

This article may be reprinted free of charge provided 1) that there is clear attribution to the Orthomolecular Medicine News Service, and 2) that both the OMNS free subscription link <http://orthomolecular.org/subscribe.html> and also the OMNS archive link <http://orthomolecular.org/resources/omns/index.shtml> are included.

FOR IMMEDIATE RELEASE

Orthomolecular Medicine News Service, August 8, 2026



Metabolic Repletion Protocol for Autism Spectrum Disorder

A Retrospective Clinical Case Series Suggests Rapid Symptomatic Improvement in 200 Children

By Vinod Kumar Goyal, MBBS, DPM

Parth Hospital Psychiatry
Nadiad, Gujarat, India

Correspondence:

Dr. Vinod Kumar Goyal

Email: drvgo999@gmail.com

Abstract

Background

Autism spectrum disorder (ASD) is generally regarded as a lifelong neurodevelopmental condition with multifactorial causes and limited disease-modifying therapies. Increasing evidence links ASD with abnormalities in mitochondrial function, oxidative stress, nutritional status, and gastrointestinal physiology. These observations raise the possibility that metabolic dysfunction may contribute to symptoms in at least a subset of patients.

Objective

To describe clinical outcomes associated with a structured nutritional and metabolic repletion protocol in children diagnosed with ASD during routine clinical practice.

Methods

This retrospective case series included 200 children (2-12 years old) diagnosed with ASD according to DSM-5 criteria and CARS-2 scores ≥ 30 who received treatment between 2008 and 2025 at a single outpatient psychiatric practice in India.

The intervention consisted of a structured nutritional protocol emphasizing micronutrient repletion, vegetable-based foods, fruit intake, and staged macronutrient introduction.

Clinical outcomes were assessed using changes in CARS-2 scores, parental observations, and review of home videos obtained before and after treatment.

Results

Among the 200 treated children, 180 (90%) met the predefined responder criterion of at least a 30% reduction in CARS-2 score after approximately three months of treatment.

Average CARS-2 scores decreased from 38.2 to 25.9.

According to caregiver reports and video review, improvements were observed in several symptom domains, including eye contact, speech, repetitive behaviors, sleep, and gastrointestinal symptoms.

No serious adverse events were reported during follow-up.

Conclusions

These observations suggest that intensive nutritional and metabolic support may benefit some children diagnosed with ASD.

Because this study is retrospective and lacks an untreated control group, randomized controlled trials are needed before conclusions regarding efficacy or causality can be established.

Introduction

Autism spectrum disorder remains one of the most challenging pediatric neurological conditions. Current management primarily emphasizes behavioral interventions, educational support, and symptomatic pharmacologic treatment.

At the same time, a growing body of literature has reported associations between ASD and:

- mitochondrial dysfunction,
- oxidative stress,
- impaired methylation,
- altered gastrointestinal function,
- micronutrient deficiencies, and
- metabolic abnormalities.

These findings raise an important question:

Could impaired metabolic function contribute substantially to symptoms in a subgroup of children with ASD?

The present report summarizes the author's clinical experience using a comprehensive nutritional repletion protocol developed over nearly two decades of practice.

The Metabolic Repletion Protocol

The treatment program was designed around the concept that optimal neuronal function requires both adequate micronutrient cofactors and sufficient metabolic substrates.

Major components included:

- comprehensive vitamin supplementation,
- mineral supplementation,
- frequent vegetable-based nutritional intake,
- seasonal fruits,
- gradual introduction of protein and other macronutrients.

The protocol sought to support:

- mitochondrial energy production,
- methylation,
- neurotransmitter synthesis,
- antioxidant defenses, and
- overall metabolic function.

Clinical Outcomes

The author reports substantial symptomatic improvement across multiple domains, including:

- communication,
- eye contact,
- repetitive behaviors,
- sleep,
- gastrointestinal function, and

- overall CARS-2 scores.

The majority of patients demonstrated clinically meaningful improvement during the approximately three-month treatment period.

Longer-term follow-up available for a subset of patients suggested maintenance of many gains, although systematic long-term outcome assessment was not performed.

Interpretation

This study should be interpreted as a **hypothesis-generating retrospective clinical case series** rather than definitive evidence of treatment efficacy.

Several limitations deserve emphasis:

- retrospective design;
- absence of a control group;
- single clinical practice;
- potential selection bias;
- reliance on caregiver observations for some outcomes;
- inability to separate effects of individual components of the intervention.

Nevertheless, the large number of treated patients and the consistency of reported improvements justify further investigation.

Future Directions

The author proposes that nutritional and metabolic dysfunction may represent an important and under-recognized contributor to ASD symptoms in some patients.

This hypothesis deserves rigorous evaluation through:

- prospective multicenter studies;
- randomized controlled clinical trials;
- biomarker-based metabolic phenotyping; and
- long-term outcome studies.

Disclosure

The author reports no financial relationship with Forever Living Products.

The protocol is presented as an open clinical approach intended for independent scientific evaluation.

Editorial Note (OMNS)

The *Orthomolecular Medicine News Service* publishes emerging hypotheses, clinical observations, and scientific perspectives to encourage discussion and further research. Publication by OMNS does not imply that the reported findings have been independently validated or that the described intervention should be considered established therapy. Readers should interpret these observations in light of the study's retrospective design and the need for well-designed prospective controlled clinical trials.

This OMNS article is intended as an accessible summary of the author's work. The complete original manuscript, including detailed methodology, intervention protocol, statistical analyses, declarations, and references, is provided as a supplementary link below for readers who wish to review the full report.



[Download Manuscript](#)

Reader Discussion and Questions

OMNS welcomes comments, questions, ideas, experiences, and respectful dialogue from readers, patients, healthcare professionals, researchers, and students worldwide.

We encourage participation on OMNS Interactive, where the exchange of knowledge and perspectives helps advance understanding and foster meaningful discussion.

Join the conversation:

<https://omns.substack.com>

About OMNS Interactive

OMNS Interactive is the discussion and commentary platform of the Orthomolecular Medicine News Service (OMNS).

The original OMNS website remains the official archive of OMNS publications.

Subscribe to OMNS Interactive for future articles, commentary, and discussions:

<https://omns.substack.com>

Content is provided for educational purposes only and does not constitute medical advice.

Follow OMNS Interactive

