

The Parent's Reading Library

Food, Nutrition & Neurodivergent Children

Section 10

Ultra-Processed Foods

Why this topic matters

Ultra-processed foods (UPFs) are foods that have undergone extensive industrial processing and often contain added sugars, refined starches, unhealthy fats, flavour enhancers, colours, preservatives and other additives. Examples include many packaged snack foods, confectionery, soft drinks, instant noodles, sweetened breakfast cereals, fast foods and some ready-made meals.

Children around the world are eating more ultra-processed foods than ever before. Research has consistently linked high consumption of these foods with poorer diet quality and a range of adverse health outcomes. Scientists are also investigating whether diets high in ultra-processed foods are associated with ADHD and other neurodevelopmental conditions. While current evidence identifies associations rather than proving cause and effect, reducing reliance on ultra-processed foods is widely recommended as part of a healthy eating pattern.

1. Ultra-Processed Food Exposure and Adverse Health Outcomes

Reference

Lane, M. M., Gamage, E., Travica, N., et al. (2024). *Ultra-processed food exposure and adverse health outcomes: Umbrella review of epidemiological meta-analyses*. **The BMJ**, **384**, e077310.

DOI

<https://doi.org/10.1136/bmj-2023-077310>

Plain English Summary

This large umbrella review combined evidence from many previous reviews and found that higher consumption of ultra-processed foods was consistently associated with poorer physical and mental health outcomes. Although not specific to ADHD, it reinforces recommendations to choose minimally processed foods whenever possible.

2. Dietary Patterns and Attention-Deficit/Hyperactivity Disorder: A Systematic Review

Reference

Del-Ponte, B., Anselmi, L., Assunção, M. C. F., Munhoz, T. N., Matijasevich, A., & Tovo-Rodrigues, L. (2019). *Dietary patterns and attention deficit/hyperactivity disorder (ADHD): A systematic review*. **Journal of Affective Disorders**, **252**, 160–173.

DOI

<https://doi.org/10.1016/j.jad.2019.04.061>

Plain English Summary

Children consuming Western-style diets, which are generally higher in ultra-processed foods, were more likely to have ADHD or increased ADHD symptoms than children eating healthier dietary patterns. The review found associations rather than evidence that processed foods cause ADHD.

3. Association Between Junk Food Consumption and Mental Health

Reference

O’Neil, A., Quirk, S. E., Housden, S., Brennan, S. L., Williams, L. J., Pasco, J. A., Berk, M., & Jacka, F. N. (2014). *Relationship between diet and mental health in children and adolescents: A systematic review*. **American Journal of Public Health**, **104**(10), e31–e42.

DOI

<https://doi.org/10.2105/AJPH.2014.302110>

Plain English Summary

This review found that diets higher in processed and energy-dense foods were generally associated with poorer mental health outcomes in children and adolescents. Healthier dietary patterns consistently showed more favourable outcomes.

4. Association Between Diet Quality and Mental Health in Australian Adolescents

Reference

Jacka, F. N., Kremer, P. J., Leslie, E. R., Berk, M., Patton, G. C., Toumbourou, J. W., & Williams, J. W. (2010). *Association between diet quality and mental health in children and adolescents*. **Australian and New Zealand Journal of Psychiatry**, **44**(5), 435–442.

DOI

<https://doi.org/10.3109/00048670903571598>

Plain English Summary

Australian researchers reported that adolescents consuming healthier diets experienced better mental health than those consuming more processed foods. While the study cannot determine cause and effect, it supports the importance of good dietary quality.

5. Ultra-Processed Foods and Human Health

Reference

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**(5), 936–941.

DOI

<https://doi.org/10.1017/S1368980018003762>

Plain English Summary

This paper explains the NOVA food classification system, which groups foods according to their level of processing. It helps families understand the difference between minimally processed foods and ultra-processed products commonly found in supermarkets.

6. Ultra-Processed Foods: The NOVA Classification

Reference

Monteiro, C. A., Cannon, G., Moubarac, J. C., et al. (2018). *The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing*. **Public Health Nutrition**, **21**(1), 5–17.

DOI

<https://doi.org/10.1017/S1368980017000234>

Plain English Summary

This paper describes how diets high in ultra-processed foods may reduce dietary quality by replacing more nutritious whole foods. It has become one of the most widely cited publications on food processing.

7. The Influence of Children’s Diet on Cognition and Behaviour

Reference

Benton, D. (2010). *The influence of children’s diet on their cognition and behaviour*. **European Journal of Nutrition**, **49**(Suppl. 1), S25–S37.

DOI

<https://doi.org/10.1007/s00394-010-0088-y>

Plain English Summary

This review concludes that children’s overall dietary quality is more important than individual foods. Diets rich in whole foods provide nutrients needed for healthy brain function, while diets dominated by highly processed foods may reduce nutritional quality.

8. Healthy Diet and Child Development

Reference

World Health Organization. (2020). *Healthy Diet*.

<https://www.who.int/news-room/fact-sheets/detail/healthy-diet>

Plain English Summary

The World Health Organization recommends limiting foods high in added sugars, unhealthy fats and salt while encouraging vegetables, fruit, legumes and whole grains. These recommendations support healthy growth and lifelong wellbeing.

9. Dietary Patterns and Childhood Development

Reference

Nyaradi, A., Li, J., Hickling, S., Whitehouse, A. J. O., & Oddy, W. H. (2013). *The role of nutrition in children's neurocognitive development, from pregnancy through childhood*. **Frontiers in Human Neuroscience**, **7**, 97.

DOI

<https://doi.org/10.3389/fnhum.2013.00097>

Plain English Summary

This review highlights the importance of nutrient-dense foods throughout childhood. Rather than focusing on avoiding one specific food, the authors recommend improving overall dietary quality.

10. Ultra-Processed Foods and Public Health

Reference

Elizabeth, L., Machado, P., Zinöcker, M., Baker, P., & Lawrence, M. (2020). *Ultra-Processed Foods and Health Outcomes: A Narrative Review*. **Nutrients**, **12**(7), 1955.

DOI

<https://doi.org/10.3390/nu12071955>

Plain English Summary

This review summarises growing evidence linking high intakes of ultra-processed foods with obesity, cardiovascular disease, type 2 diabetes and poorer overall health. The authors conclude that replacing ultra-processed foods with minimally processed alternatives is likely to improve diet quality.

What this means for families

You don't need to eliminate every packaged food from your child's diet. The goal is to gradually increase the proportion of nutritious whole and minimally processed foods while reducing reliance on foods that are high in added sugars, refined starches, unhealthy fats and multiple additives.

For many families, simple swaps—such as fresh fruit instead of confectionery, homemade snacks instead of packaged biscuits, or yoghurt with fruit instead of flavoured desserts—can improve overall diet quality without making mealtimes more stressful. Progress is more important than perfection.

Evidence at a Glance

Overall evidence: ★★★★★ Strong

What research consistently shows

- High consumption of ultra-processed foods is associated with poorer overall health.
- Children with healthier dietary patterns generally consume fewer ultra-processed foods.
- Western-style dietary patterns are associated with increased ADHD symptoms, although they do not establish cause and effect.
- Improving overall diet quality is more important than avoiding a single food.
- Choosing more whole and minimally processed foods supports healthy growth, development and long-term wellbeing.