Practitioner Mini Manual

The quick reference guide to Functional Pathology Testing
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Who is Australian Clinical Labs?

We combine scientific and technology leadership to provide high-quality laboratory services which enable practitioners to deliver the best treatment options for their patients. Our goal is to assist practitioners and patients to achieve and maintain optimal health.

What is Functional Pathology?

Functional pathology provides essential information to assist practitioners in the diagnosis, treatment and management of patients seeking a holistic approach to health. Functional Pathology testing is used to investigate functional, biochemical, nutritional, metabolic and hormonal status. The tests are designed to monitor the progress and efficiency of patient treatment.

Our functional kits are designed so that patients can collect specimens in the privacy of their own home.

When to use Functional Pathology?

- When diagnosing for patients presenting with chronic unresolved symptoms and/or conditions
- When establishing the cause of disease, illness or imbalance
- When establishing a baseline and monitoring the progress or efficacy of treatment
- When you wish to present patients with high quality results through accredited laboratory testing
Why choose Clinical Labs Functional Pathology?

Scientific Leadership
Our tests are performed by a team of highly qualified scientists and technicians using the latest technology at our NATA-accredited laboratory, delivering high quality results.

Convenience
Our tests are designed so that, wherever possible, patients can collect specimens in the privacy of their own homes. For tests that require a blood specimen, Functional Pathology patients have the convenience of blood collection at their nearest Australian Clinical Labs collection centre.

Superior Technical Support
Our expert support team is available during business hours to assist practitioners in selecting the best pathology test for the patient and are available for interpretation of results to ensure the practitioner provides the best treatment options to patients.

Practitioner Education
Our Practitioner Education Program includes a series of conferences, webinars, workshops, and individual and group training. These events provide invaluable opportunities for practitioners to ensure they remain current with clinical and scientific developments in the field of functional medicine.

Practitioner Resources

Industry Support
We support key functional medicine industry bodies, which assists our member associations to continue their support, representation, education and training for functional medicine practitioners.
How to access Functional Pathology?

As a practitioner, how do I start using and benefiting from Australian Clinical Labs Functional Pathology tests?

**Step 1**
Register online via clinicallabs.com.au (selecting ‘Functional Pathology’) and we will issue you with your request forms. These are personalised to include a practitioner’s individual clinic details, and provide a list of tests and costs.

**Step 2**
Give the patient a signed request form and direct them to order online at clinicallabs.com.au, or call our toll free number 1300 554 480 (within Australia) between the hours of 9.00 am and 5.00 pm (AEST) to order their kit.

**Step 3**
The patient is instructed to collect the specimen required and post it back to Australian Clinical Labs as per the instructions in the kit.

If the test requires a blood specimen, the patient should be referred to the nearest Clinical Labs collection centre for collection. Visit clinicallabs.com.au for a full list of collection centre locations.

**Step 4**
Specimens are analysed and the results sent to practitioners. Results are available to practitioners online through eResults and may be downloaded, or they can be sent by mail or fax.

**Step 5**
For more practitioner and patient information visit www.clinicallabs.com.au
How to order a kit through our online store

Visit ClinicalLabs.com.au/functional-pathology and click through to shop

**Step 1**
Find and add to cart tests on the referral form

**Step 2**
Proceed to checkout ensuring selected tests match referral form

**Step 3**
Provide patient, shipping, practitioner and payment details

**Step 4**
Patient will receive kit to complete and return kit to Clinical Labs

**Step 5**
Results are sent through to referring practitioner
Gastrointestinal Tract Tests
Gastrointestinal Tract Tests
Complete Digestive Stool Analysis (CDSA)

Used to Assess
Overview of the components of digestion, absorption, intestinal function and microbial flora, plus identification of pathogenic bacteria, parasites and yeasts.

Specimen Requirements
CDSA Levels 1–3 require one day stool collection. CDSA Levels 4 & 5 require stool collections on 3 consecutive days.

Test Kit
Self-collection stool test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

CDSA Levels 1-5: Complete Digestive Stool Analysis (CDSA) Levels

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NB: Please note all CDSAs include microscopy and macroscopy

Clinical Relevance
Poor digestive function and imbalanced gut flora may play a crucial role in the underlying cause of a number of health conditions. Symptoms such as constipation, diarrhoea, flatulence, bloating, abdominal discomfort, food sensitivities, headaches, fatigue and bad breath are all indicative of poor digestive function.

