ONE FMV
OPTIMAL NUTRITION EVALUATION

Optimal Nutrition Evaluation

sample type: URINE

Even if your patients are eating a "balanced" or healthy diet and taking supplements, their bodies could still lack vital and necessary nutrition. The **ONE** will help you understand your patients' individual diet and supplementation needs.

- ***Analytes***

Metabolic Analysis
Creatinine and 46 organic acids ratioed to creatinine including
10 gastrointestinal metabolites
12 cellular energy metabolites
6 neurotransmitter metabolites
11 vitamin markers
4 detoxification markers
2 tyrosine metabolites

Amino Acids Analysis
30 analytes for:
-Nutritionally essential and Semi-essential amino acids
-Dietary peptide-related markers
-Non-essential protein amino acids
-Intermediary metabolites and Diagnostic markers
-Urine representativeness

Oxidative Stress
Lipid peroxides
8-OHdG

- ***Specimen Requirements:***
Urine specimens required. Refer to Patient kit instructions for details

- ***Before Taking this Test:***
-Discontinue non-essential medications (4 days before test)
-Refer to clinician instructions About what other medications And supplements to avoid (4 days Before test)
-Patients must fast overnight
-Arrange posting for Monday-Thursday
-See instructions inside test kit For details

- ***Turn-Around Time:***
16 Days

This unique profile:

- Requires only one first morning void urine sample with easy patient at-home collection
- Evaluates overall nutritional status of your patient
- Assesses the functional need for vitamins and minerals
- Includes an innovative "Interpretation-at-a-Glance"
  - **Concise-Easy Interpretation**
  - **Provides clear, personalised recommendations for supplementation**
    - Anti-oxidants
    - B-vitamins
    - Minerals
    - Amino acids

The ONE consists of:

Metabolic Analysis measuring 46 key organic acids to evaluate gastrointestinal function, cellular energy production, neurotransmitter processing, and functional need for vitamins, minerals, and co-factors.

Amino Acid Analysis measuring 30 amino acids to evaluate dietary protein adequacy, digestion, absorption, amino acid transport, metabolic impairments, and nutritional deficits; including essential vitamins, minerals, and amino acids.

Oxidative Stress Analysis is a sensitive tool to evaluate the body's anti-oxidant reserves and the presence of oxidative injury.

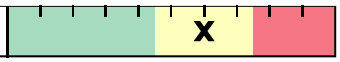
Genova Diagnostics® Europe
Innovative Testing for Optimal Health

ONE FMV *Interpretation At-A-Glance*

Nutritional Needs

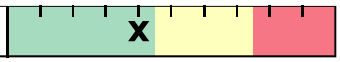
Antioxidants

Vitamin A / Carotenoids



- Beta-carotene & other carotenoids are converted to vitamin A (retinol), involved in vision, antioxidant & immune function, gene expression & cell growth.
- Vitamin A deficiency may occur with chronic alcoholism, zinc deficiency, hypothyroidism, or oral contraceptives containing estrogen & progestin.
- Deficiency may result in night blindness, impaired immunity, healing & tissue regeneration, increased risk of infection, leukoplakia or keratosis.
- Food sources include cod liver oil, fortified cereals & milk, eggs, sweet potato, pumpkin, carrot, cantaloupe, mango, spinach, broccoli, kale & butternut squash.

Vitamin C

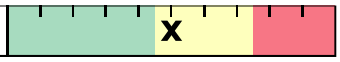


- Vitamin C is an antioxidant (also used in the regeneration of other antioxidants). It is involved in cholesterol metabolism, the production & function of WBCs and antibodies, and the synthesis of collagen, norepinephrine and carnitine.
- Deficiency may occur with oral contraceptives, aspirin, diuretics or NSAIDs.
- Deficiency can result in scurvy, swollen gingiva, periodontal destruction, loose teeth, sore mouth, soft tissue ulcerations, or increased risk of infection.
- Food sources include oranges, grapefruit, strawberries, tomato, sweet red pepper, broccoli and potato.

