



**Functional  
Neurodiversity:**

*Well-Being for All*

**Medicine for  
A Complete Guide**

(Testing for Minerals & Vitamins – ADHD, Autism, Emotional/Regulation Support)

### **What is Functional Medicine?**

Functional medicine is an approach to health-care that seeks to identify and address the root causes of disease rather than solely treating symptoms. It views the body as an interconnected system covering nutrition, metabolism, immune response, detoxification, hormone regulation, and the gut microbiome. Practitioners emphasise personalised care, detailed history, and advanced laboratory testing.

It asks: What underlying imbalances, nutrient deficiencies, or environmental exposures are contributing to the person's presentation? Then it uses diet, nutrition, supplements, and lifestyle strategies to support correction and improved function.

### **Why Functional Medicine is Important**

For neurodiverse individuals (e.g., ADHD, autism), functional medicine focuses on co-occurring symptoms like fatigue, poor sleep, mood instability, or nutrient insufficiencies. Addressing these biochemical aspects can improve well-being, attention, and emotional regulation. The approach complements conventional therapies by filling gaps in lifestyle and nutritional assessment.

### **Functional Medicine & Neurodiversity – The Rationale**

Neurodiverse conditions are complex and involve multiple factors. Research shows suboptimal levels of iron, zinc, magnesium, vitamin D, and omega-3s in some individuals with ADHD or autism. Addressing deficiencies may enhance sleep, concentration, and overall function. Functional medicine uses both serum and metabolic testing to detect functional deficiencies.

### **Key Nutrient and Functional Tests**

Common tests include: Ferritin/iron studies, Vitamin D, B-vitamins and homocysteine, Magnesium/Zinc, Fatty acid profile, Organic Acids Test (OAT), Hair mineral analysis, and Gut microbiome analysis. Each provides insight into nutrient status, inflammation, or metabolic imbalances relevant to brain health and cognition.

## **Evidence Overview**

### **Research findings:**

- Lower serum magnesium and ferritin levels are often found in ADHD.
- Vitamin D deficiency is frequent and may influence behaviour or mood.
- Omega-3 supplementation shows modest improvements in some cases.
- Functional medicine patients report better overall well-being compared to standard care in some studies (JAMA Network Open, 2019).

However, evidence remains mixed and more RCTs are needed.

## **UK Guidance and Practical Application**

NICE guidelines (NG87, CG170) do not currently recommend supplements as primary ADHD or autism treatments. However, correcting confirmed deficiencies (iron, vitamin D, B12, folate, magnesium, zinc) is good medical practice. In the UK, private functional tests are available via Biolab, Genova Diagnostics, and Regenerus Laboratories.

## **Safety and Ethical Considerations**

Functional medicine must complement—not replace—conventional care. Avoid over-testing or unnecessary supplementation. Iron and vitamin D should only be supplemented if low. Watch for drug–nutrient interactions, especially with ADHD medications. Seek professional advice for interpreting tests and supplement doses.

## **Summary and Key Take-Home Points**

- Functional medicine offers a personalised, whole-body perspective.
- Correct nutrient deficiencies to support overall function.
- Integrate with behavioural and medical therapies.
- Use reputable testing and supplements.
- Maintain balanced diet, sleep, and lifestyle foundations.

## **Further Reading & References**

Institute for Functional Medicine – <https://www.ifm.org>

JAMA Network Open (2019) Beidelschies & Bharmal, ‘Functional Medicine Model of Care and Health Outcomes’ –

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2753520>

BMC Pediatrics (2021) Pinto et al., ‘Vitamin D and Magnesium in ADHD’ –

<https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-021-02631-1>

PMC Review (2024) Lange et al., ‘Nutrition in ADHD Management’ –

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10444659/>

WebMD – <https://www.webmd.com/a-to-z-guides/what-is-a-functional-medicine-doctor>