Companion Tests
- Intestinal Permeability (IP)
- Urinary Organic Acids
- Secretory IgA (slgA)
- Food Sensitivities
Gastrointestinal Tract Tests
Faecal Multiplex PCR

**Used to Assess**
Both viral and protozoal gastroenteritis within a single test with the ability to detect 13 enteric pathogens.

**Specimen Requirements**
One stool specimen is required.

**Test Kit**
Self-collection stool test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

**Clinical Relevance**
Gastroenteritis is a major cause of morbidity and mortality worldwide. Although the mortality in developed countries like Australia is much lower than in developing countries, the morbidity and economic consequences are still high.

Of the enteric pathogens, viruses are the most common cause of gastroenteritis and account for over 60% of cases, while enteric protozoa continue to be the most commonly encountered cause of parasitic diseases, affecting millions of people yearly.

Viruses included in the assay are rotavirus A and B, adenovirus 40 and 41, norovirus GI and GII, astrovirus and enterovirus. Protozoans included are Cryptosporidium, Giardia, Dientamoeba fragilis, Entamoeba histolytica and Blastocystis hominis.

**Companion Tests**
- Complete Digestive Stool Analysis (CDSA)
- Calprotectin
Gastrointestinal Tract Tests
3 Day Parasitology (3DP)

**Used to Assess**
Presence or absence of parasitic infection. Parasites commonly detected include blastocystis hominis and dientamoeba fragilis.

Parasites detected are not limited to this list. Any parasites detected will be indicated in the results that are sent to the practitioner.

**Specimen Requirements**
Collection of stool specimen on three consecutive days.

**Test Kit**
Self-collection stool test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

**Clinical Relevance**
Parasitic infection is commonly associated with a number of gastrointestinal and systemic symptoms, including acute watery diarrhoea, nausea, vomiting, abdominal pain/cramps, weight loss and fatigue.

Chronic parasitic infection can also result in a number of indirect symptoms that may not be commonly connected with infection.

These symptoms can include malabsorption, iron deficiency, and inflammatory conditions such as food sensitivities and reactive inflammatory arthritis in patients with ankylosing spondylitis.

**Companion Tests**
- Complete Digestive Stool Analysis (CDSA)
- Intestinal Permeability (IP)
- Secretory IgA (SLgA)
Gastrointestinal Tract Tests
Helicobacter pylori Stool Antigen (HpSA)

**Used to Assess**
The primary feature of Helicobacter pylori infection is progressive degeneration to gastric structure and function, with clinical manifestations appearing in adulthood.

**Specimen Requirements**
One stool specimen is required.

**Test Kit**
Self-collection stool test kit. 
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

**Clinical Relevance**
Signs and symptoms can include:
- Generalized epigastric distress
- Dyspepsia and reflux
- Feeling of fullness and nausea
- Chronic bloating and burping
- Gastritis and/or gnawing or burning pain in stomach or duodenum
- Gastric or duodenal ulcer infection is associated with hypochlorhydria, which can lead to malabsorption of iron and B12 and a potential increase in the risk of gastric cancer

**Companion Tests**
- Complete Digestive Stool Analysis (CDSA)
- Intestinal Permeability (IP)
Gastrointestinal Tract Tests
Genova DetoxiGenomic Profile

Used to Assess
Phase I and II liver detoxification. It identifies polymorphisms that may be inhibiting the function of cytochrome P-450 enzymes in phase I and gives a breakdown of ways to help improve function.

This test investigates phase II methylation, acetylation, glutathione conjugation and oxidative protection and assesses the patient’s genetic predisposition to conjugate and eliminate toxins.

Specimen Requirements
One buccal swab is required.

Test Kit
Self-collection swab kit and self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
May provide valuable information for the management of patients who suffer from food allergies, multiple chemical sensitivities, dermatological conditions, chronic fatigue syndrome, ‘leaky gut’ and hormonal imbalance.

