NeuroFX
Changing Minds

DIET AND SUPPLEMENTATION · 14.1

Diet and Supplementation for ADHD: What the Evidence Actually Supports

The supplement and dietary advice market for ADHD is among the most marketed and least regulated areas in patient-facing content. The actual evidence is more modest than the headlines. Medication and structured behavioural intervention remain primary; diet and supplements have small effects at population level and may help in specific subgroups.

FOR
Parents and adults weighing diet and supplementation

AUDIENCE AGE
All ages alongside ADHD treatment

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PART OF
The NeuroFX resource library

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IN SUMMARY

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What the evidence does support

- **Iron in iron-deficient children with ADHD.** Iron is a cofactor for dopamine synthesis. Children with ADHD have lower serum ferritin on average. Where deficiency is identified by blood test, supplementation under clinical supervision helps. Where deficiency is not identified, supplementation does not.
- **Omega-3 fatty acids.** Meta-analysis pooled ten trials and found a small but statistically significant effect at the group level, smaller than stimulant medication. Higher-EPA formulations showed larger effects than higher-DHA ones in subgroup analysis.
- **Few-foods elimination diets in a minority of children.** Real effect in the subset who respond, smaller at the broader population level when blinded raters are used. NICE NG87 allows this with dietetic supervision where the family has identified specific triggers; not a routine recommendation.
- **Synthetic dye reduction in dye-sensitive children.** Small but real effect, more pronounced where parents identified dye sensitivity before randomisation. The UK FSA-commissioned Southampton studies led to current EU warning labels on six specific colourings.
- **Saffron, zinc in zinc-deficient populations.** Saffron extract has small but real RCT evidence with effect size comparable to omega-3. Zinc has evidence in regions with high background zinc deficiency; UK and Western European children are rarely zinc-deficient.

What the evidence does not support

- **Multivitamins and brain-support blends in non-deficient children or adults.** Where there is no underlying deficiency, no clinically meaningful effect on ADHD symptoms. The marketing is heavy; the evidence is not there.
- **Sugar restriction for ADHD symptom control.** The Wolraich 1995 JAMA meta-analysis, replicated many times since, found no effect of dietary sugar on behaviour or cognition. One of the most disconfirmed claims in paediatric nutrition.
- **Single-nutrient megadosing.** Particularly high-dose B vitamins, magnesium or single amino acids marketed as ADHD treatment. Not supported by evidence and some high doses (vitamin B6) carry real toxicity risk.
- **Vitamin D for ADHD specifically; gluten-free, casein-free, ketogenic diets for ADHD.** Treating documented vitamin D deficiency is good general medicine; supplementing vitamin D specifically for ADHD is not evidence-supported. Gluten-free, casein-free and ketogenic diets have no ADHD-specific evidence base.

How to read the marketing and what to do

- **The pattern is recognisable.** A small underpowered trial gets overstated. Correlation gets sold as causation. 'Doctor formulated' replaces published RCT evidence. The language is carefully written to imply treatment without triggering medicines regulation.
- **Disclose supplements to the prescriber.** Iron, magnesium, high-dose B vitamins and some herbals interact with prescribed ADHD medication. The prescriber needs to know what is being taken.
- **Blood tests where deficiency is plausible.** Iron and ferritin testing is worth requesting where ADHD is the picture. Vitamin D testing is sometimes appropriate. A registered dietitian is the right specialist for elimination diets.

WHEN TO SPEAK TO A PROFESSIONAL

If you are considering supplements for your child or yourself in the context of an ADHD diagnosis, speak to your GP or prescribing clinician before starting. Iron and ferritin testing is worth requesting where ADHD is the picture. A registered dietitian is the right specialist for dietary modification. NeuroFX assessment includes a discussion of co-occurring conditions and current supplements; the clinical team can advise on interactions with prescribed medication.

SOURCES

NICE NG87; Faraone consensus 2021; Sonuga-Barke 2013 Am J Psychiatry; Bloch & Qawasmi 2011; Nigg 2012; Pelsser 2011 INCA Lancet; Wolraich 1995 JAMA