

Organic Acids in Urine

E 408 / Testset 908

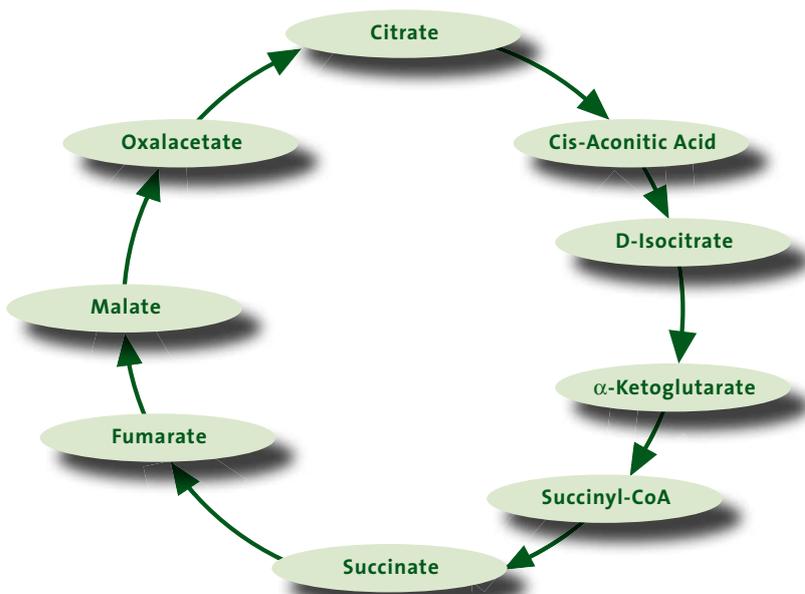
The determination of organic acids in urine provides for an insight about the utilisation of nutrients consumed with food and their transformation into energy (ATP). This transformation is effected with the aid of enzymes and their co-factors. If these co-factors are missing or the enzymes are not working well this may cause accumulation of metabolic intermediate products.

These accumulated intermediate products lead to conclusions about lacking vital substances or nitrosative stress.

Metabolic products of neurotransmitters in urine may argue in favour of disordered stress-hormone balance.

Dysbiosis markers suggest microbial imbalances.

The organic acid analysis in urine will give an overview of the metabolic situation of the patient. No invasive measures are required. Therefore the analysis might also be an alternative for children. Stabilization of the sample material will guarantee longer stability periods.



Citrate Cycle

Literatur:

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Kushnir MM1,2, Nelson GJ3, Frank EL3,4, Rockwood AL3,4.

biovis' Diagnostik M V Z GmbH

Justus-Staudt-Straße 2
 65555 Limburg
 Tel.: +49/6431/21248-0
 Fax: +49/6431/21248-66
 info@biovis.de · www.biovis.de

Organic Acids in Urine		
Lipometabolism		<i>Indicates*</i>
Adipate	increased	Carnitine, B2-deficiency
Suberate	increased	Carnitine, B2-deficiency
Ethylmalonate	increased	Carnitine, B2-deficiency
Carbohydrate Metabolism		<i>Indicates*</i>
Lactate	increased	Anaerobic metabolization of pyruvate, Deficiency of Q10, carnitine, -lipoic acid, biotin, B1, B2, B3, B5
	reduced	Malnutrition
Pyruvate	increased	Increased utilization of the anaerobic energy development, disordered mitochondrial function, deficiency of B6, B3 and -lipoic acid
β-Hydroxy-butyrate	reduced	Degradation disorders of the carbohydrate metabolism
Organic Acids of the Citric Acid Cycle		<i>Indicates*</i>
Cis-aconitate	increased	Magnesium and manganese deficiency
Citrate	increased	Nitrosative stress
	increased	Magnesium, nitrosative stress
Isocitrate	increased	Magnesium and manganese deficiency
Hydroxy-methylglutarate	increased	Co-enzyme Q10 deficiency, intestinal fungal infection
Succinate	increased	B2, B12 and biotin deficiency
	reduced	B3 deficiency
α-ketoglutarat	increased	α-lipoic acid, B1, B2, B3, B5, B6, magnesium deficiency
Fumarate	increased	Catabolic metabolism
	reduced	B2-deficiency
Malate	increased	Q10, B3 deficiency
Organic Acids of the Vitamin Metabolism		<i>Indicates*</i>
α-keto-isovalerate	increased	B1, B2, B3, B5, B6, -lipoic acid and magnesium deficiency
Xanthurenate	increased	B6-deficiency
Methylmalonic acid	increased	B12-deficiency
Neurotransmitter Degradation		<i>Indicates*</i>
Vanillyl mandelic acid	increased	Stress, hypertonia, hypocalcaemia
	reduced	Stress hormone deficiency
Homo-vanillyl mandelic acid	increased	Stress, hypertonia, hypocalcaemia
	reduced	Stress hormone deficiency
5-hydroxyindole-acetate	increased	If antidepressant drugs are taken
	reduced	Serotonin deficiency
Kynurenate	increased	Imbalance of the dopaminergic system
Dysbiosis Marker		<i>Indicates*</i>
D-Arabinitol	increased	Systemic candida infection
Hydroxybenzoic acid	increased	Microbial overgrowth
Citramalat	increased	Yeast and anaerobic bacteria population

*These are only indices. It is possible that only one substance is concerned, but maybe also more than one.