NutriPATH
INTEGRATIVE PATHOLOGY SERVICES

ORGANIC ACIDS – Environmental Pollutants

The organic acid test is a nutritional test providing insights into the body's cellular metabolic processes. Urinary organic acids derived from the metabolic conversion of dietary proteins, fats and carbohydrates, in addition to compounds of bacterial origin, provide a unique chemical profile of a patient's cellular health. The testing procedure measures the overflow or build-up of intermediate organic acid products in the urine, determining where 'aberrations' are occurring in metabolic pathways. These biomarkers give an overview of several major systems in the body and an analysis of nutritional deficiencies in the body.

The Organic Acids test is the preferred test used in clinical practice as many functional medicine practitioners believe the metabolic panel provides remarkable data about a patient from a simple urine collection. The organic acid tests assess a wide range of cellular and physiological processes including intestinal dysbiosis, energy production, nutrient cofactor requirements and neurotransmitter metabolism.

Marked accumulation of specific organic acids detected in urine often signals a metabolic inhibition or block. The metabolic block may be due to a nutrient deficiency, an inherited enzyme deficit, toxic build-up or drug effect.

By evaluating organic acid levels and pinpointing the metabolic dysfunctions occurring at the cellular level, a comprehensive, customized treatment strategy can be tailor-made for each individual patient.

The Ideal Test for Complex Patients

Medically unexplained symptoms account for approximately 20% of primary care consultations and 10% of secondary care referrals. The typical symptom clusters including emotional and mental difficulties, allergic reactions, gastrointestinal distress, and urinary tract problems that do not fit any traditional disease pattern, nor do they have an agreed upon conventional medical diagnosis.

In these situations the organic acid tests would be an ideal diagnostic test to utilise. This test brings new tools to the practitioner.

CONDITIONS WHICH MAY BENEFIT FROM ORGANIC ACID TESTING	
Allergies	Anaemia
Autism	Blood sugar irregularities
Cardiovascular disease	Chemical sensitivities
Depression / Anxiety	Dermatitis
Fatigue	Hyperactivity
Insomnia	Irritable Bowel Syndrome
Malabsorption and maldigestion	Mental or developmental delay
Mood disorders	Muscle pain
Autoimmune disorders	Inflammation

Environmental Pollutants

We are exposed to multiple chemicals which may have a combination effect (e.g. additive, synergistic) associated with low level exposures to multiple classes of contaminants, which may impact a variety of organ systems. Sources of contamination of pollutants may be found in diet, air pollution or cigarette smoking.

Increasing exposure to environmental pollutants has been linked to many chronic diseases such as autism spectrum disorders, autoimmune disorders, Parkinson's disease, and Alzheimer's disease. The Environmental Pollutant panel makes it possible in a single test to measure the degree of toxicity to pollutants in the environment, whether it be in the air, what we consume or what we are exposed to.

This test measures the presence of urinary organic acids which are derived from the metabolic conversion of common pollutants which assesses exposure to benzene, xylene, toluene, trimethylbenzene, styrene and phthalate.

ORGANIC ACIDS – ENVIRONMENTAL POLLUTANTS [Test code: 4014]

- 3,4-dimethylhippurate, 3-methylhippurate, 2-methylhippurate; Hippurate, Benzoate; t,t-muconic acid; Mandelate, Phenylglyoxylate; Monoethyl phthalate, Phthalic acid, Quinolate

Other organic acids tests available

- **Organic Acids, Metabolic Profile [4016]:** Measures 34 organic acids for analysing bacterial dysbiosis, yeast & fungal dysbiosis, citric acid metabolites, ketone/fatty acid metabolites, cofactor sufficiency markers and neurotransmitter metabolites.
- **Organic Acids, Citric Acid Cycle [4013]:** Lactic acid, Pyruvic acid, Citric acid, cis-aconitic acid, Isocitric acid, α-ketoglutaric acid, Fumaric acid, Malic acid
- **Organic Acids, Ketone, Fatty Acid Metabolites [4015]:** Adipic acid, Suberic acid, β-hydroxy-β-methyglutaric acid (HMG), β-hydroxybutyric acid
- **Organic Acids, Methylation Cofactors [4018]:** Formiminoglutamic acid (FIGLU), Methylmalonic acid (MMA)
- **Organic Acids, Metabolic Profile + Environmental Pollutants [4017]:** This panel includes both Metabolic Profile and Environmental Pollutants analytes as above.

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service.

NutriPATH
Integrative Pathology Services

Phone 1300 688 522 for further details

www.nutripath.com.au