-audio-teilen.html?audio_id=dira_DRW_0e496a0c)
- 2 WDR. (2024, 16. Februar). *Wie der Podcast »Hoss und Hopf«*

- Verschwörungen verbreitet.* <https://www1.wdr.de/nachrichten/rechter-podcast-hoss-hopf-100.html>
- 3 Umweltbundesamt & Bundesministerium für Gesundheit. (2024). Bericht des Bundesministeriums für Gesundheit und des Umweltbundesamtes an die Verbraucherinnen und Verbraucher über die Qualität von Wasser für den menschlichen Gebrauch (Trinkwasser) in Deutschland (2020–2022). [https://www.umweltbundesamt.de/sites/default/files/medien/11850/publikationen/dwd\\_bericht\\_2020-2022.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/11850/publikationen/dwd_bericht_2020-2022.pdf)
  - 4 Verordnung über die Qualität von Wasser für den menschlichen Gebrauch (Trinkwasserverordnung – TrinkwV). (2023). *Gesetze im Internet*. [https://www.gesetze-im-internet.de/trinkwv\\_2023/TrinkwV.pdf](https://www.gesetze-im-internet.de/trinkwv_2023/TrinkwV.pdf)
  - 5 DVGW e. V. (2015). *Arzneimittelrückstände im Wasserkreislauf; eine Bewertung aus Sicht der Trinkwasserversorgung*. DVGW-Wasser-Information Nr. 54. [https://www.dvgw.de/medien/dvgw/wasser/qualitaet/dvgw-wasserinfo-nr-54\\_2015\\_04.pdf](https://www.dvgw.de/medien/dvgw/wasser/qualitaet/dvgw-wasserinfo-nr-54_2015_04.pdf)
  - 6 Gelbe Liste Pharmaindex: Penicilline. Im Internet unter: <https://www.gelbe-liste.de/wirkstoffgruppen/penicilline>
  - 7 Arzneimittel-Entsorgung richtig gemacht. (o. J.). *Startseite*. <https://arzneimittelentsorgung.de/home/>
  - 8 Umweltbundesamt. (2016). *Rund um das Trinkwasser*. [https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/uba\\_rund\\_um\\_das\\_trinkwasser\\_ratgeber\\_web\\_0.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/uba_rund_um_das_trinkwasser_ratgeber_web_0.pdf)
  - 9 Trinkwasserverordnung. (2023). *Trinkwasserverordnung (TrinkwV) vom 20. Juni 2023* (BGBI. 2023 I Nr. 159, S. 2). [https://www.gesetze-im-internet.de/trinkwv\\_2023/TrinkwV.pdf](https://www.gesetze-im-internet.de/trinkwv_2023/TrinkwV.pdf)
  - 10 Umweltbundesamt. (2017, 17. Januar). *Toxikologie des Trinkwassers*. <https://www.umweltbundesamt.de/themen/wasser/trinkwasser/trinkwasserqualitaet/toxikologie-des-trinkwassers>
  - 11 Umweltbundesamt. (2022). *Messnetze – Chemisches Monitoring*. <https://www.umweltbundesamt.de/themen/wasser/fluesse/ueberwachung-bewertung/messnetze-chemisches-monitoring>

- 12 Wolfgang Püttmann et al. (2008). Wassertechnische Strategien zur Reduzierung der Trinkwasserbelastung durch Arzneimittelwirkstoffe. *Environmental Sciences Europe*, 20(3), 209–226. <https://doi.org/10.1007/s12302-008-0010-8>
- 13 Umweltbundesamt. (2025). *Bleirohre: Blei im Trinkwasser ist gesundheitsgefährdend*. <https://www.umweltbundesamt.de/umwelt-tipps-fuer-den-alltag/essen-trinken/blei-im-trinkwasser>
- 14 Umweltbundesamt Österreich. (o. J.). *Fragen und Antworten zu PFAS*. <https://www.umweltbundesamt.at/umwelthemen/stoffradar/pfas>
- 15 Ministerium für Justiz und Gesundheit Schleswig-Holstein. (2023). *Untersuchung von per- und polyfluorierten Alkylsubstanzen (PFAS) in ausgewählten Trinkwasserbrunnen in Schleswig-Holstein*. [https://www.schleswig-holstein.de/DE/fachinhalte/T/trinkwasser/Downloads/PAFS-Studie\\_2022.null?\\_\\_blob=publicationFile&v=4](https://www.schleswig-holstein.de/DE/fachinhalte/T/trinkwasser/Downloads/PAFS-Studie_2022.null?__blob=publicationFile&v=4)
- 16 Helmut Burtscher-Schaden et al. (2024). *TFA: Die ewige Chemikalie in dem Wasser, das wir trinken*. Global 2000 Report. [https://www.global2000.at/sites/global/files/TFAinTrinkwasser\\_Report\\_Final\\_DE.pdf](https://www.global2000.at/sites/global/files/TFAinTrinkwasser_Report_Final_DE.pdf)
- 17 Abigail Saylor, Linda S. Prokopy, & Stephen Amberg. (2011). What's wrong with the tap? Examining perceptions of tap water and bottled water at Purdue University. *Environmental Management*, 48(3), 588–601. <https://doi.org/10.1007/s00267-011-9692-6>
- 18 Huan Li et al. (2023). Occurrence of microplastics in commercially sold bottled water. *Science of the Total Environment*, 867, 161553. <https://doi.org/10.1016/j.scitotenv.2022.161553>
- 19 Lama W. Hazzazi et al. (2025). The effect of water filter pitchers on the mineral concentration of tap water. *Journal of Public Health Dentistry*, 85(1), 21–28. <https://doi.org/10.1111/jphd.12649>
- 20 Franz Daschner et al. (1996). Microbiological contamination of drinking water in a commercial household water filter system.

- European Journal of Clinical Microbiology & Infectious Diseases*, 15(3), 233–237. <https://doi.org/10.1007/BF01591360>
- 21 Christine M. George et al. (2006). Reverse osmosis filter use and high arsenic levels in private well water. *Archives of Environmental & Occupational Health*, 61(4), 171–175. <https://doi.org/10.3200/AEOH.61.4.171-175>
  - 22 Roberta Sacchetti et al. (2015). Quality of drinking water treated at point of use in residential healthcare facilities for the elderly. *International Journal of Environmental Research and Public Health*, 12(9), 11163–11177. <https://doi.org/10.3390/ijerph120911163>
  - 23 Lama W. Hazzazi et al. (2024). Tap water filtration and purification usage and their impact on the concentrations of fluoride and other minerals: A community-based study. *Journal of Dentistry*, 150, 105377. <https://doi.org/10.1016/j.jdent.2024.105377>
  - 24 BDEW Bundesverband der Energie- und Wasserwirtschaft e. V. (o. J.). *Wasserportal.info*. <https://www.wasserportal.info/>
  - 25 DVGW Deutscher Verein des Gas- und Wasserfaches. (2024). *Wasseraufbereitung in der Trinkwasserinstallation* (TWIN Nr. 3/2024). <https://www.dvgw.de/medien/dvgw/leistungen/publikationen/twin-wasseraufbereitung-trinkwasserinstallation-maerz-2024.pdf>
  - 26 Umweltbundesamt. (2020). *Ratgeber: Trinkwasser aus dem Hahn*. [https://www.umweltbundesamt.de/sites/default/files/medien/421/publikationen/uba\\_trinkwas-ratgeber\\_2020-04-07\\_web\\_barrierefrei.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/421/publikationen/uba_trinkwas-ratgeber_2020-04-07_web_barrierefrei.pdf)

## **Das Fundament**

- 1 Deutsche Adipositas-Gesellschaft. (o. J.). *Prävalenz von Übergewicht und Adipositas in Deutschland*. Abgerufen am 6. März

- 2026, von <https://adipositas-gesellschaft.de/uebergewicht-adipositas/praevaenz/>
- 2 Hannah Fink, Olle Langselius, Julie Vignat et al. (2026). Global and regional cancer burden attributable to modifiable risk factors to inform prevention. *Nature Medicine*. <https://doi.org/10.1038/s41591-026-04219-7>
  - 3 Deutsches Krebsforschungszentrum. (2018, 3. September). *Erstmals für Deutschland ermittelt: Vermeidbare Risikofaktoren verursachen 37 Prozent aller Krebsfälle* [Pressemitteilung]. Abgerufen am 6. März 2026, von <https://www.dkfz.de/de/presse/pressemitteilungen/2018/dkfz-pm-18-54-Vermeidbare-Risikofaktoren-verursachen-37-Prozent-aller-Krebsfaelle.php>
  - 4 Solja T. Nyberg, Archana Singh-Manoux, Jaana Pentti, et al. (2020). Association of healthy lifestyle with years lived without major chronic diseases. *JAMA Internal Medicine*, 180(5), 760–768. <https://doi.org/10.1001/jamainternmed.2020.0618>
  - 5 Yanping Li, An Pan, Dong D. Wang, et al. (2018). Impact of healthy lifestyle factors on life expectancies in the US population. *Circulation*, 138(4), 345–355. <https://doi.org/10.1161/CIRCULATIONAHA.117.032047>
  - 6 Lars T. Fadnes, Johan M. Økland, Øystein A. Haaland, & Kjell Arne Johansson. (2022). Estimating impact of food choices on life expectancy: A modeling study. *PLoS Medicine*, 19(2), e1003889. <https://doi.org/10.1371/journal.pmed.1003889>
  - 7 Lars T. Fadnes, Elaheh Javadi Arjmand, Johan M. Økland, Carlos Celis-Morales, Katherine M. Livingstone, Ranjit Balakrishna, John C. Mathers, Kjell Arne Johansson, & Øystein A. Haaland. (2024). Life expectancy gains from dietary modifications: A comparative modeling study in 7 countries. *The American Journal of Clinical Nutrition*, 120(1), 170–177. <https://doi.org/10.1016/j.ajcnut.2024.04.028>
  - 8 GBD 2021 Adult BMI Collaborators. (2025). Global, regional, and national prevalence of adult overweight and obesity, 1990–