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Baseline Hormone Profile
- Comprehensive Urine Elements Profile (CUEP)
- Intestinal Permeability (IP)
- Toxic Elements
Gastrointestinal Tract Tests
Intestinal Permeability (IP)

Used to Assess
The small intestine is a digestive/absorptive organ as well as a barrier for toxic compounds and macromolecules. Abnormalities of mechanical barriers and immune function can lead to increased uptake of inflammatory luminal macromolecules and pathogenic bacteria. With intestinal injury, mucosal absorption of normally-excluded substances increases dramatically.

Specimen Requirements
One urine specimen taken from a six hour collection.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
A decrease in permeability appears to have a strong correlation with malabsorption and malnutrition. An increase in permeability of the intestinal mucosal barrier appears to be connected with a number of clinical disorders, such as:

- Inflammatory bowel disease
- Inflammatory joint disease
- Food allergy/intolerance
- Coeliac disease
- Ankylosing spondylitis
- Reiter’s syndrome
- Chronic dermatological conditions

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Secretory IgA (slgA)
Gastrointestinal Tract Tests
Secretory IgA (sIgA)

Used to Assess
Secretory IgA levels in saliva are thought to be representative of the functional status of the entire mucosal immune system.

Specimen Requirements
One saliva specimen required.

Test Kit
Self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Stress has a major impact on the output of secretory IgA and maintaining a high daily production is essential for an adaptive immune response. It is thought that secretory IgA may provide a link between gut-related health conditions and systemic illness, and is usually associated with altered intestinal permeability.

Investigation of salivary sIgA is recommended in cases of food sensitivity, allergy, atopic conditions such as asthma and eczema, inflammatory bowel disease, irritable bowel syndrome and chronic infection.

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Intestinal Permeability (IP)
- Food Sensitivities
- Adrenal Hormone Profile
Gastrointestinal Tract Tests
Faecal Calprotectin (FP)

**Used to Assess**
Discriminating between inflammatory bowel disease (IBD) and irritable bowel syndrome (IBS).

**Specimen Requirements**
One stool specimen is required.

**Test Kit**
Self-collection stool test kit.
Speak to an expert on **1300 554 480**.
Order online at [clinicallabs.com.au](http://clinicallabs.com.au)

**Clinical Relevance**
Calprotectin is a neutrophilic marker that is specific to gastrointestinal tract inflammation. Levels of this inflammatory marker increase with digestive infection, NSAID enteropathy and IBD.

Fecal calprotectin can be used to differentiate between IBD and IBS. It can also be used to monitor progression and treatment of IBD, and to determine if a patient should be referred for an endoscopy/colonoscopy.

**Companion Tests**
- Complete Digestive Stool Analysis (CDSA)
Gastrointestinal Tract Tests
Genova GI Effects Comprehensive Profile

Used to Assess
Assessing the three critical areas of gut health: digestive function, gut inflammation, and the gut microbiome.

Specimen Requirements
One stool specimen is required.

Test Kit
Self-collection stool test kit. Speak to an expert on 1300 554 480. Order online at clinicallabs.com.au

Clinical Relevance
Any bacteria which are identified in this test are tested against a panel of prescription and natural anti-microbial and anti-fungal agents to assist with determining the most appropriate treatment. Patients who may benefit from the evaluation of this stool profile include those suffering from:

• Irritable bowel syndrome (IBS)
• Inflammation
• Inflammatory bowel disease (IBD)
• Metabolic disorders
• Body weight and fat distribution
• Insulin sensitivity / type 2 diabetes
• Other acute and chronic disorders
• Conditions associated with ‘leaky gut’ or impaired intestinal barrier function

Companion Tests
• Complete Digestive Stool Analysis (CDSA)
• Intestinal Permeability (IP)
• Food Sensitivities
• Adrenal Hormone Profile
Genetic Diagnostic Testing
MTHFR Gene Test

Used to Assess
Methylenetetrahydrofolate reductase (MTHFR), is essential in the conversion of homocysteine to methionine via methylation. A polymorphism of the gene may result in defective metabolism of folate and subsequent hyperhomocysteinaemia.

Specimen Requirements
A blood sample or buccal swab is required.