Vitamin E / Tocopherols

- Alpha-tocopherol (body's main form of vitamin E) functions as an antioxidant, regulates cell signaling, influences immune function and inhibits coagulation.
- Deficiency may occur with malabsorption, cholestyramine, colestipol, isoniazid, orlistat, olestra and certain anti-convulsants (e.g., phenobarbital, phenytoin).
- Deficiency may result in peripheral neuropathy, ataxia, muscle weakness, retinopathy, and increased risk of CVD, prostate cancer and cataracts.
- Food sources include oils (olive, soy, corn, canola, safflower, sunflower), eggs, nuts, seeds, spinach, carrots, avocado, dark leafy greens and wheat germ.

α-Lipoic Acid

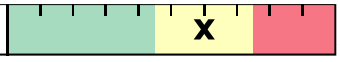


- Lipoic acid plays an important role in energy production, antioxidant activity (including the regeneration of vitamin C and glutathione), insulin signaling, cell signaling and the catabolism of α-keto acids and amino acids.
- High biotin intake can compete with lipoic acid for cell membrane entry.
- Optimal levels of lipoic acid may improve glucose utilization and protect against diabetic neuropathy, vascular disease and age-related cognitive decline.
- Main food sources include organ meats, spinach and broccoli. Lesser sources include tomato, peas, Brussels sprouts and brewer's yeast.

CoQ10

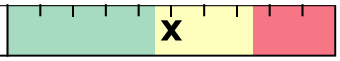
- CoQ10 is a powerful antioxidant that is synthesized in the body and contained in cell membranes. CoQ10 is also essential for energy production & pH regulation.
- CoQ10 deficiency may occur with HMG-CoA reductase inhibitors (statins), several anti-diabetic medication classes (biguanides, sulfonylureas) or beta-blockers.
- Low levels may aggravate oxidative stress, diabetes, cancer, congestive heart failure, cardiac arrhythmias, gingivitis and neurologic diseases.
- Main food sources include meat, poultry, fish, soybean, canola oil, nuts and whole grains. Moderate sources include fruits, vegetables, eggs and dairy.

Glutathione



- Glutathione (GSH) is composed of cysteine, glutamine & glycine. GSH is a source of sulfate and plays a key role in antioxidant activity and detoxification of toxins.
- GSH requirement is increased with high-fat diets, cigarette smoke, cystinuria, chronic alcoholism, chronic acetaminophen use, infection, inflammation and toxic exposure.
- Deficiency may result in oxidative stress & damage, impaired detoxification, altered immunity, macular degeneration and increased risk of chronic illness.
- Food sources of GSH precursors include meats, poultry, fish, soy, corn, nuts, seeds, wheat germ, milk and cheese.

Plant-based Antioxidants



- Oxidative stress is the imbalance between the production of free radicals and the body's ability to readily detoxify these reactive species and/or repair the resulting damage with anti-oxidants.
- Oxidative stress can be endogenous (energy production and inflammation) or exogenous (exercise, exposure to environmental toxins).
- Oxidative stress has been implicated clinically in the development of neurodegenerative diseases, cardiovascular diseases and chronic fatigue syndrome.
- Antioxidants may be found in whole food sources (e.g., brightly colored fruits & vegetables, green tea, turmeric) as well as nutriceuticals (e.g., resveratrol, EGCG, lutein, lycopene, ginkgo, milk thistle, etc.).

Key

- Function
- Causes of Deficiency
- Complications of Deficiency
- Food Sources

This Innovative "Interpretation at a Glance":

- ***Highlights individualised nutritional recommendations***
  - *Anti-Oxidants*
  - *B-Vitamins*
  - *Minerals*
- ***Provides insight into disease risk and treatment options***
  - *Gastrointestinal Dysfunction*
  - *Detoxification & Methylation*
  - *Neurotransmitter Imbalance*
  - *Need for Probiotics*

For test kits, clinical support, or more information contact:

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More detailed publications with references are also available: www.GDXuk.net