- 2021, with forecasts to 2050: A forecasting study for the Global Burden of Disease Study 2021. *The Lancet*, 405(10481), 813–838. [https://doi.org/10.1016/S0140-6736\(25\)00355-1](https://doi.org/10.1016/S0140-6736(25)00355-1)
- 9 GBD 2019 Risk Factors Collaborators. (2020). Global burden of 87 risk factors in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258), 1223–1249. [https://doi.org/10.1016/S0140-6736\(20\)30752-2](https://doi.org/10.1016/S0140-6736(20)30752-2)
- 10 Penny Kris-Etherton, Robert H. Eckel, Barbara V. Howard, Steven St Jeor, Terence L. Bazzarre, & American Heart Association. (2001). AHA Science Advisory: Lyon Diet Heart Study. Benefits of a Mediterranean-style, National Cholesterol Education Program/American Heart Association Step I dietary pattern on cardiovascular disease. *Circulation*, 103(13), 1823–1825. <https://doi.org/10.1161/01.CIR.103.13.1823>
- 11 Pedro Marques-Vidal, Vasilis Tsampasian, Aedín Cassidy, et al. (2025). Diet and nutrition in cardiovascular disease prevention: A scientific statement of the European Association of Preventive Cardiology and the Association of Cardiovascular Nursing & Allied Professions of the European Society of Cardiology. *European Journal of Preventive Cardiology*.
- 12 Ying Fan, Chao Hu, Xia Xie, Yunfei Weng, Chen Chen, Zhen Wang, Xing He, Dong Jiang, Shanshan Huang, Zhibin Hu, & Fei Liu. (2024). Effects of diets on risks of cancer and the mediating role of metabolites. *Nature Communications*, 15(1), 5903. <https://doi.org/10.1038/s41467-024-50258-4>
- 13 Sameera Ahmad, Vasanti S. Moorthy, I-Min Lee, et al. (2024). Mediterranean diet adherence and risk of all-cause mortality in women. *JAMA Network Open*, 7(5), e2414322. <https://doi.org/10.1001/jamanetworkopen.2024.14322>
- 14 Lars T. Fadnes, Johan M. Økland, Øystein A. Haaland, & Kjell Arne Johansson. (2022). Correction: Estimating impact of food choices on life expectancy: A modeling study. *PLoS*

- Medicine*, 19(3), e1003962. <https://doi.org/10.1371/journal.pmed.1003962>
- 15 Wilfredo Campos-Perez, & Erick Martinez-Lopez. (2021). Effects of short chain fatty acids on metabolic and inflammatory processes in human health. *Biochimica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*, 1866(5), 158900. <https://doi.org/10.1016/j.bbalip.2021.158900>
  - 16 Katherine Hodgkinson, Farah El Abbar, Patryk Dobranowski, Jennifer Manoogian, Jonathan Butcher, Daniel Figeys, David Mack, & Alain Stintzi. (2023). Butyrate's role in human health and the current progress towards its clinical application to treat gastrointestinal disease. *Clinical Nutrition*, 42(2), 61–75. <https://doi.org/10.1016/j.clnu.2022.10.024>
  - 17 Alexandros Machalias, Jane J. A. Ferguson, Toby Guy, & Edward J. Beck. (2026). Cereal fibers and satiety: A systematic review. *Nutrition Reviews*, 84(1), 47–68. <https://doi.org/10.1093/nutrit/nuaf083>
  - 18 Ethan M. Balk, Erica Couch, Hui Jie Mai, Ying Chen, Ghada P. Adam, George Kanaan, Eduardo L. Caputo, Thomas A. Trikalinos, Geoffrey Williams, Kirsten Duncanson, Nicholas J. Talley, & Alice H. Lichtenstein. (2026). Fiber intake and laxation in people with normal bowel function: A systematic review. *The American Journal of Clinical Nutrition*, 123(3), 101212. <https://doi.org/10.1016/j.ajcnut.2026.101212>
  - 19 Andrew Reynolds, Jim Mann, John Cummings, Nicole Winter, Emily Mete, & Lisa Te Morenga. (2019). Carbohydrate quality and human health: A series of systematic reviews and meta-analyses. *The Lancet*, 393(10170), 434–445. [https://doi.org/10.1016/S0140-6736\(18\)31809-9](https://doi.org/10.1016/S0140-6736(18)31809-9)
  - 20 Sergio M. Murga-Garrido, Qing Hong, Tara L. Cross, Ethan R. Hutchison, Jie Han, Scott P. Thomas, Erika I. Vivas, John Denu, Daniel G. Ceschin, Zhanxiang Z. Tang, & Federico E. Rey. (2021). Gut microbiome variation modulates the effects of die-

- tary fiber on host metabolism. *Microbiome*, 9(1), 117. <https://doi.org/10.1186/s40168-021-01061-6>
- 21 Daniel McDonald, Emily Hyde, Justine W. Debelius, et al. (2018). American Gut: An open platform for citizen science microbiome research. *mSystems*, 3(3), e00031-18. <https://doi.org/10.1128/mSystems.00031-18>
  - 22 Jordan Stanford, Anita Stefoska-Needham, Xiaotao Jiang, Brett McWhinney, Hicham I. Cheikh Hassan, Emad El-Omar, Karen Charlton, & Kelly Lambert. (2025). High-diversity plant-based diet and gut microbiome, plasma metabolome, and symptoms in adults with CKD. *Clinical Journal of the American Society of Nephrology*, 20(5), 619–631. <https://doi.org/10.2215/CJN.000000682>
  - 23 Lars T. Fadnes, Johan M. Økland, Øystein A. Haaland, & Kjell Arne Johansson. (2022). Estimating impact of food choices on life expectancy: A modeling study. *PLoS Medicine*, 19(2), e1003889. <https://doi.org/10.1371/journal.pmed.1003889>
  - 24 Siddhant Chikara, Lingaraju D. Nagaprashantha, Jatin Singhal, David Horne, Sanjay Awasthi, & Sharad S. Singhal. (2018). Oxidative stress and dietary phytochemicals: Role in cancer chemoprevention and treatment. *Cancer Letters*, 413, 122–134. <https://doi.org/10.1016/j.canlet.2017.11.002>
  - 25 Rui Hai Liu. (2004). Potential synergy of phytochemicals in cancer prevention: Mechanism of action. *The Journal of Nutrition*, 134(12 Suppl.), 3479S–3485S. <https://doi.org/10.1093/jn/134.12.3479S>
  - 26 Miguel Ángel Martínez-González, Carmen Sayón-Orea, Victoria Bullón-Vela, et al. (2022). Effect of olive oil consumption on cardiovascular disease, cancer, type 2 diabetes, and all-cause mortality: A systematic review and meta-analysis. *Clinical Nutrition*, 41, 2659–2682. <https://doi.org/10.1016/j.clnu.2022.10.001>
  - 27 Elizabeth A. Spencer et al. (2003). Diet and body mass index in 38,000 EPIC-Oxford meat-eaters, fish-eaters, vegetarians and

- vegans. *International Journal of Obesity and Related Metabolic Disorders*, 27(6), 728–734. <https://doi.org/10.1038/sj.ijo.0802300>
- 28 Julie S. Dybvik et al. (2022). Vegetarian and vegan diets and the risk of cardiovascular disease, ischemic heart disease and stroke: A systematic review and meta-analysis of prospective cohort studies. *European Journal of Nutrition*, 62, 51–69. <https://doi.org/10.1007/s00394-022-02942-8>
- 29 Dan Buettner, & Susan Skemp. (2016). Blue zones: Lessons from the world's longest-lived. *American Journal of Lifestyle Medicine*, 10(5), 318–321. <https://doi.org/10.1177/1559827616637066>
- 30 Kevin C. Maki et al. (2019). The relationship between whole grain intake and body weight: Results of meta-analyses of observational studies and randomized controlled trials. *Nutrients*, 11(6), 1245. <https://doi.org/10.3390/nu11061245>
- 31 Soo Jeong Kim et al. (2016). Effects of dietary pulse consumption on body weight: A systematic review and meta-analysis of randomized controlled trials. *The American Journal of Clinical Nutrition*, 103(5), 1213–1223. <https://doi.org/10.3945/ajcn.115.124677>
- 32 Oliver T. Mytton et al. (2014). Systematic review and meta-analysis of the effect of increased vegetable and fruit consumption on body weight and energy intake. *BMC Public Health*, 14(1), 886. <https://doi.org/10.1186/1471-2458-14-886>
- 33 Andrew Reynolds, Jim Mann, John Cummings, Nicole Winter, Emily Mete, & Lisa Te Morenga. (2019). Carbohydrate quality and human health: A series of systematic reviews and meta-analyses. *The Lancet*, 393(10170), 434–445. [https://doi.org/10.1016/S0140-6736\(18\)31809-9](https://doi.org/10.1016/S0140-6736(18)31809-9)
- 34 Andrew González, Matthew N. Hall, Shyh-Chang Lin, & D. Grahame Hardie. (2020). AMPK and TOR: The Yin and Yang of cellular nutrient sensing and growth control. *Cell Metabolism*, 31(3), 472–492. <https://doi.org/10.1016/j.cmet.2020.01.015>
- 35 Zhen Tao, Hassan Aslam, Jessica Parke, Maria Sanchez, & Zhen-