Test Kit
Self-collection buccal swab kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
High blood levels of homocysteine are recognised as a risk factor for:

- Obesity and type 2 diabetes
- Coronary artery disease
- Venous thrombosis and stroke

MTHFR gene polymorphisms may be associated with:

- Migraine
- Neural tube defects
- Stillbirth
- Spontaneous/recurrent miscarriage
- Depression
- Autism spectrum disorders

Companion Tests
- 2 & 16 Urinary Oestrogen Metabolites
- Red Cell Folate
- Homocysteine
- Baseline Hormone Profile
- Active Vitamin B12
Genetic Diagnostic Testing
MyDNA

**Used to Assess**
Identifies gene variants in four major enzyme systems in phase I detoxification that metabolise commonly prescribed medications.

**Specimen Requirements**
A blood or swab specimen is required, which can be collected at any time of day.

**Test Kit**
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Speak to an expert on 1300 554 480.

**Clinical Relevance**
MyDNA identifies how your patient’s individual genetic structure determines their response to a medication, so the practitioner can prescribe the most suitable medicine and dosage. This test helps to clarify and break down the patient’s genetic capacity to metabolise via CYP450 enzymes.
Genetic Diagnostic Testing
Coeliac Gene Test (HLA DQ2, DQ8)

Used to Assess
A useful test in select cases when the diagnosis of coeliac disease is unclear. This can occur if the blood or small bowel biopsy results are inconclusive, or if adequate gluten was not being consumed to make the test reliable.

Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Speak to an expert on 1300 554 480.

Clinical Relevance
Over 99% of people affected by coeliac disease have the HLA DQ2 or HLA DQ8 gene. Therefore, a negative test for these genes effectively rules out coeliac disease. However, it is not diagnostic of coeliac disease as only a subset of individuals with these polymorphisms will develop coeliac disease.

Companion Tests
- Food Sensitivities
Hormone Profiles - Male and Female
Hormone Profiles
Adrenal Hormone Profile

Used to Assess
Monitors the levels of the stress hormones, cortisol and DHEA-S, over the course of a day.

Specimen Requirements
Four saliva specimens are collected over the course of a day at the following times:
- Between 6.00 am and 8.00 am
- 12.00 pm (midday)
- 6.00 pm
- 10.00 pm

Test Kit
Self-collection saliva test kit.

Clinical Relevance
Altered levels of cortisol and DHEA-S are indicative of acute and/or chronic mental and/or physical stress. Prolonged stress causes increased secretion of Cortisol and can eventually lead to hypertrophy of the adrenal cortex, adrenal exhaustion and immune suppression.

Reduced levels of DHEA-S may result in fatigue, poor immune function, weight gain, increased ageing, memory loss and poor concentration. Increased levels can indicate adrenal overload.

Companion Tests
- Baseline Hormone Profile
- Secretory IgA (sIgA)
- Female Hormone Profile
- Intestinal Permeability (IP)
- Melatonin Hormone Profile
Hormone Profiles
Baseline Hormone Profile – Male and Female

Used to Assess
Individual status of the following hormones:
Male:
- Oestrone (E1)
- Oestradiol (E2)
- Testosterone
- DHEA-S
- Cortisol

Female:
- Oestrone (E1)
- Oestradiol (E2)
- Oestriol (E3)
- Progesterone
- Testosterone
- DHEA-S

Specimen Requirements
One saliva specimen, from which multiple hormones are tested. The specimen is collected on day 21 for menstruating women, and any day for post-menopausal women and for men.

Test Kit
Self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Provides valuable information on an individual’s hormonal status and the potential impact this may have on physical and emotional health.

Hormonal imbalance may result in weight gain, mood swings, night sweats, disturbed sleep patterns, loss of libido and hot flushes.

Companion Tests
- 2 & 16 Urinary Oestrogen Metabolites
- Adrenal Hormone Profile
Hormone Profiles
Baseline plus Adrenal Hormone Profile – Male and Female

Used to Assess
A combined test designed to measure an individual’s hormonal status as well as their adrenal function and the potential impact this may have on physical and emotional health.

Male:
- Oestrone (E1)
- Oestradiol (E2)
- Testosterone
- DHEA-S
- Cortisol

Female:
- Oestrone (E1)
- Oestradiol (E2)
- Oestriol (E3)
- Progesterone
- Testosterone
- Cortisol
- DHEA-S

Test Kit
Self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Specimen Requirements
Four saliva specimens are collected over the course of a day. The specimen is collected on day 21 for menstruating women, and any day for post-menopausal women and for men.

