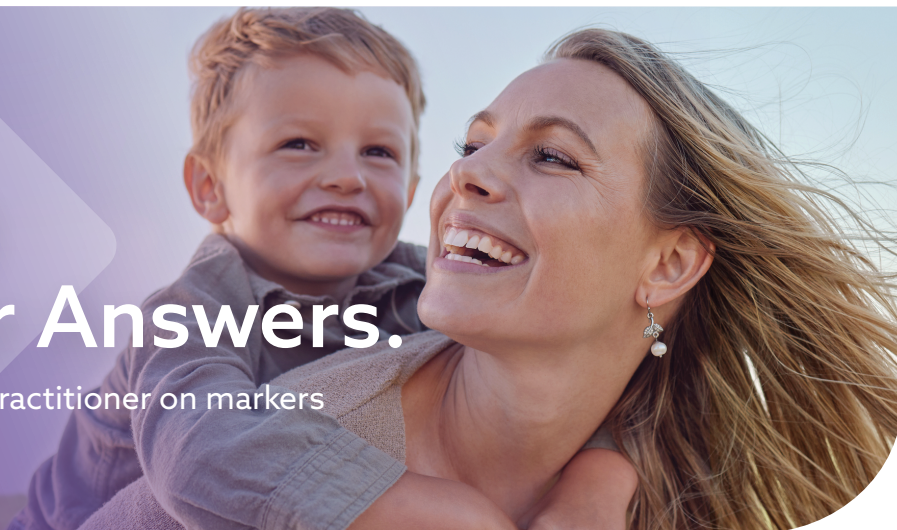




You've Looked Everywhere for Answers.

We're here to help guide you and your practitioner on markers that haven't yet been evaluated



You've done everything right. The standard labs from your child's doctor keep coming back normal. But your child is still struggling.

If you're reading this, you've probably already seen specialists, tracked symptoms, researched on your own, and heard "everything looks normal" more times than you can count.

Normal on standard labs means the tests ruled out what they were designed to find. It doesn't mean there's nothing left to find. Standard testing is often built to detect disease, not to reveal why a child who screens normal is still not thriving. There may be more the standard workup has missed. A different kind of test can help your child's practitioner look deeper.

What is the Organic Acids Test (OAT)?

The Organic Acids Test (OAT) from Mosaic Diagnostics is a simple urine test, collected from the convenience of your home, that provides insight into how a child's body is actually functioning at the metabolic level. It looks at energy production pathways, gut microbe imbalance, metabolic markers related to mood and focus, nutrition, and more, all from a single sample. It's been in use by clinicians for 30 years and was developed specifically with children in mind.

Mosaic Diagnostics was among the first laboratories to develop expanded organic acids testing for pediatric and complex-needs populations, and we have enhanced the report and interpretations as we have gained clinical insights over the last three decades.

One of the first labs to assess organic acids testing for use in children with autism and special needs. Providing valuable information to clinicians since 1996.

What the OAT Evaluates

Practitioners shared that they find value in using the OAT when working with children experiencing:

• Autism • ADHD • Anxiety & Mood Challenges • Chronic Digestive Issues • Fatigue • Sensory Processing Disorder • Sleep Difficulties • Other Special Needs

The OAT is not a diagnostic tool and is not intended to diagnose, treat, cure, or prevent any disease or condition. Please consult a licensed healthcare practitioner.

Six Key Clinical Categories

Microbial Overgrowth

Markers of fungal yeast and mold, bacteria, and Clostridia species, and their metabolic by-products.

Methylation/Detoxification

Metabolites reflecting methyl group cycling, glutathione status, and nutrients involved in both methylation and detoxification.

Neurotransmitter Metabolites

Dopamine, serotonin, and norepinephrine/epinephrine pathway metabolites, providing insights into neurotransmitter imbalances.

Toxic Exposure

Organic acids associated with environmental toxins and toxicants, oxidative stress, and glutathione depletion

Mitochondrial Health

Intermediates of glucose, fatty acid, and amino acid metabolism involved in energy production.