- qi Cheng. (2022). Mechanisms of autophagic responses to altered nutritional status. *The Journal of Nutritional Biochemistry*, 103, 108955. <https://doi.org/10.1016/j.jnutbio.2022.108955>
- 36 Masafumi Kitada, & Daisuke Koya. (2021). Autophagy in metabolic disease and ageing. *Nature Reviews Endocrinology*, 17(11), 647–661. <https://doi.org/10.1038/s41574-021-00551-9>
- 37 Amal Al Rajabi, Grace Lo Siou, Angela K. Akawung, Katherine McDonald, Trevor R. Price, Grace Shen-Tu, Paul J. Robson, Paul J. Veugeliers, & Katerina Maximova. (2022). Towards refining World Cancer Research Fund/American Institute for Cancer Research cancer prevention recommendations for red and processed meat intake: Insights from Alberta's Tomorrow Project cohort. *British Journal of Nutrition*, 127(4), 607–618. <https://doi.org/10.1017/S0007114521001240>
- 38 Feng J. He, Mengjia Tan, Yuan Ma, & Graham A. MacGregor. (2020). Salt reduction to prevent hypertension and cardiovascular disease: JACC state-of-the-art review. *Journal of the American College of Cardiology*, 75(6), 632–647. <https://doi.org/10.1016/j.jacc.2019.11.055>
- 39 Deutsche Gesellschaft für Ernährung. (2016). *Speisesalzzufuhr in Deutschland*. <https://www.dge.de/wissenschaft/stellungnahmen-und-positionspapiere/stellungnahmen/speisesalzzufuhr-in-deutschland/>
- 40 Ángel Gil, & Rosa M. Ortega. (2019). Introduction and executive summary of the supplement, role of milk and dairy products in health and prevention of noncommunicable chronic diseases: A series of systematic reviews. *Advances in Nutrition*, 10(Suppl. 2), S67–S73. <https://doi.org/10.1093/advances/nmz020>
- 41 Sena Akyil, Stefanie Winkler, Daniel Meyer, et al. (2026). Association between dairy intake and multiple health outcomes: A scoping review of systematic reviews and meta-analyses. *European Journal of Clinical Nutrition*, 80, 16–27. <https://doi.org/10.1038/s41430-025-01639-5>

- 42 Nienke K. Leeuwendaal, Catherine Stanton, Paul W. O'Toole, & Timothy P. Beresford. (2022). Fermented foods, health and the gut microbiome. *Nutrients*, 14(7), 1527. <https://doi.org/10.3390/nu14071527>
- 43 Mandy Chan, Nanna Larsen, Hannah Baxter, Lene Jespersen, Elif I. Ekinci, & Katherine Howell. (2024). The impact of botanical fermented foods on metabolic syndrome and type 2 diabetes: A systematic review of randomised controlled trials. *Nutrition Research Reviews*, 37(2), 396–415. <https://doi.org/10.1017/S0954422423000252>
- 44 Parth Patel, Khushbu Butani, Ankit Kumar, Sandeep Singh, & Bhavesh G. Prajapati. (2023). Effects of fermented food consumption on non-communicable diseases. *Foods*, 12(4), 687. <https://doi.org/10.3390/foods12040687>
- 45 Eamonn M. M. Quigley. (2019). Prebiotics and probiotics in digestive health. *Clinical Gastroenterology and Hepatology*, 17(2), 333–344. <https://doi.org/10.1016/j.cgh.2018.09.028>
- 46 Andreas Christ, Maria Lauterbach, & Eicke Latz. (2019). Western diet and the immune system: An inflammatory connection. *Immunity*, 51(5), 794–811. <https://doi.org/10.1016/j.immuni.2019.09.020>
- 47 Harvard T.H. Chan School of Public Health. (o. J.). *Diet review: Anti-inflammatory diet*. The Nutrition Source. <https://nutritionsource.hsph.harvard.edu/healthy-weight/diet-reviews/anti-inflammatory-diet/>
- 48 Ramon Casas, Emilio Sacanella, Marta Urpí-Sardà, Gemma Chiva-Blanch, Emilio Ros, Miguel Ángel Martínez-González, Maria-Isabel Covas, Rosa Maria Lamuela-Raventós, Jordi Salas-Salvadó, Miquel Fiol, Francisco Arós, & Ramón Estruch. (2014). The effects of the Mediterranean diet on biomarkers of vascular wall inflammation and plaque vulnerability in subjects with high risk for cardiovascular disease: A randomized trial. *PLoS ONE*, 9(6), e100084. <https://doi.org/10.1371/journal.pone.0100084>

- 49 Firoozeh Haghighatdoost, Nick Bellissimo, Johan O. Totosy de Zepetnek, & Mohsen H. Rouhani. (2017). Association of vegetarian diet with inflammatory biomarkers: A systematic review and meta-analysis of observational studies. *Public Health Nutrition*, 20(15), 2713–2721. <https://doi.org/10.1017/S1368980017001768>
- 50 Tracy L. Tylka, Rachel M. Calogero, & Sigrún Danielsdóttir. (2015). Is intuitive eating the same as flexible dietary control? Their links to each other and well-being could provide an answer. *Appetite*, 95, 166–175. <https://doi.org/10.1016/j.appet.2015>
- 51 American Diabetes Association Professional Practice Committee. (2026). Facilitating positive health behaviors and well-being to improve health outcomes: Standards of care in diabetes—2026. *Diabetes Care*, 49(Suppl. 1), S89–S131. <https://doi.org/10.2337/dc26-S005>
- 52 Verbraucherzentrale. (2026, 18. März). *Sind unsere Böden und Pflanzen arm an Nährstoffen?* <https://www.verbraucherzentrale.de/wissen/lebensmittel/kennzeichnung-und-inhaltsstoffe/sind-unsere-boeden-und-pflanzen-arm-an-naehrstoffen-17734>
- 53 Fiona C. Bull, Sami S. Al-Ansari, Stuart Biddle, et al. (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *British Journal of Sports Medicine*, 54, 1451–1462. <https://doi.org/10.1136/bjsports-2020-102955>
- 54 Hiren Patel, Hassan Alkhawam, Rami Madanieh, Nirav Shah, Constantine E. Kosmas, & Thomas J. Vittorio. (2017). Aerobic vs anaerobic exercise training effects on the cardiovascular system. *World Journal of Cardiology*, 9(2), 134–138. <https://doi.org/10.4330/wjc.v9.i2.134>
- 55 Charles H. Hillman, Kirk I. Erickson, & Arthur F. Kramer. (2008). Be smart, exercise your heart: Exercise effects on brain and cognition. *Nature Reviews Neuroscience*, 9(1), 58–65. <https://doi.org/10.1038/nrn2298>
- 56 Michael Noetel, Toby Sanders, Daniel Gallardo-Gómez, Philip

- Taylor, Borja del Pozo Cruz, Daniel van den Hoek, et al. (2024). Effect of exercise for depression: Systematic review and network meta-analysis of randomised controlled trials. *BMJ*, 384, e075847. <https://doi.org/10.1136/bmj-2023-075847>
- 57 Rebecca J. Neumann, Katharina F. Ahrens, Birgit Kollmann, Nina Goldbach, Andreas Chmitorz, Daniel Weichert, Christian J. Fiebach, Michèle Wessa, Raffael Kalisch, Klaus Lieb, Oliver Tüscher, Michael M. Plichta, Andreas Reif, & Steffen Matura. (2022). The impact of physical fitness on resilience to modern life stress and the mediating role of general self-efficacy. *European Archives of Psychiatry and Clinical Neuroscience*, 272(4), 679–692. <https://doi.org/10.1007/s00406-021-01338-9>
  - 58 Claude Bouchard, Steven N. Blair, & Peter T. Katzmarzyk. (2015). Less sitting, more physical activity, or higher fitness? *Mayo Clinic Proceedings*, 90(11), 1533–1540. <https://doi.org/10.1016/j.mayocp.2015.08.005>
  - 59 Szymon Sitko, Xabier Artetxe, Morten Bonnevie-Svendsen, Miguel Ángel Galán-Rioja, Giacomo Gallo, Frédéric Grappe, Pablo Leo, Mario Mateo, Iñigo Mujika, Daryl Sanders, Stephen Seiler, Mikel Zabala, Pedro L. Valenzuela, & Ander Viribay. (2025). What is “Zone 2 training”? Experts’ viewpoint on definition, training methods, and expected adaptations. *International Journal of Sports Physiology and Performance*, 20(11), 1614–1617. <https://doi.org/10.1123/ijsp.2024-0303>
  - 60 Peter Schnohr et al. (2018). Various leisure-time physical activities associated with widely divergent life expectancies: The Copenhagen City Heart Study. *Mayo Clinic Proceedings*, 93(12), 1775–1785. <https://doi.org/10.1016/j.mayocp.2018.06.020>
  - 61 Carol Ewing Garber, Bryan Blissmer, Michael R. Deschenes, Barry A. Franklin, Michael J. Lamonte, I-Min Lee, David C. Nieman, & David P. Swain. (2011). Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults:

- Guidance for prescribing exercise. *Medicine & Science in Sports & Exercise*, 43(7), 1334–1359. <https://doi.org/10.1249/MSS.0b013e318213feff>
- 62 Rubén López-Bueno, Lars L. Andersen, Ai Koyanagi, Rodrigo Núñez-Cortés, Jorge Calatayud, Jose Casaña, & Borja del Pozo Cruz. (2022). Thresholds of handgrip strength for all-cause, cancer, and cardiovascular mortality: A systematic review with dose-response meta-analysis. *Ageing Research Reviews*, 82, 101778. <https://doi.org/10.1016/j.arr.2022.101778>
  - 63 Bente K. Pedersen. (2009). The diseasome of physical inactivity – and the role of myokines in muscle–fat cross talk. *The Journal of Physiology*, 587(23), 5559–5568. <https://doi.org/10.1113/jphysiol.2009.179515>
  - 64 Maria C. K. Severinsen, & Bente K. Pedersen. (2020). Muscle-organ crosstalk: The emerging roles of myokines. *Endocrine Reviews*, 41(4), 594–609. <https://doi.org/10.1210/endrev/bnaa016>
  - 65 Sandra M. Barbalho, Eduardo V. Prado Neto, Raquel De Alvares Goulart, Mariana D. Bechara, Elisvânia F. Baisi Chagas, Marina Audi, Livia M. Guissoni Campos, Elisângela Landgraf Guiger, Renato L. Buchaim, Daniel V. Buchaim, & Aline Cressoni Araujo. (2020). Myokines: A descriptive review. *The Journal of Sports Medicine and Physical Fitness*, 60(12), 1583–1590. <https://doi.org/10.23736/S0022-4707.20.10884-3>
  - 66 Hao Han, Jing Hu, Dong Hoon Lee, Ying Zhang, Edward Giovannucci, Meir J. Stampfer, Frank B. Hu, Ying Hu, & Qi Sun. (2026). Physical activity types, variety, and mortality: Results from two prospective cohort studies. *BMJ Medicine*, 5(1), e001513. <https://doi.org/10.1136/bmjmed-2025-001513>
  - 67 Haris Islam, Martin J. Gibala, & Jonathan P. Little. (2022). Exercise snacks: A novel strategy to improve cardiometabolic health. *Exercise and Sport Sciences Reviews*, 50(1), 31–37. <https://doi.org/10.1249/JES.0000000000000275>
  - 68 Matthew N. Ahmadi, Paul J. Clare, Peter T. Katzmarzyk, et al.