Clinical Relevance
Hormonal imbalance may result in a symptom picture which includes weight gain, mood swings, night sweats, disturbed sleep pattern, loss of libido, and hot flushes. Where patients also present with symptoms such as anxiety, depression, headaches, low energy, stress and poor immune function, it is important to also assess adrenal function. Altered levels of cortisol and DHEA-S are indicative of acute and/or chronic mental and/or physical stress.

Companion Tests
- Melatonin Hormone Profile
- 2 & 16 Urinary Oestrogen Metabolites
- Intestinal Permeability (IP)
Hormone Profiles
Female Hormone Profile – Full Cycle/Luteal Phase

Used to Assess
Changes in hormonal status over the course of part of the menstrual cycle by measuring the sex hormones on specified days of the month.

Specimen Requirements
Three or five saliva specimens are collected on specified days of the month.

Luteal phase
Collection on days 14, 21 and 28 of cycle.

Full Cycle
Collection on days 7, 14, 21, 25 and 30 of cycle.

Test Kit
Self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Recommended for pre-menopausal and peri-menopausal women presenting with infertility, dysmenorrhoea, endometriosis, PCOS, oestrogen dominance, menorrhagia, weight gain, amenorrhoea/irregular periods, PMS, fibroids and history of miscarriage.

Companion Tests
- 2 & 16 Urinary Oestrogen Metabolites
- Adrenal Hormone Profile
Hormone Profiles
Melatonin Hormone Profile

Used to Assess
The levels of melatonin in the body are measured at midnight and 6.00 am.

Clinical Relevance
The levels of melatonin in the body tend to decrease with age. Low levels may result in sleep disturbances such as sleep onset insomnia and sleep maintenance insomnia. Low melatonin can also contribute to the development of poor immune function, depression and other mood disorders.

Specimen Requirements
Two specimens of saliva are collected at timed intervals.

Test Kit
Self-collection saliva test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Melatonin levels are sensitive to light stimulation. Exposure to bright lights or electromagnetic fields, and regular long-haul flights or night work-shifts, can all affect melatonin levels.

Melatonin levels can also be altered by excessive exercise at night and by some prescription medications.

Companion Tests
- Adrenal Hormone Profile
- Baseline Hormone Profile
Hormone Profiles
2 & 16 Urinary Oestrogen Metabolites

Used to Assess
Monitors the metabolism of two oestrogens: 2-hydroxyoestrone and 16α-hydroxyoestrone.

Specimen Requirements
A urine specimen is collected from the first morning void.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
High levels of circulating oestrogens are proliferative and potentially dangerous, so it is important to ensure that they are broken down efficiently and removed from the body effectively. Oestrogens are metabolised in two ways: the first pathway (2-hydroxyoestrone) is protective, while the second pathway (16α-hydroxyoestrone) is more potent. The ideal ratio of the 2:16 pathways is between 2.0 and 2.8.

A low ratio (reduced 2-hydroxyoestrone production) indicates a state of oestrogen excess which may be a contributing factor to oestrogen-dependant cancers, such as those of the breast, head/neck and the prostate.

Companion Tests
- Osteoporosis Risk Assessment
- Baseline Hormone Profile
- Adrenal Hormone Profile
Hormone Profiles
Thyroid Hormone Profile

Used to Assess
The levels of the unbound free thyroid hormones TSH, fT4 and fT3, that are available to the tissues, reflecting a true measure of the body’s metabolic rate.

Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample.
Visit clinicallabs.com.au for locations.
Speak to an expert on 1300 554 480.

Clinical Relevance
Thyroid function decreases with age and an underactive thyroid is most common in menopausal and post-menopausal women. Symptoms of underactive thyroid include dry and coarse skin, weakness and lethargy, constipation, weight gain, slow pulse, heavy and irregular periods, and depression. Symptoms of overactive thyroid or hyperthyroidism include fast metabolic rate, rapid heart beat, nervousness and palpitations, weight loss despite increased appetite, and frequent bowel movements.

Companion Tests
- Reverse T3
- Adrenal Hormone Profile
- Baseline Hormone Profile / Female Hormone Profile
- Urinary Iodine
Hormone Profiles
Reverse T3

Used to Assess
Reverse T3 (rT3) is an inactive form of T3 that is produced in the body, particularly during periods of stress.

Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Under normal conditions, T4 converts to both T3 and rT3 continually and the body eliminates rT3 quickly. Under certain conditions, more rT3 is produced and the desirable conversion of T4 to T3 decreases. This occurs during fasting, starvation, illness such as liver disease, and during times of increased stress.

An increased production of rT3 is often seen in patients with disorders such as fibromyalgia, chronic fatigue syndrome, Wilson’s thyroid syndrome and stress. Measurement of rT3 is also valuable in identifying sick euthyroid syndrome where active T3 is within normal range and rT3 is elevated.

Companion Tests
- Thyroid Hormone Profile
- Adrenal Hormone Profile
Hormone Profiles
Thyroid Antibodies

Used to Assess
The two thyroid antibodies thyroglobulin and thyroid peroxidase.

Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
The presence of auto-antibodies against thyroglobulin indicates possible inflammation of the thyroid gland (Hashimoto’s thyroiditis). High levels are found in Hashimoto’s thyroiditis (85%), thyroid carcinoma (45%) and Grave’s disease (30%). Low levels are found in 10% of normal patients, many autoimmune conditions (including pernicious anaemia and SLE), and some chromosomal disorders (such as Turner’s syndrome and Down’s syndrome). The presence of thyroid peroxidase antibodies is also indicative for autoimmune thyroid disorders. They may be positive in Hashimoto’s thyroiditis, idiopathic myxoedema and Grave’s disease. Non-immune thyroid disorders show no greater incidence than normal.

Companion Tests
- Thyroid Hormone Profile
- Adrenal Hormone Profile
- Reverse T3
## Hormone Profiles
### Additional Tests

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Metabolic Profiles
Metabolic Profiles
Essential Fatty Acids (EFAs)

Used to Assess
Blood levels of essential fatty acids.

Clinical Relevance
EFAs are required for growth, reproduction, skin and hair condition, and wound healing. Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are also known to 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.

The matrix tested is:

- Plasma
  Assessment of the last 3 days
- Red cells
  Assessment of the last 120 days

Specimen Requirements
A blood specimen is taken after an overnight fast.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample.
Visit clinicalabs.com.au for locations.
Speak to an expert on 1300 554 480.

Companion Tests
- Baseline Hormone Profile / Female Hormone Profile
- Intestinal Permeability (IP)
Metabolic Profiles
Urinary Iodine (UI)

Used to Assess
An accurate approximation of dietary iodine intake. Urinary iodine measurements provide a biological indicator of iodine deficiency disorders.

Specimen Requirements
One urine specimen is required from the first morning void.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Iodine’s main action is involved in thyroid function. Due to the numerous actions carried out by the thyroid gland, the implications of iodine deficiency are vast. Iodine is an essential constituent of the thyroid hormones which are essential for growth and development (particularly during pregnancy, early infancy and childhood), as well as control of metabolic processes in the body.

Companion Tests
- Thyroid Hormone Profile
- Adrenal Hormone Profile
- Baseline Hormone Profile
Metabolic Profiles
Osteoporosis Risk Assessment (NTx)

Used to Assess
A urine test which measures the risk of osteoporosis by detecting the rate of bone resorption (breakdown) well before significant changes are obvious on bone mineral density scans.

Specimen Requirements
Two urine specimens from the second morning void are required.

Test Kit
Self-collection urine test kit. Speak to an expert on 1300 554 480. Order online at clinicallabs.com.au

Clinical Relevance
Research indicates 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 1 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.

Companion Tests
- Baseline Hormone Profile / Female Hormone Profile
- 2 & 16 Urinary Oestrogen Metabolites
- Adrenal Hormone Profile
Metabolic Profiles
Urinary Pyrroles

Used to Assess
The presence of pyrroles in the urine.

Specimen Requirements
A urine specimen is required from the second morning void.

Test Kit
Urine sample test kit, available at specialised Australian Clinical Labs collection centre’s.
Visit clinicallabs.com.au for locations.
Speak to an expert on 1300 554 480.