Nutritional Needs

Direct and indirect biomarkers reflecting the functional demand for B-vitamins, antioxidants, and other key micronutrients.

5 Ways the OAT Supports Practitioners in the Assessment of Children with Complex Health Needs

1

Gut Microbes: Emerging Data Hints at a Hidden Source of Behavior and Mood Problems.¹

In children with unexplained mood swings, aggression, or sleep problems that seem to come from nowhere, the gut may be involved in ways not identified on standard labs yet.

The impact on the body. When yeast like candida or bacteria like clostridia grow out of balance, they release toxins that travel to the brain and disrupt key neurochemicals such as dopamine, a chemical that regulates mood, motivation, and behavior. The result can look like moodiness, aggression, self-stimulatory behavior, or sleep disruption that never quite settles. Standard stool tests often miss these organisms entirely.²

What the OAT reveals. The OAT measures specific chemical markers, byproducts these microbes leave behind, that appear in urine and reveal what a stool test can't see.^{3,4,5}

2

Mood, Focus, and Behavior: Why Your Child May Struggle with Calmness, and Attention.

When children struggle with focus, anxiety, or emotional swings, underlying metabolic processes in the body may play a role — not just their behavior.

The impact on the body. Dopamine, serotonin, and norepinephrine help influence how your child focuses, regulates emotions, and stays calm. When these are disrupted by gut toxins, nutrient gaps, or other stressors children struggle with attention, anxiety, aggression, and sleep.

What the OAT reveals. The OAT measures the metabolic byproducts of these pathways, giving practitioners a framework of where the imbalance is and what's driving it. That's far more actionable than observing symptoms and guessing.⁶

3

Cellular Energy: When Your Child's Body Isn't Keeping Up.

If your child seems chronically exhausted, foggy, or slower to develop than expected, their cells may not be producing the energy they need.

The impact on the body. Every function in a child's body, including movement, learning, and growth, runs on cellular energy produced by mitochondria. When mitochondria are disrupted by gut toxins or other stressors, children can experience persistent fatigue, poor growth, and difficulty concentrating that no amount of sleep seems to fix. Mitochondrial dysfunction is well-documented in children with autism and related conditions.⁷ Standard bloodwork doesn't evaluate it.

What the OAT reveals. The OAT measures organic acid markers involved in cellular energy production, including metabolites from the Krebs (citric acid) cycle and fatty-acid metabolism. Abnormal levels can signal when mitochondria are struggling to produce energy efficiently, helping identify possible nutrient deficiencies, toxin exposures, or metabolic blocks affecting energy production.⁸

4

Oxalate Overload: A Hidden Cause That's Rarely Tested.

When children have unexplained pain, frequent urination, or behavior that spikes without warning, high oxalate may be the missing piece - and almost no one tests for it.

The impact on the body. Oxalate is a naturally occurring compound found in many healthy foods (such as spinach, almonds, and sweet potatoes), but in some children, such as those with autism, it accumulates to levels that cause real problems.⁹ High oxalate can contribute to joint and muscle pain, urinary issues, gut inflammation, and behavior changes. Oxalate metabolism has historically been evaluated primarily in the context of kidney stone disorders, leaving oxalate-related symptoms frequently overlooked in children with complex health needs.

What the OAT reveals. The OAT measures oxalate directly in urine and also evaluates related metabolites that can indicate problems in oxalate metabolism. Because the test also evaluates microbial markers and related metabolic pathways, it can help practitioners determine whether elevated oxalate is contributing to symptoms or reflecting underlying factors such as microbial imbalance, mitochondrial dysfunction, metabolic stress, or dietary intake.^{10,11}

5

Detox & Toxin Stress: When the Body Is Overloaded.

When children seem sensitive to everything, including foods, environments, or medications, their detox pathways may be under strain that's never been measured.