- (2022). Vigorous physical activity, incident heart disease, and cancer: How little is enough? *European Heart Journal*, 43(46), 4801–4814. <https://doi.org/10.1093/eurheartj/ehac572>
- 69 Emmanuel Stamatakis, Matthew N. Ahmadi, Jason M. R. Gill, Cecilie Thøgersen-Ntoumani, Martin J. Gibala, Aiden Doherty, & Mark Hamer. (2022). Association of wearable device-measured vigorous intermittent lifestyle physical activity with mortality. *Nature Medicine*, 28(12), 2521–2529. <https://doi.org/10.1038/s41591-022-02100-x>
- 70 Benjamin N. Greenwood. (2019). The role of dopamine in overcoming aversion with exercise. *Brain Research*, 1713, 102–108. <https://doi.org/10.1016/j.brainres.2018.08.030>
- 71 Ann M. Williamson, & Anne-Marie Feyer. (2000). Moderate sleep deprivation produces impairments in cognitive and motor performance equivalent to legally prescribed levels of alcohol intoxication. *Occupational and Environmental Medicine*, 57(10), 649–655. <https://doi.org/10.1136/oem.57.10.649>
- 72 Eleonora Tobaldini, Gabriele Costantino, Matteo Solbiati, Chiara Cogliati, Tolga Kara, Lino Nobili, & Nicola Montano. (2017). Sleep, sleep deprivation, autonomic nervous system and cardiovascular diseases. *Neuroscience & Biobehavioral Reviews*, 74(Pt B), 321–329. <https://doi.org/10.1016/j.neubiorev.2016.07.004>
- 73 Séverine Sabia, Aline Dugravot, Damien Léger, Chiraz Ben Hassen, Mika Kivimäki, & Archana Singh-Manoux. (2022). Association of sleep duration at age 50, 60, and 70 years with risk of multimorbidity in the UK: 25-year follow-up of the Whitehall II cohort study. *PLoS Medicine*, 19(10), e1004109. <https://doi.org/10.1371/journal.pmed.1004109>
- 74 Xiaoxuan Wu, Xia Zhao, Anqi Ge, Zhen Han, Cheng Hou, Yong Hao, Jian Xiao, Min Fan, Stephen Burgess, Jianfeng Li, & Xia Jiang. (2025). Evaluating the nonlinear effects of sleep duration on biological aging across phenotypic, genomic, and epigenomic

- data. *Aging*, 17(8), 2126–2151. <https://doi.org/10.18632/aging.206306>
- 75 Eban-Rothschild, A., Appelbaum, L., & de Lecea, L. (2018). Neuronal mechanisms for sleep/wake regulation and modulatory drive. *Neuropsychopharmacology*, 43(5), 937–952. <https://doi.org/10.1038/npp.2017.294>
- 76 Lee, Y., Lee, J., Cho, J., et al. (2025). Performance of consumer wrist-worn sleep tracking devices compared to polysomnography: A meta-analysis. *Journal of Clinical Sleep Medicine*, 21, 573–582. <https://doi.org/10.5664/jcsm.11460>
- 77 Grandner, M. A., Bromberg, Z., Hadley, A., Morrell, Z., Graf, A., Hutchison, S., & Freckleton, D. (2023). Performance of a multi-sensor smart ring to evaluate sleep: In-lab and home-based evaluation of generalized and personalized algorithms. *Sleep*, 46(1), Article zsac152. <https://doi.org/10.1093/sleep/zsac152>
- 78 Fostitsch, A. J., Schwarzer, G., Buchgeister, M., Surbeck, W., Lahmann, C., Spiegelhalter, K., Frase, L., & Spieler, D. (2025). The association between sleep quality and telomere attrition: A systematic review and meta-analysis comprising 400,212 participants. *Sleep Medicine Reviews*, 80, Article 102073. <https://doi.org/10.1016/j.smr.2025.102073>
- 79 Chung, Y. P., & Chung, W. S. (2025). Telomere shortening in middle-aged and elderly individuals with varying severities of obstructive sleep apnea. *Scientific Reports*, 15(1), Article 30277. <https://doi.org/10.1038/s41598-025-15895-9>
- 80 Wu, X., Zhao, X., Ge, A., Han, Z., Hou, C., Hao, Y., Xiao, J., Fan, M., Burgess, S., Li, J., & Jiang, X. (2025). Evaluating the nonlinear effects of sleep duration on biological aging across phenotypic, genomic, and epigenomic data. *Aging*, 17(8), 2126–2151. <https://doi.org/10.18632/aging.206306>
- 81 Perlis, M. L., Posner, D., Riemann, D., Bastien, C. H., Teel, J., & Thase, M. (2022). Insomnia. *The Lancet*, 400(10357), 1047–1060. [https://doi.org/10.1016/S0140-6736\(22\)00879-0](https://doi.org/10.1016/S0140-6736(22)00879-0)

- 82 Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., Buysse, D., Dinges, D. F., Gangwisch, J., Grandner, M. A., Kushida, C., Malhotra, R. K., Martin, J. L., Patel, S. R., Quan, S. F., & Tasali, E. (2015). Recommended amount of sleep for a healthy adult: A joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep*, 38(6), 843–844. <https://doi.org/10.5665/sleep.4716>
- 83 Kurina, L. M., McClintock, M. K., Chen, J. H., Waite, L. J., Thisted, R. A., & Lauderdale, D. S. (2013). Sleep duration and all-cause mortality: A critical review of measurement and associations. *Annals of Epidemiology*, 23(6), 361–370. <https://doi.org/10.1016/j.annepidem.2013.03.015>
- 84 Qian, F., et al. (2023). Association of sleep patterns with mortality and life expectancy in US adults. *Journal of the American College of Cardiology*, 81(13), 1302–1314.
- 85 Qian, F., et al. (2023). Association of sleep patterns with mortality and life expectancy in US adults. *Journal of the American College of Cardiology*, 81(13), 1302–1314.
- 86 Ferracioli-Oda, E., Qawasmi, A., & Bloch, M. H. (2013). Meta-analysis: Melatonin for the treatment of primary sleep disorders. *PLoS ONE*, 8(5), Article e63773. <https://doi.org/10.1371/journal.pone.0063773>
- 87 Di Mauro, G., & Liguori, C. (2026). »Adverse event reports of seizure for insomnia medication from 1967 to 2023«: The challenge of using hypnotic medication in people with epilepsy. *Frontiers in Neurology*, 17.
- 88 Herxheimer, A., & Petrie, K. J. (2002). Melatonin for the prevention and treatment of jet lag. *Cochrane Database of Systematic Reviews*, 2002(2), Article CD001520. <https://doi.org/10.1002/14651858.CD001520>
- 89 Arab, A., Rafie, N., Amani, R., & Shirani, F. (2023). The role of magnesium in sleep health: A systematic review of available

- literature. *Biological Trace Element Research*, 201(1), 121–128. <https://doi.org/10.1007/s12011-022-03162-1>
- 90 Shen, H., Zhang, L. J., & Zhu, W. Y. (2026). The sleep-enhancing effect of lavender essential oil in adults: A systematic review and meta-analysis. *Holistic Nursing Practice*, 40(2), 105–118. <https://doi.org/10.1097/HNP.0000000000000734>
  - 91 Windred, D. P., Burns, A. C., Lane, J. M., Saxena, R., Rutter, M. K., Cain, S. W., & Phillips, A. J. K. (2024). Sleep regularity is a stronger predictor of mortality risk than sleep duration: A prospective cohort study. *Sleep*, 47(1), Article zsad253. <https://doi.org/10.1093/sleep/zsad253>
  - 92 Zhong, C., Masters, M., Donzella, S. M., Diver, W. R., & Patel, A. V. (2025). Electronic screen use and sleep duration and timing in adults. *JAMA Network Open*, 8(3), Article e252493. <https://doi.org/10.1001/jamanetworkopen.2025.2493>
  - 93 Chung, N., Bin, Y. S., Cistulli, P. A., & Chow, C. M. (2020). Does the proximity of meals to bedtime influence the sleep of young adults? A cross-sectional survey of university students. *International Journal of Environmental Research and Public Health*, 17(8), Article 2677. <https://doi.org/10.3390/ijerph17082677>
  - 94 He, S., Hasler, B. P., & Chakravorty, S. (2019). Alcohol and sleep-related problems. *Current Opinion in Psychology*, 30, 117–122. <https://doi.org/10.1016/j.copsyc.2019.03.007>
  - 95 Kirschbaum, C., Pirke, K.-M., & Hellhammer, D. H. (1993). The “Trier Social Stress Test” – A tool for investigating psychobiological stress responses in a laboratory setting. *Neuropsychobiology*, 28(1–2), 76–81. <https://doi.org/10.1159/000119004>
  - 96 Deinzer, R., Kirschbaum, C., Gresele, C., & Hellhammer, D. H. (1997). Adrenocortical responses to repeated parachute jumping and subsequent h-CRH challenge in inexperienced healthy subjects. *Physiology & Behavior*, 61(4), 507–511. [https://doi.org/10.1016/S0031-9384\(96\)00465-9](https://doi.org/10.1016/S0031-9384(96)00465-9)
  - 97 Le Blanc-Brillon, J., Fortin, J. S., Lafrance, L., & Hétu, S. (2025).

