

## ■ Metabolic profiles

### Urinary amino acids

---

#### Used to assess

More than 40 analytes are measured, providing valuable information on metabolic and nutritional imbalances. The following amino acids are tested: Essential Amino Acids Non-Essential Amino Acids Intermediary Metabolites and Diagnostic Markers Dietary Peptide Related Markers

#### Clinical Relevance

Urinary Amino Acid analysis should be considered whenever a thorough nutritional and metabolic assessment of an individual is required. In addition to family history, a variety of presenting conditions may indicate disordered amino acid metabolism including chronic fatigue, frequent headaches, chronic digestive dysfunction, intolerances to foods and chemicals, chronic inflammation, depression, learning disabilities, malnutrition, neurological disorders and symptoms of degenerative disease.

#### Specimen requirements

Two urine specimens are collected from the first morning void

#### Specimen collection method

Self-collection test kit

### Essential fatty acids (EFAs)

---

#### Used to assess

Blood levels of essential fatty acids.

#### Matrix Tested

- Plasma (3 days)
- Red Cells (120 days)
- Plasma Phospholipids (>120 days)

#### Clinical relevance

EFAs are required for growth, reproduction, skin and hair condition and wound healing. Eicosapentaenoic acid (EPA) and Docosahexaenoic Acid (DHA) also lower plasma triglyceride levels and play a structural role in the brain and retina. EFAs provide the substrate for eicosanoids (prostaglandins) which play a vital role in the regulation of inflammatory conditions.

#### Specimen requirements

A blood specimen is taken after an overnight fast

#### Specimen collection method

Healthscope Pathology collection centre

### Optimal nutrition evaluation (ONE)

---

#### Used to assess

Assess an individual's overall nutritional status and the functional need for vitamins and minerals. The test report provides clear, personalised recommendations for nutritional supplementation.

#### Clinical relevance

The Optimal Nutrition Evaluation measures:

- **Metabolic Analysis** - measuring 39 key organic acids to evaluate gastrointestinal function, cellular energy production, neurotransmitter processing and functional need for vitamins, minerals and cofactors.

- **Amino Acid Analysis** - measuring 38 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** - evaluates the body's oxidative stress status, the interrelationship with liver detoxification and antioxidant reserve.

### **Specimen requirements**

One urine specimen is required from the first morning void

### **Specimen collection method**

Self-collection test kit

## **Organic acids - metabolic analysis profile (MAP)**

---

### **Used to assess**

Measures 39 key organic acids to evaluate gastrointestinal function, cellular energy production, neurotransmitter processing and functional need for vitamins, minerals and cofactors.

### **Specimen requirements**

One urine specimen is required from the first morning void

### **Specimen collection method**

Self-collection test kit

## **Organic acids - cellular energy profile (CEP)**

---

### **Used to assess**

Measures 13 key organic acids to evaluate cellular energy production.

### **Specimen requirements**

One urine specimen is required from the first morning void

### **Specimen collection method**

Self-collection test kit

## **Osteoporosis risk assessment (NTx)**

---

### **Used to assess**

Measures the risk of osteoporosis by detecting the rate of bone resorption (breakdown) well before significant changes are obvious on bone mineral density scans.

### **Clinical relevance**

Research shows that elevated bone resorption is the primary cause of age-related bone loss and low bone mass is the major cause of osteoporosis. Once osteoporosis has been diagnosed, quantitative measures of the excretion of cross-linked N-telopeptide (NTx), type I bone collagen, provide an indicator of bone resorption. The NTx marker may also be used to monitor the efficacy of anti-resorptive therapies such as hormone replacement therapy (HRT) and/or calcium supplementation in postmenopausal women, individuals with osteoporosis and those with Paget's disease.

### **Specimen requirements**

Two urine specimens are required from the second morning void

### **Specimen collection method**

Self-collection test kit