



NUTRITION, GUT HEALTH & BRAIN DEVELOPMENT IN GROWING CHILDREN

FROM THE NATUROPATH'S OFFICE — A GUIDE FOR PARENTS AND CAREGIVERS

Every child's brain and body are growing at an extraordinary pace. Whether your little one is developing right on the expected path, or has already received a diagnosis such as ADD or ADHD, good nutrition — and the right gut foundation — can help their body and brain do what they're designed to do: grow, focus, regulate and thrive. This guide brings together what the research currently shows about gut health and key nutrients, so you can have an informed conversation with your healthcare provider.

A note before you read on

This leaflet is educational, not diagnostic. It cannot tell you whether your child has ADHD, autism, or another neurodevelopmental difference — only a qualified health professional can do that through proper assessment. If something here resonates, please use it as a starting point for a conversation with your paediatrician, GP, or Naturopath, rather than a conclusion on its own.

THE GUT-BRAIN CONNECTION

The gut and the brain are in constant conversation. This link — often called the gut-brain axis — runs through the nervous system, the immune system, and the trillions of microbes living in the digestive tract. In children, a well-balanced gut microbiome is thought to support healthy immune development, mood regulation, and even neurotransmitter production, while an imbalanced gut (dysbiosis) has been linked in research to a number of neurodevelopmental conditions, including ADHD and autism spectrum disorder. The science here is still developing, but it's a promising and increasingly important piece of the picture.

WHAT DOES A HEALTHY GUT LOOK LIKE?

- Regular, comfortable bowel movements — not chronically loose, hard, or infrequent
- Minimal bloating, wind or tummy pain after meals
- Good appetite and steady energy levels without big crashes
- A generally settled mood, with resilience to minor stressors
- Fewer recurrent infections, as much of the immune system is shaped in the gut

SIGNS A CHILD'S GUT MAY BE OUT OF BALANCE

- Frequent constipation, diarrhoea, or a stool pattern that swings between the two
- Regular bloating, excessive wind, or complaints of a sore tummy
- Picky eating alongside digestive discomfort, or new food sensitivities
- Skin flare-ups such as eczema, which often track alongside gut symptoms
- Disrupted sleep or notable mood swings without an obvious cause
- A history of frequent antibiotic use, which can disrupt the microbiome



SUPPORTING GUT HEALTH THROUGH FOOD

- Colourful vegetables and fruit for fibre, which feeds beneficial gut bacteria
- Naturally fermented foods where the child tolerates them — plain yoghurt, kefir, sauerkraut
- Whole, minimally processed foods as the everyday foundation of meals and snacks
- Less refined sugar — it's the preferred fuel for less favourable gut residents such as Candida yeast, and letting them overgrow can crowd out the beneficial bacteria a healthy gut relies on
- Adequate water intake — be aware that filtered and reverse-osmosis water is stripped of natural trace minerals, so ask your healthcare provider whether trace mineral supplementation is worth considering
- Slow, unhurried mealtimes — digestion starts with a calm nervous system

SUPPLEMENTING TO SUPPORT THE GUT

Where diet alone isn't enough, a good-quality, age-appropriate probiotic (and where needed, a prebiotic to feed those good bacteria) can help re-establish balance. Early research into probiotic and synbiotic support for children with ADHD and autism is encouraging, though still preliminary — strain, dose and duration all matter, so this is best chosen with professional guidance rather than off the shelf.



KEY NUTRIENTS FOR A GROWING BRAIN

Alongside gut health, a handful of nutrients come up again and again in the research on children's attention, mood and cognitive development. None of these are a replacement for a balanced diet, medical care, or (where relevant) established ADHD treatment — but getting them right can meaningfully support a child's growing brain.

OMEGA-3 FATTY ACIDS (EPA & DHA)

- DHA makes up around a quarter of the fatty acids in the brain and half of those in the retina, making it a genuinely structural nutrient for a growing child, not just a 'nice to have'
- Beyond attention and behaviour, omega-3s are linked to sharper memory, problem-solving and learning, healthy vision, better sleep quality, and a well-functioning immune system — benefits relevant to every child, not only those with a diagnosis
- EPA in particular supports a healthy inflammatory response, while DHA is the dominant player in brain structure and cognitive function
- Children with ADHD tend to run lower in blood omega-3s, and supplementation offers a modest, consistent improvement in symptoms — particularly hyperactivity — though a smaller effect than standard stimulant medication
- Food sources: oily fish (salmon, sardines, pilchards), flaxseed, walnuts; supplementation is a practical option when fish intake is low

IRON

- Children with ADHD often run lower in ferritin (the body's iron-storage marker), even without full-blown anaemia
- Lower ferritin has been linked to greater symptom severity, and iron plays a direct role in dopamine production — a neurotransmitter central to attention and focus
- A simple full iron panel (not just a basic blood count) with ferritin is a sensible baseline check — iron should only ever be supplemented under guidance, as too much is harmful

MAGNESIUM

- Magnesium tends to run low in children with ADHD; paired with vitamin B6 or vitamin D, small trials show improvements in hyperactivity, attention and sleep
- Evidence is still developing, but magnesium's broader role in nervous system function and sleep makes it a reasonable, low-risk nutrient to check

ZINC

- Zinc deficiency tracks with ADHD symptom severity, and may enhance the effect of other treatments
- Zinc supports the enzymes involved in neurotransmitter regulation and is worth including in an overall nutrient review

VITAMIN D

- Children with ADHD consistently run lower in vitamin D, and combining it with magnesium showed measurable mental health improvements in one randomised trial
- Vitamin D's role goes well beyond bones — it's involved in immune regulation, mood, and healthy nervous system function, all relevant to a growing child
- Vitamin K2 works alongside vitamin D to help direct calcium to the bones and teeth rather than soft tissue — depending on your child's age, ask your practitioner whether K2 should be added alongside a vitamin D3 supplement

WHAT THE RESEARCH ACTUALLY SAYS (IN PLAIN TERMS)

Nutrient deficiencies don't cause ADHD or neurodivergence, and supplements are not a cure or a substitute for diagnosis and treatment. What the evidence does show is that children with ADHD, as a group, more often run low in omega-3s, iron, magnesium and zinc — and that correcting genuine deficiencies can offer a modest, meaningful boost alongside whatever other support a child is receiving. The honest, professional answer is: test where possible, supplement what's actually low, and treat nutrition as one supportive pillar among several.

OTHER NUTRIENTS WORTH A MENTION

Depending on a child's individual picture, your Naturopath may also want to discuss: B-vitamins (B6, B12, folate) for neurotransmitter production; choline, found in eggs, for brain structure; iodine, essential for the thyroid function that underpins early brain development; and vitamin C, which helps the body absorb iron from food and supplements more effectively.

PRACTICAL NEXT STEPS FOR PARENTS

- Keep a simple diary of behaviours, sleep and tummy symptoms for 1–2 weeks — patterns are easier to see on paper
- Ask your healthcare provider for a full iron panel (including ferritin), and consider checking magnesium, zinc, and vitamin D
- Build in daily sources of omega-3s, fibre, and fermented foods where your child will accept them
- Introduce any new supplement one at a time, at an age-appropriate dose, so you can see what's actually helping
- You may want to loop in a professional — your GP, paediatrician, or Naturopath — before starting supplementation, especially if your child is already on medication