- The associations between social comparison on social media and young adults' mental health. *Frontiers in Psychology*, 16, Article 1597241. <https://doi.org/10.3389/fpsyg.2025.1597241>
- 98 Agorastos, A., & Chrousos, G. P. (2022). The neuroendocrinology of stress: The stress-related continuum of chronic disease development. *Molecular Psychiatry*, 27(1), 502–513. <https://doi.org/10.1038/s41380-021-01224-9>
  - 99 Richardson, S., Shaffer, J. A., Falzon, L., Krupka, D., Davidson, K. W., & Edmondson, D. (2012). Meta-analysis of perceived stress and its association with incident coronary heart disease. *The American Journal of Cardiology*, 110(12), 1711–1716. <https://doi.org/10.1016/j.amjcard.2012.08.004>
  - 100 Steptoe, A., Hamer, M., Lin, J., Blackburn, E. H., & Erusalimsky, J. D. (2017). The longitudinal relationship between cortisol responses to mental stress and leukocyte telomere attrition. *The Journal of Clinical Endocrinology & Metabolism*, 102(3), 962–969. <https://doi.org/10.1210/jc.2016-3035>
  - 101 Bourassa, K. J., Caspi, A., Brennan, G. M., Hall, K. S., Harrington, H., Houts, R., Kimbrel, N. A., Poulton, R., Ramrakha, S., Taylor, G. A., & Moffitt, T. E. (2023). Which types of stress are associated with accelerated biological aging? Comparing perceived stress, stressful life events, childhood adversity, and post-traumatic stress disorder. *Psychosomatic Medicine*, 85(5), 389–396. <https://doi.org/10.1097/PSY.0000000000001197>
  - 102 Epel, E. S., Blackburn, E. H., Lin, J., Dhabhar, F. S., Adler, N. E., Morrow, J. D., & Cawthon, R. M. (2004). Accelerated telomere shortening in response to life stress. *Proceedings of the National Academy of Sciences of the United States of America*, 101(49), 17312–17315. <https://doi.org/10.1073/pnas.0407162101>
  - 103 Cohen, S., Frank, E., Doyle, W. J., et al. (1998). Types of stressors that increase susceptibility to the common cold in healthy adults. *Health Psychology*, 17(3), 214–223.
  - 104 Bowers, M. E., & Yehuda, R. (2016). Intergenerational transmis-

- sion of stress in humans. *Neuropsychopharmacology*, 41(1), 232–244. <https://doi.org/10.1038/npp.2015.247>
- 105 Chan, J. C., Nugent, B. M., & Bale, T. L. (2018). Parental advisory: Maternal and paternal stress can impact offspring neurodevelopment. *Biological Psychiatry*, 83(10), 886–894. <https://doi.org/10.1016/j.biopsych.2017.10.005>
  - 106 Gordon, A. M., & Mendes, W. B. (2021). A large-scale study of stress, emotions, and blood pressure in daily life using a digital platform. *Proceedings of the National Academy of Sciences*, 118(31), Article e2105573118. <https://doi.org/10.1073/pnas.2105573118>
  - 107 Sinichi, M., Gevonden, M. J., & Krabbendam, L. (2025). Quality in question: Assessing the accuracy of four heart rate wearables and the implications for psychophysiological research. *Psychophysiology*, 62(2), Article e70004. <https://doi.org/10.1111/psyp.70004>
  - 108 Little, A. L. (2025). The A52 breath method: A narrative review of breathwork for mental health and stress resilience. *Stress and Health*, 41(4), Article e70098. <https://doi.org/10.1002/smi.70098>
  - 109 Morava, A., Dillon, K., Sui, W., Alushaj, E., & Prapavessis, H. (2024). The effects of acute exercise on stress reactivity assessed via a multidimensional approach: A systematic review. *Journal of Behavioral Medicine*, 47(4), 545–565. <https://doi.org/10.1007/s10865-024-00470-w>
  - 110 Hunter, M. R., Gillespie, B. W., & Chen, S. Y.-P. (2019). Urban nature experiences reduce stress in the context of daily life based on salivary biomarkers. *Frontiers in Psychology*, 10, 722. <https://doi.org/10.3389/fpsyg.2019.00722>
  - 111 Yao, W., Luo, Q., Zhang, X., Zhuo, C., & Mi, L. (2024). Exploring the effect of different typical plant community on human stress reduction: A field experiment. *Scientific Reports*, 14(1), Article 5600. <https://doi.org/10.1038/s41598-024-56243-7>
  - 112 Meredith, G. R., Rakow, D. A., Eldermire, E. R. B., et al. (2019).

- Minimum time dose in nature to positively impact the mental health of college-aged students, and how to measure it: A scoping review. *Frontiers in Psychology*, 10, 2942. <https://doi.org/10.3389/fpsyg.2019.02942>
- 113 Sweeny, K., Medina Huerta, J., Hawes, J., & Susoeff, S. (2026). Just keep flowing: A meta-analysis on the relationship between flow and well-being. *Emotion*. Advance online publication. <https://doi.org/10.1037/emo0001657>
- 114 Gaston, E., Ullén, F., Wesseldijk, L. W., & Mosing, M. A. (2024). Can flow proneness be protective against mental and cardiovascular health problems? A genetically informed prospective cohort study. *Translational Psychiatry*, 14(1), Article 144. <https://doi.org/10.1038/s41398-024-02855-6>
- 115 Puhlmann, L. M. C., & Engert, V. (2025). How mindfulness-based training improves stress-related health: A selective review of randomized clinical trials comparing psychological mechanisms of action. *Frontiers in Endocrinology*, 16, Article 1415081. <https://doi.org/10.3389/fendo.2025.1415081>
- 116 Løseth, G. E., Eikemo, M., Trøstheim, M., Meier, I. M., Bjørnstad, H., Asratian, A., Pazmandi, C., Tangen, V. W., Heilig, M., & Leknes, S. (2022). Stress recovery with social support: A dyadic stress and support task. *Psychoneuroendocrinology*, 146, Article 105949. <https://doi.org/10.1016/j.psyneuen.2022.105949>
- 117 Szuhany, K. L., & Simon, N. M. (2022). Anxiety disorders: A review. *JAMA*, 328(24), 2431–2445. <https://doi.org/10.1001/jama.2022.22744>
- 118 Gesundheitsinformation.de. (o. J.). *Kognitive Verhaltenstherapie*. Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen (IQWiG). <https://www.gesundheitsinformation.de/kognitive-verhaltenstherapie.html>
- 119 Bundesinstitut für Risikobewertung. (2024, 10. September). *Ashwagandha: Schlafbeeren-Präparate mit möglichen Gesundheitsrisiken* (Mitteilung Nr. 39/2024). <https://www.bfr.bund.de/>

cm/343/ashwagandha-schlafbeeren-praeparate-mit-moeglichen-gesundheitsrisiken.pdf

- 120 Burnette, J. L., Knouse, L. E., Vavra, D. T., O'Boyle, E., & Brooks, M. A. (2020). Growth mindsets and psychological distress: A meta-analysis. *Clinical Psychology Review*, 77, Article 101816. <https://doi.org/10.1016/j.cpr.2020.101816>
- 121 Hatsukami, D. K., Stead, L. F., & Gupta, P. C. (2008). Tobacco addiction. *The Lancet*, 371(9629), 2027–2038. [https://doi.org/10.1016/S0140-6736\(08\)60871-5](https://doi.org/10.1016/S0140-6736(08)60871-5)
- 122 Rigotti, N. A., Kruse, G. R., Livingstone-Banks, J., & Hartmann-Boyce, J. (2022). Treatment of tobacco smoking: A review. *JAMA*, 327(6), 566–577. <https://doi.org/10.1001/jama.2022.0395>
- 123 Jha, P., & Peto, R. (2014). Global effects of smoking, of quitting, and of taxing tobacco. *The New England Journal of Medicine*, 370(1), 60–68. <https://doi.org/10.1056/NEJMr1308383>
- 124 Steimle, L., Grabski, M., & Stöver, H. (2024). Tabak Harm Reduction: Die Notwendigkeit eines Paradigmenwechsels in der deutschen Tabakkontrollpolitik. *Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz*, 67(8), 956–961. <https://doi.org/10.1007/s00103-024-03900-x>
- 125 Jiang, J., Li, X., Hu, A. F., Zhou, G. J., Gao, Y. H., Xu, C., Wu, X. M., & Wang, H. J. (2025). Nicotine and neuronal nicotinic acetylcholine receptors: Unraveling the mechanisms of nicotine addiction. *Frontiers in Neuroscience*, 19, Article 1670883. <https://doi.org/10.3389/fn.2025.1670883>
- 126 Kalkhoran, S., Benowitz, N. L., & Rigotti, N. A. (2018). Reprint of: Prevention and treatment of tobacco use: JACC health promotion series. *Journal of the American College of Cardiology*, 72(23 Pt B), 2964–2979. <https://doi.org/10.1016/j.jacc.2018.10.020>
- 127 Inoue-Choi, M., Liao, L. M., Reyes-Guzman, C., Hartge, P., Caporaso, N., & Freedman, N. D. (2017). Association of long-term, low-intensity smoking with all-cause and cause-specific

- mortality in the National Institutes of Health–AARP Diet and Health Study. *JAMA Internal Medicine*, 177(1), 87–95. <https://doi.org/10.1001/jamainternmed.2016.7511>
- 128 Le, T. T. T., Mendez, D., & Warner, K. E. (2024). The benefits of quitting smoking at different ages. *American Journal of Preventive Medicine*, 67(5), 684–688. <https://doi.org/10.1016/j.amepre.2024.06.02>
- 129 Cahill, K., et al. (2013). Pharmacological interventions for smoking cessation: An overview and network meta-analysis. *Cochrane Database of Systematic Reviews*, 2013(5), Article CD009329. <https://doi.org/10.1002/14651858.CD009329.pub2>
- 130 Bundesinstitut für Öffentliche Gesundheit. (o. J.). *Rauchfrei-Programm – Unterstützung beim Rauchstopp*. <https://www.rauchfrei-info.de>
- 131 Bundesinstitut für Arzneimittel und Medizinprodukte. (o. J.). *DiGA-Verzeichnis – Smoke Free: Rauchen aufhören*. <https://diga.bfarm.de/de/verzeichnis/01909>
- 132 AOK-Bundesverband. (2025, 24. Juli). *Debatte: E-Zigaretten ebnen den Weg in die Sucht*. Gesundheit + Gesellschaft. <https://www.aok.de/pp/gg/magazine/gesundheit-gesellschaft-07-2025/sucht-e-zigaretten/>
- 133 National Institute on Alcohol Abuse and Alcoholism. (2025, May 8). *Medical complications: Common alcohol-related concerns*. U.S. Department of Health and Human Services, National Institutes of Health. <https://www.niaaa.nih.gov/health-professionals-communities/core-resource-on-alcohol/medical-complications-common-alcohol-related-concerns>
- 134 Morford, K. L., Tetrault, J. M., & O'Connor, P. G. (2025). Alcohol and cancer risk. *JAMA*, 334(10), 908–909. <https://doi.org/10.1001/jama.2025.11229>
- 135 Wood, A. M., Kaptoge, S., Butterworth, A. S., Willeit, P., et al. (2018). Risk thresholds for alcohol consumption: Combined analysis of individual-participant data for 599,912 current drin-