The impact on the body. Children's detox systems are still developing, which makes them more vulnerable when those systems get overwhelmed. When the body struggles to neutralize and eliminate toxins, it can create oxidative stress and disrupt normal cellular function. This strain can affect the brain, immune system, and energy production, contributing to symptoms like brain fog, irritability, fatigue, and increased sensitivities.¹²

What the OAT reveals. The OAT measures markers linked to glutathione balance, methylation, and how well your child's body is managing toxic stress from gut microbes, mold exposure, and environmental chemicals. When detox pathways are stressed, symptoms often appear as poor mood, anxiety, brain, irritability, fatigue, or immune challenges that seem to come from nowhere. Identifying the strain is the first step toward relieving it.¹³

What to Expect

The OAT is a simple first-morning urine collection done at home — no blood draw, no clinic visit. Your child's practitioner will receive a detailed report organized around the areas of need most relevant to their care.

Want more information on what the OAT measures?

Scan to see what the OAT evaluates



Want to order an OAT?

This test is only available through a clinician. Scan to find a trusted practitioner who is familiar with the OAT and our team will share a list of local clinicians near you.



Already have a practitioner?

Ask them to order the OAT from Mosaic Diagnostics.

The content of this guide and other information provided by MosaicDX, including on its website, is for informational purposes only and is not intended to be medical advice or a substitute for obtaining medical advice from a licensed healthcare practitioner. The tests are not intended to diagnose, treat, cure or prevent any disease or condition. We recommend that you consult a licensed healthcare practitioner for medication, treatment, diet, exercise or lifestyle management as appropriate, as your practitioner will have individualized information about you that may need to be taken into account in providing you with clinical advice.

References:

1. Finegold SM, et al. Gastrointestinal Microflora Studies in Late-Onset Autism. *Clinical Infectious Diseases*. 2002.
2. Vinithakumari AA, et al. Clostridioides difficile Infection Dysregulates Brain Dopamine Metabolism. *Microbiol Spectr*. 2022.
3. Persico AM and Napolioni V. Urinary p-cresol in autism spectrum disorder. *Neurotoxicology and Teratology*. 2013.
4. Shaw W. Dopamine excess and/or norepinephrine and epinephrine deficiency in autistic patients due to prenatal and/or postnatal deficiency of dopamine beta-hydroxylase. *Journal of Orthomolecular Medicine*. 2021.
5. Shaw W. Inhibition of the Beta-oxidation Pathway of Fatty Acids and Dopamine-Beta-hydroxylase by Phenyl Derivatives of Short-Chain Fatty Acids from Gastrointestinal Clostridia Bacteria is a (the) Major Cause of Autism. *Integrative Medicine*. 2023.
6. Kałużna-Czaplińska J. Noninvasive urinary organic acids test to assess biochemical and nutritional individuality in autistic children. *Clin Biochem*. 2011.
7. Rossignol DA and Frye RE. Mitochondrial dysfunction in autism spectrum disorders. *Mol Psychiatry*. 2012.
8. Holmes RP and Assimos DG. The impact of dietary oxalate on kidney stone formation. *Urol Res*. 2004.
9. Kałużna-Czaplińska J. Urinary organic acids as markers of metabolic disturbances in autistic children. *Clin Biochem*. 2011.
10. James SJ, et al. Metabolic biomarkers of increased oxidative stress and impaired methylation capacity in children with autism. *Am J Clin Nutr*. 2004.
11. Suryavanshi MV, Bhute SS, Jadhav SD, Bhatia MS, Gune RP, Shouche YS. Hyperoxaluria leads to dysbiosis and drives selective enrichment of oxalate metabolizing bacterial species in recurrent kidney stone endures. *Sci Rep*. 2016;6(1):34712. doi:10.1038/srep34712
12. Vida C, Gonzalez E, Fuente M. Increase of Oxidation and Inflammation in Nervous and Immune Systems with Aging and Anxiety. *CPD*. 2014;20(29):4656-4678. doi:10.2174/1381612820666140130201734
13. Poladian N, Navasardyan I, Narinyan W, Orujyan D, Venketaraman V. Potential Role of Glutathione Antioxidant Pathways in the Pathophysiology and Adjunct Treatment of Psychiatric Disorders. *Clin Pract*. 2023;13(4):768-779. doi:10.3390/clinpract13040070



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