- kers in 83 prospective studies. *The Lancet*, 391(10129), 1513–1523. [https://doi.org/10.1016/S0140-6736\(18\)30134-X](https://doi.org/10.1016/S0140-6736(18)30134-X)
- 136 Martínez-González, M. A., Bes-Rastrollo, M., Sayon-Orea, C., et al. (2026). Wine consumption, Mediterranean diet, and cardiovascular risk in two Spanish cohorts. *European Heart Journal*. Advance online publication. <https://doi.org/10.1093/eurheartj/ehaf1081>
  - 137 Deutsche Hauptstelle für Suchtfragen. (Hrsg.). (2025). *Jahrbuch Sucht 2025*. Pabst Science Publishers. [https://www.dhs.de/fileadmin/user\\_upload/pdf/Jahrbuch\\_Sucht/JBSucht2025\\_komplett\\_WEB.pdf](https://www.dhs.de/fileadmin/user_upload/pdf/Jahrbuch_Sucht/JBSucht2025_komplett_WEB.pdf)
  - 138 Elmaleh-Sachs, A., Schwartz, J. L., Bramante, C. T., Nicklas, J. M., Gudzone, K. A., & Jay, M. (2023). Obesity management in adults: A review. *JAMA*, 330(20), 2000–2015. <https://doi.org/10.1001/jama.2023.19897>
  - 139 Fontaine, K. R., Redden, D. T., Wang, C., Westfall, A. O., & Allison, D. B. (2003). Years of life lost due to obesity. *JAMA*, 289(2), 187–193. <https://doi.org/10.1001/jama.289.2.187>
  - 140 Nadolsky, K., Garvey, W., & Agarwal, M. (2025). American Association of Clinical Endocrinology consensus statement: Algorithm for the evaluation and treatment of adults with obesity/adiposity-based chronic disease – 2025 update. *Endocrine Practice*, 31, 1351–1394.
  - 141 Ding, C., Chan, Z., & Magkos, F. (2016). Lean, but not healthy: The »metabolically obese, normal-weight« phenotype. *Current Opinion in Clinical Nutrition and Metabolic Care*, 19(6), 408–417.
  - 142 Cornier, M. A., Després, J. P., Davis, N., et al. (2011). Assessing adiposity: A scientific statement from the American Heart Association. *Circulation*, 124(18), 1996–2019. <https://doi.org/10.1161/CIR.0b013e318233bc6a>
  - 143 Khan, S. S., Krefman, A. E., Zhao, L., et al. (2022). Association of body mass index in midlife with morbidity burden in older

- adulthood and longevity. *JAMA Network Open*, 5(3), e222318. <https://doi.org/10.1001/jamanetworkopen.2022.2318>
- 144 Correa-Burrows, P., Burrows, R., Albala, C., et al. (2025). Long-term obesity and biological aging in young adults. *JAMA Network Open*, 8(7), e2520011. <https://doi.org/10.1001/jamanetworkopen.2025.20011>
- 145 Lingvay, I., Cohen, R. V., Le Roux, C. W., & Sumithran, P. (2024). Obesity in adults. *The Lancet*, 404(10456), 972–987. [https://doi.org/10.1016/S0140-6736\(24\)01210-8](https://doi.org/10.1016/S0140-6736(24)01210-8)
- 146 Robert Koch-Institut. (2024, 16. Februar). *Themenschwerpunkt: Übergewicht und Adipositas*. <https://www.rki.de/DE/Themen/Nichtuebertragbare-Krankheiten/Koerperliche-Gesundheit/Adipositas-und-Uebergewicht/themenschwerpunkt-adipositas.html>
- 147 Li, K., Hüsing, A., & Kaaks, R. (2014). Lifestyle risk factors and residual life expectancy at age 40: A German cohort study. *BMC Medicine*, 12, 59. <https://doi.org/10.1186/1741-7015-12-59>
- 148 American Diabetes Association Professional Practice Committee. (2026). Facilitating positive health behaviors and well-being to improve health outcomes: Standards of care in diabetes—2026. *Diabetes Care*, 49(Supplement\_1), S89–S131. <https://doi.org/10.2337/dc26-S005>
- 149 Deutsches Ärzteblatt. (2024, 1. Juli). *DMP Adipositas: Regionale Verträge ab sofort möglich*. <https://www.aerzteblatt.de/news/dmp-adipositas-regionale-vertraege-ab-sofort-moeglich-c0b84331-c117-4d60-9c3a-7f304912bbd1>
- 150 Joossens, L., & Raw, M. (2022). *The tobacco control scale 2021 in Europe*. Association of European Cancer Leagues.
- 151 WHO Regionalbüro für Europa. (2022). WHO European regional obesity report 2022. World Health Organization.
- 152 Emmert-Fees, K. M. F., Amies-Cull, B., Wawro, N., Linseisen, J., Staudigel, M., Peters, A., et al. (2023). Projected health and economic impacts of sugar-sweetened beverage taxation in Germa-

- ny: A cross-validation modelling study. *PLoS Medicine*, 20(11), e1004311. <https://doi.org/10.1371/journal.pmed.1004311>
- 153 Tagesschau. (2026). *Was eine Zuckerabgabe bringen könnte*. <https://www.tagesschau.de/inland/gesellschaft/zuckerabgabe-100.html> (reddit.com)
- 154 USA Today. (2023, September 28). *How one health study, inspired by FDR's death, changed life in America forever*. <https://eu.usatoday.com/story/news/health/2023/09/28/framingham-heart-study-changed-america/70925438007/> (uthscsa.edu)
- 155 Andersson, C., Naylor, M., Tsao, C. W., Levy, D., & Vasan, R. S. (2021). Framingham Heart Study: JACC focus seminar, 1/8. *Journal of the American College of Cardiology*, 77(21), 2680–2692. <https://doi.org/10.1016/j.jacc.2021.01.059>
- 156 Deutsche Hochdruckliga e. V. (2024, 7. Mai). *Bluthochdruck, der stille Saboteur: Bundesweite Experten-Sprechstunde am 15. Mai zum Welthypertonietag 2024*. <https://www.hochdruckliga.de/pressemitteilung/bluthochdruck-der-stille-saboteur-bundesweite-experten-sprechstunde-am-15-mai-zum-welthypertonietag-2024> (hochdruckliga.de)
- 157 Deutsche Hochdruckliga e. V. DHL® | Deutsche Gesellschaft für Hypertonie und Prävention. (2024, März). *Patientenleitfaden Bluthochdruck*. <https://www.hochdruckliga.de/fileadmin/downloads/patienten/leitfaden/dhl-patientenleitfaden-2024.pdf>
- 158 Ettehad, D., Emdin, C. A., Kiran, A., Anderson, S. G., Callender, T., Emberson, J., Chalmers, J., Rodgers, A., & Rahimi, K. (2016). Blood pressure lowering for prevention of cardiovascular disease and death: A systematic review and meta-analysis. *The Lancet*, 387(10022), 957–967. [https://doi.org/10.1016/S0140-6736\(15\)01225-8](https://doi.org/10.1016/S0140-6736(15)01225-8)
- 159 Robert Koch-Institut. (2015). *Gesundheit in Deutschland: Gesundheitsberichterstattung des Bundes* (S. 4). RKI. <https://edoc.rki.de/bitstream/handle/176904/3138/4.pdf>
- 160 Robert Koch-Institut (Hrsg.). (2015). *Gesundheit in Deutschland: Gesundheitsberichterstattung des Bundes*. RKI. <https://>

- www.rki.de/DE/Themen/Gesundheit-und-Gesellschaft/Gesundheitsberichterstattung/Berichte/Gesundheit-in-Deutschland/03\_gesundheit\_in\_deutschland.pdf
- 161 Ference, B. A., Yoo, W., Alesh, I., et al. (2012). Effect of long-term exposure to lower low-density lipoprotein cholesterol beginning early in life on the risk of coronary heart disease: A Mendelian randomization analysis. *Journal of the American College of Cardiology*, 60(25), 2631–2639. <https://doi.org/10.1016/j.jacc.2012.09.017>
  - 162 Mach, F., Koskinas, K. C., Roeters van Lennep, J. E., et al. (2025). 2025 focused update of the 2019 ESC/EAS guidelines for the management of dyslipidaemias. *European Heart Journal*, 46(42), 4359–4378. <https://doi.org/10.1093/eurheartj/ehaf190>
  - 163 Deutsche Herzstiftung e. V. (2025). *Gefäßkiller LDL-Cholesterin: Sind Butter, Eier, Käse Übeltäter?* <https://herzstiftung.de/service-und-aktuelles/presse/pressemitteilungen/tag-der-gesunden-ernaehrung-ldl-cholesterin> (herzstiftung.de)
  - 164 Blumenthal, R. S., Morris, P. B., Gaudino, M., et al. (2026). 2026 ACC/AHA/AACVPR/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of dyslipidemia: A report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Journal of the American College of Cardiology*. Advance online publication. <https://doi.org/10.1016/j.jacc.2025.11.016>
  - 165 Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften. (2025). *S3-Leitlinie hausärztliche Risikoberatung zur kardiovaskulären Prävention* (AWMF-Registernummer 053-024). [https://register.awmf.org/assets/guidelines/053-024\\_S3\\_Hausaerztliche-Risikoberatung-zur-kardiovaskulaeren-Praevention\\_2025-11.pdf](https://register.awmf.org/assets/guidelines/053-024_S3_Hausaerztliche-Risikoberatung-zur-kardiovaskulaeren-Praevention_2025-11.pdf)
  - 166 Clifton, P. M. (2019). Diet, exercise and weight loss and dyslipidaemia. *Pathology*, 51(2), 222–226. <https://doi.org/10.1016/j.pathol.2018.10.013>

- 167 Keene, D., Price, C., Shun-Shin, M. J., & Francis, D. P. (2014). Effect on cardiovascular risk of high density lipoprotein targeted drug treatments niacin, fibrates, and CETP inhibitors: Meta-analysis of randomised controlled trials including 117,411 patients. *BMJ*, 349, g4379. <https://doi.org/10.1136/bmj.g4379>
- 168 Ray, K. K., Corral, P., Morales, E., & Nicholls, S. J. (2019). Pharmacological lipid-modification therapies for prevention of ischaemic heart disease: Current and future options. *The Lancet*, 394(10199), 697–708. [https://doi.org/10.1016/S0140-6736\(19\)31950-6](https://doi.org/10.1016/S0140-6736(19)31950-6)
- 169 Sniderman, A. D., Dufresne, L., Pencina, K. M., Bilgic, S., Thanassoulis, G., & Pencina, M. J. (2024). Discordance among apoB, non-high-density lipoprotein cholesterol, and triglycerides: Implications for cardiovascular prevention. *European Heart Journal*, 45(27), 2410–2418. <https://doi.org/10.1093/eurheartj/ehae258>
- 170 Visseren, F. L. J., Mach, F., Smulders, Y. M., et al. (2021). 2021 ESC guidelines on cardiovascular disease prevention in clinical practice. *European Heart Journal*, 42(34), 3227–3337. <https://doi.org/10.1093/eurheartj/ehab484>
- 171 Herrett, E., Gadd, S., Jackson, R., et al. (2019). Eligibility and subsequent burden of cardiovascular disease of four strategies for blood pressure-lowering treatment: A retrospective cohort study. *The Lancet*, 394(10199), 663–671. [https://doi.org/10.1016/S0140-6736\(19\)31359-5](https://doi.org/10.1016/S0140-6736(19)31359-5)
- 172 Byrne, P., Demasi, M., Jones, M., Smith, S. M., O'Brien, K. K., & DuBroff, R. (2022). Evaluating the association between low-density lipoprotein cholesterol reduction and relative and absolute effects of statin treatment: A systematic review and meta-analysis. *JAMA Internal Medicine*, 182(5), 474–481. <https://doi.org/10.1001/jamainternmed.2022.0134>
- 173 Reyes-Soffer, G., Ginsberg, H. N., Berglund, L., Duell, P. B., Hefron, S. P., Kamstrup, P. R., Lloyd-Jones, D. M., Marcovina, S. M.,

- Yeang, C., & Koschinsky, M. L. (2022). Lipoprotein(a): A genetically determined, causal, and prevalent risk factor for atherosclerotic cardiovascular disease: A scientific statement from the American Heart Association. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 42(1), e48–e60. <https://doi.org/10.1161/ATV.000000000000147>
- 174 Blumenthal, R. S., Morris, P. B., Gaudino, M., et al. (2026). 2026 ACC/AHA/AACVPR/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of dyslipidemia: A report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Journal of the American College of Cardiology*. Advance online publication. <https://doi.org/10.1016/j.jacc.2025.11.016>
- 175 Cho, L., Nicholls, S. J., Nordestgaard, B. G., Landmesser, U., Tsimikas, S., Blaha, M. J., Leitersdorf, E., Lincoff, A. M., Lesogor, A., Manning, B., Kozlovski, P., Cao, H., Wang, J., & Nissen, S. E. (2025). Design and rationale of Lp(a)HORIZON trial: Assessing the effect of lipoprotein(a) lowering with pelacarsen on major cardiovascular events in patients with CVD and elevated Lp(a). *American Heart Journal*, 287, 1–9. <https://doi.org/10.1016/j.ahj.2025.03>
- 176 Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften. (o. J.). S2k-Leitlinie 027/068: Diagnostik und Therapie von Hyperlipidämien bei Kindern und Jugendlichen. AWMF.
- 177 Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften, Bundesärztekammer, & Kassenärztliche Bundesvereinigung. (2024). *Nationale VersorgungsLeitlinie Typ-2-Diabetes* (Version 3.0). [https://register.awmf.org/assets/guidelines/Nationale\\_Versorgungs-Leitlinie/nvl-001kaperg\\_S3\\_Typ-2-Diabetes\\_2024-12.pdf](https://register.awmf.org/assets/guidelines/Nationale_Versorgungs-Leitlinie/nvl-001kaperg_S3_Typ-2-Diabetes_2024-12.pdf)
- 178 Brockmann, A. N., Eastman, A., & Ross, K. M. (2020). Frequency and consistency of self-weighing to promote weight-loss

- maintenance. *Obesity*, 28(7), 1215–1218. <https://doi.org/10.1002/oby.22828>
- 179 Steinberg, D. M., Bennett, G. G., Askew, S., & Tate, D. F. (2015). Weighing every day matters: Daily weighing improves weight loss and adoption of weight control behaviors. *Journal of the Academy of Nutrition and Dietetics*, 115(4), 511–518. <https://doi.org/10.1016/j.jand.2014.12.011>
- 180 Vuorinen, A. L., Helander, E., Pietilä, J., & Korhonen, I. (2021). Frequency of self-weighing and weight change: Cohort study with 10,000 smart scale users. *Journal of Medical Internet Research*, 23(6), e25529. <https://doi.org/10.2196/25529>
- 181 Jeong, S. M., Lee, D. H., Rezende, L. F. M., & Giovannucci, E. L. (2023). Different correlation of body mass index with body fatness and obesity-related biomarker according to age, sex and race-ethnicity. *Scientific Reports*, 13(1), 3472. <https://doi.org/10.1038/s41598-023-30527-w>
- 182 Cornier, M. A., Després, J. P., Davis, N., Grossniklaus, D. A., Klein, S., Lamarche, B., Lopez-Jimenez, F., Rao, G., St-Onge, M. P., Towfighi, A., & Poirier, P. (2011). Assessing adiposity: A scientific statement from the American Heart Association. *Circulation*, 124(18), 1996–2019. <https://doi.org/10.1161/CIR.0b013e318233bc6a>
- 183 Wijayatunga, N. N., & Dhurandhar, E. J. (2021). Normal weight obesity and unaddressed cardiometabolic health risk—A narrative review. *International Journal of Obesity*, 45(10), 2141–2155. <https://doi.org/10.1038/s41366-021-00858-7>
- 184 Nadolsky, K., Garvey, W., & Agarwal, M. (2025). American Association of Clinical Endocrinology consensus statement: Algorithm for the evaluation and treatment of adults with obesity/adiposity-based chronic disease – 2025 update. *Endocrine Practice*, 31, 1351–1394.
- 185 Shaukat, A., Kahi, C. J., Burke, C. A., Rabeneck, L., Sauer, B. G., & Rex, D. K. (2021). ACG clinical guidelines: Colorectal cancer

- screening 2021. *The American Journal of Gastroenterology*, 116(3), 458–479. <https://doi.org/10.14309/ajg.0000000000001122>
- 186 Gemeinsamer Bundesausschuss. (o. J.). *Brustkrebs-Früherkennung – Mammographie-Screening-Programm*. <https://www.g-ba.de/themen/methodenbewertung/erwachsene/krebsfrueherkennung/mammographie-screening/> (g-ba.de)
  - 187 US Preventive Services Task Force. (2024). Screening for breast cancer: US Preventive Services Task Force recommendation statement. *JAMA*, 331(22), 1918–1930. <https://doi.org/10.1001/jama.2024.5534>
  - 188 Duffy, S. W., Tabár, L., Yen, A. M., Dean, P. B., Smith, R. A., Jons-son, H., Törnberg, S., Chen, S. L., Chiu, S. Y., Fann, J. C., Ku, M. M., Wu, W. Y., Hsu, C. Y., Chen, Y. C., Svane, G., Azavedo, E., Grundström, H., Sundén, P., Leifland, K., ... Chen, T. H. (2020). Mammography screening reduces rates of advanced and fatal breast cancers: Results in 549,091 women. *Cancer*, 126(13), 2971–2979. <https://doi.org/10.1002/cncr.32859>
  - 189 Perkins, R. B., Wentzensen, N., Guido, R. S., & Schiffman, M. (2023). Cervical cancer screening: A review. *JAMA*, 330(6), 547–558. <https://doi.org/10.1001/jama.2023.13174>
  - 190 Gössinger, E. V., Müller, A. M., Navarini, A. A., & Sonntag, A. K. (2025). Melanom-Screening. *Aktuelle Dermatologie*, 51(7), 243–249. <https://doi.org/10.1055/a-2634-7830>
  - 191 Falcaro, M., Castañón, A., Ndlela, B., Checchi, M., Soldan, K., Lopez-Bernal, J., Elliss-Brookes, L., & Sasieni, P. (2021). The effects of the national HPV vaccination programme in England, UK, on cervical cancer and grade 3 cervical intraepithelial neoplasia incidence: A register-based observational study. *The Lancet*, 398(10316), 2084–2092. [https://doi.org/10.1016/S0140-6736\(21\)02178-4](https://doi.org/10.1016/S0140-6736(21)02178-4)
  - 192 Heidenreich, P. A., Bhatt, A., Nazir, N. T., Schaffner, W., & Vardeny, O. (2025). 2025 concise clinical guidance: An ACC expert

- consensus statement on adult immunizations as part of cardiovascular care: A report of the American College of Cardiology Solution Set Oversight Committee. *Journal of the American College of Cardiology*, 86(21), 2085–2098. <https://doi.org/10.1016/j.jacc.2025.07.003>
- 193 Dobrescu, A., Pinte, L., Sharifan, A., Gadinger, A., Moser, I., Cooper, C., & Gartlehner, G. (2026). Effectiveness, comparative effectiveness, and harms of COVID-19 vaccines in adults who are not pregnant or immunocompromised: A rapid review for the American College of Physicians. *Annals of Internal Medicine*. Advance online publication. <https://doi.org/10.7326/ANNALS-25-05044>
  - 194 Tan, Y. Y., Ho, R. W. L., Lim, J. T., Chiew, C. J., Lim, S. K., Lye, D. C. B., Tan, K. B., & Wee, L. E. (2026). Real-world effectiveness of sequential pneumococcal vaccination in older adults: A cohort study. *The Journal of Infectious Diseases*. Advance online publication. <https://doi.org/10.1093/infdis/jiag147>
  - 195 Neff, K. D. (2023). Self-compassion: Theory, method, research, and intervention. *Annual Review of Psychology*, 74, 193–218. <https://doi.org/10.1146/annurev-psych-032420-031047>
  - 196 Phillips, W. J., & Hine, D. W. (2021). Self-compassion, physical health, and health behaviour: A meta-analysis. *Health Psychology Review*, 15(1), 113–139. <https://doi.org/10.1080/17437199.2019.1705872>
  - 197 Holden, C. L., Rollins, P., & Gonzalez, M. (2021). Does how you treat yourself affect your health? The relationship between health-promoting behaviors and self-compassion among a community sample. *Journal of Health Psychology*, 26(12), 2330–2341. <https://doi.org/10.1177/1359105320912448>
  - 198 Terry, M. L., Leary, M. R., Mehta, S., & Henderson, K. (2013). Self-compassionate reactions to health threats. *Personality and Social Psychology Bulletin*, 39(7), 911–926. <https://doi.org/10.1177/0146167213488213>

- 199 Thurston, R. C., Fritz, M. M., Chang, Y., Barinas Mitchell, E., & Maki, P. M. (2021). Self-compassion and subclinical cardiovascular disease among midlife women. *Health Psychology, 40*(11), 747–753. <https://doi.org/10.1037/hea0001137>
- 200 Levine, G. N., Cohen, B. E., Commodore-Mensah, Y., Fleury, J., Huffman, J. C., Khalid, U., Labarthe, D. R., Lavretsky, H., Michos, E. D., Spatz, E. S., & Kubzansky, L. D. (2021). Psychological health, well-being, and the mind-heart-body connection: A scientific statement from the American Heart Association. *Circulation, 143*(10), e763–e783. <https://doi.org/10.1161/CIR.0000000000000947>
- 201 Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: A randomized controlled trial of a mindful self-compassion intervention improves depression, distress, and HbA1c among patients with diabetes. *Diabetes Care, 39*(11), 1963–1971. <https://doi.org/10.2337/dc16-0416>
- 202 Lee, E. E., Govind, T., Ramsey, M., Wu, T. C., Daly, R., Liu, J., Tu, X. M., Paulus, M. P., Thomas, M. L., & Jeste, D. V. (2021). Compassion toward others and self-compassion predict mental and physical well-being: A 5-year longitudinal study of 1090 community-dwelling adults across the lifespan. *Translational Psychiatry, 11*(1), 397. <https://doi.org/10.1038/s41398-021-01491-8>
- 203 Guan, F., Wu, Y., Ren, W., Zhang, P., Jing, B., Xu, Z., Wu, S. T., Peng, K. P., & He, J. B. (2021). Self-compassion and the mitigation of negative affect in the era of social distancing. *Mindfulness, 12*(9), 2184–2195. <https://doi.org/10.1007/s12671-021-01674-w>
- 204 Susman, E. S., Chen, S., Kring, A. M., & Harvey, A. G. (2024). Daily micropractice can augment single-session interventions: A randomized controlled trial of self-compassionate touch and examining their associations with habit formation in US college students. *Behaviour Research and Therapy, 175*, 104498. <https://doi.org/10.1016/j.brat.2024.104498>
- 205 Wegemer, C. M. (2020). Selflessness, depression, and neuroti-

- cism: An interactionist perspective on the effects of self-transcendence, perspective-taking, and materialism. *Frontiers in Psychology*, 11, 523950. <https://doi.org/10.3389/fpsyg.2020.523950>
- 206 Dambrun, M. (2017). Self-centeredness and selflessness: Happiness correlates and mediating psychological processes. *PeerJ*, 5, e3306. <https://doi.org/10.7717/peerj.3306>
- 207 Wong, P. T. P., Arslan, G., Bowers, V. L., Peacock, E. J., Kjell, O. N. E., Ivtzan, I., & Lomas, T. (2021). Self-transcendence as a buffer against COVID-19 suffering: The development and validation of the self-transcendence measure-B. *Frontiers in Psychology*, 12, 648549. <https://doi.org/10.3389/fpsyg.2021.648549>
- 208 White, M. P., Elliott, L. R., Grellier, J., Economou, T., Bell, S., Bratman, G. N., Cirach, M., Gascon, M., Lima, M. L., Löhmus, M., Nieuwenhuijsen, M., Ojala, A., Roiko, A., Schultz, P. W., van den Bosch, M., & Fleming, L. E. (2021). Associations between green/blue spaces and mental health across 18 countries. *Scientific Reports*, 11(1), 8903. <https://doi.org/10.1038/s41598-021-87675-0>
- 209 Baquedano, C., Olguí, A., Contreras-Huerta, L. S., Rosas, F. E., & Estarellas, M. (2026). Your brain on nature: A scoping review of the neuroscience of nature exposure. *Neuroscience & Biobehavioral Reviews*, 183, 106565. <https://doi.org/10.1016/j.neubio-rev.2026.106565>
- 210 Monroy, M., & Keltner, D. (2023). Awe as a pathway to mental and physical health. *Perspectives on Psychological Science*, 18(2), 309–320. <https://doi.org/10.1177/17456916221094856>
- 211 Stellar, J. E., John-Henderson, N., Anderson, C. L., Gordon, A. M., McNeil, G. D., & Keltner, D. (2015). Positive affect and markers of inflammation: Discrete positive emotions predict lower levels of inflammatory cytokines. *Emotion*, 15(2), 129–133. <https://doi.org/10.1037/emo0000033>
- 212 Talen MR. The Good Life: Lessons From the World's Longest

- Scientific Study of Happiness. *Fam Med.* 2024 Aug 8;56(10):684–5. <https://doi.org/10.22454/FamMed.2024.345850>. PMID: PMC11575524
- 213 Foster, H. M. E., Gill, J. M. R., Mair, F. S., Celis-Morales, C. A., Jani, B. D., Nicholl, B. I., Lee, D., & O'Donnell, C. A. (2023). Social connection and mortality in UK Biobank: A prospective cohort analysis. *BMC Medicine*, 21(1), 384. <https://doi.org/10.1186/s12916-023-03055-7>
  - 214 Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10(2), 227–237. <https://doi.org/10.1177/1745691614568352>
  - 215 Pantell, M., Rehkopf, D., Jutte, D., Syme, S. L., Balmes, J., & Adler, N. (2013). Social isolation: A predictor of mortality comparable to traditional clinical risk factors. *American Journal of Public Health*, 103(11), 2056–2062. <https://doi.org/10.2105/AJPH.2013.301261>
  - 216 Laugesen, K., Baggesen, L. M., Schmidt, S. A. J., Glymour, M. M., Lasgaard, M., Milstein, A., Sørensen, H. T., Adler, N. E., & Ehrenstein, V. (2018). Social isolation and all-cause mortality: A population-based cohort study in Denmark. *Scientific Reports*, 8(1), 4731. <https://doi.org/10.1038/s41598-018-22963-w>
  - 217 Bundesinstitut für Bevölkerungsforschung. (2024, 29. Mai). *Einsamkeit im jungen und mittleren Erwachsenenalter hat zugenommen*. <https://www.bib.bund.de/DE/Presse/Mitteilungen/2024/2024-05-29-Einsamkeit-im-jungen-und-mittleren-Erwachsenenalter-hat-zugenommen-besonders-unter-jungen-Menschen.html> (bib.bund.de)
  - 218 Techniker Krankenkasse. (2024). *Einsamkeitsreport 2024*. <https://www.tk.de/presse/themen/praevention/gesundheitsstudien/einsamkeitsreport-60-prozent-kennen-einsamkeit-2187212>
  - 219 Holt-Lunstad, J., Birmingham, W., & Jones, B. Q. (2008). Is there

- something unique about marriage? The relative impact of marital status, relationship quality, and network social support on ambulatory blood pressure and mental health. *Annals of Behavioral Medicine*, 35(2), 239–244. <https://doi.org/10.1007/s12160-008-9018-y>
- 220 Kauppi, M., Kawachi, I., Batty, G. D., Oksanen, T., Elovainio, M., Pentti, J., Aalto, V., Virtanen, M., Koskenvuo, M., Vahtera, J., & Kivimäki, M. (2018). Characteristics of social networks and mortality risk: Evidence from 2 prospective cohort studies. *American Journal of Epidemiology*, 187(4), 746–753. <https://doi.org/10.1093/aje/kwx301>
- 221 Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, 7(7), e1000316. <https://doi.org/10.1371/journal.pmed.1000316>
- 222 Yang, Y. C., Boen, C., Gerken, K., Li, T., Schorpp, K., & Harris, K. M. (2016). Social relationships and physiological determinants of longevity across the human life span. *Proceedings of the National Academy of Sciences of the United States of America*, 113(3), 578–583. <https://doi.org/10.1073/pnas.1511085112>
- 223 Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior*, 52(2), 145–161. <https://doi.org/10.1177/0022146510395592>
- 224 Techniker Krankenkasse. (o. D.). *Was wirklich zählt: Gute Beziehungen zu anderen*. <https://www.tk.de/techniker/gesundheit-foerdern/stress-entspannung/wohlbefinden/glueck-gute-beziehungen-2062406>
- 225 Waldinger, R. J., & Schulz, M. S. (2023). The good life: Lessons from the world's longest scientific study of happiness. Simon & Schuster.
- 226 Braun, T., Rohr, M. K., Wagner, J., & Kunzmann, U. (2018). Perceived reciprocity and relationship satisfaction: Age and rela-

tionship category matter. *Psychology and Aging*, 33(5), 713–727.  
<https://doi.org/10.1037/pag0000267>

### **Zum Mitnehmen – Abschließende Gedanken**

- 1 Xue, X., Reed, W. R., & Menclova, A. (2020). Social capital and health: A meta-analysis. *Journal of Health Economics*, 72, 102317. <https://doi.org/10.1016/j.jhealeco.2020.102317>
- 2 Linde, S., & Egede, L. E. (2023). Community social capital and population health outcomes. *JAMA Network Open*, 6(8), e2331087. <https://doi.org/10.1001/jamanetworkopen.2023.31087>