Clinical Relevance
Kryptopyrrole is a metabolite and a waste product of haemoglobin. Pyroluria is the condition where increased kryptopyrroles are produced but not excreted efficiently in the urine. Kryptopyrroles bind to pyridoxine (vitamin B6) and zinc, making them unavailable for use in their important roles as co-factors in enzyme function and metabolism. The essential nutrients that are bound to the kryptopyrroles are removed from the bloodstream and excreted in the urine.

The measurement of urinary kryptopyrroles may be indicated for patients with conditions associated with B6 and zinc deficiency, such as behavioural and emotional disorders (including ADHD, anxiety, depression, schizophrenia and bipolar disorder).

Companion Tests
- Vitamin B6
- Red Cell Zinc
Nutritional Profiles
Nutritional Profiles
Vitamins, Minerals and Antioxidants

Used to Assess
A number of trace elements, vitamins, minerals and antioxidants, providing valuable information on the body’s nutritional and biochemical status. A combination of any or all of the following nutrients can be tested:

- Minerals - copper, magnesium, manganese, selenium, zinc
- Vitamins - B1, B6, B12, D and folate
- Coenzyme Q10

Specimen Requirements
A blood specimen is required, which can be taken at any time of the day. Overnight fasting may be required for some nutrients.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
An invaluable screening tool in both everyday and preventive health care.

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Intestinal Permeability (IP)
- Urinary Organic Acids
Nutritional Profiles
Active B12

Used to Assess
Active B12 (halotranscobalamin) is the biologically active fraction of Vitamin B12.

Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Early detection of vitamin B12 deficiency is crucial due to the latent nature of this disorder and the possible risks of irreversible neurological damage.

Companion Tests
- MTHFR Gene Test
- Folate
Nutritional Profiles
Homocysteine

Used to Assess
The level of homocysteine in the plasma is increasingly being recognised as a risk factor for disease.

Specimen Requirements
A fasting blood specimen is required, which can be collected at any time of day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Homocysteine is an amino acid that is present in the blood stream and occurs in the body as an intermediate in the metabolism of methionine and cysteine. Studies have shown that too much homocysteine in the blood is related to a higher risk of coronary heart disease, stroke or peripheral vascular disease.

Companion Tests
- Active B12
- MTHFR Gene Test
- Folate
Nutritional Profiles
Genova Optimal Nutrition Evaluation (ONE) Profile

Used to Assess
A combination of nutritional tests that provides an analysis of key nutritional biomarkers, assessing the functional needs and deficiencies for antioxidants, B-vitamins, minerals, digestive support, and amino acids.

Specimen Requirements
One urine specimen is required.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Imbalanced or insufficient nutrients can provide a wide range of negative effects on the body and on an individual’s quality of life.

Nutritional deficiencies may be a causative factor in complex chronic conditions. Patients who would benefit from this test would clinically indicate:

- Mood disorders
- Fatigue
- Digestive complaints
- Weight issues / dietary guidance
- General health and sports fitness optimisation
Nutritional Profiles
Genova Organix Comprehensive Profile

Used to Assess
Identify accumulations of specific organic acids which may signal a metabolic inhibition or block.

Specimen Requirements
One urine specimen is required.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
This test is valuable for determining:
• Functional vitamin and mineral status
• Amino acid insufficiencies such as carnitine and NAC
• Oxidative damage and antioxidant need
• Phase I and phase II detoxification capacity
• Functional B-complex vitamin need
• Neurotransmitter metabolites
• Mitochondrial energy production
• Methylation sufficiency
• Lipoic acid and CoQ10 status
• Markers for bacteria and yeast overgrowth
## Nutritional Profiles

### Additional Tests

#### Trace Elements
- Red Cell Copper
- Red Cell Magnesium
- Red Cell Manganese
- Red Cell Selenium
- Red Cell Zinc
- Serum Magnesium
- Serum Copper
- Serum Selenium
- Serum Zinc
- Whole Blood Manganese
- Whole Blood Selenium

#### Vitamins and Antioxidants
- Active B12
- Calcium
- Co-Enzyme Q10
- Folate
- Phosphate
- Vitamin B1
- Vitamin B6
- Vitamin B12
- Vitamin D
Food Sensitivity Profiles
Food Sensitivity Profiles
IgG 5, 40 and 93 Food Panels

Used to Assess
Individuals with adverse reactions to foods.

Specimen Requirements
A blood specimen is required, which can be taken at any time of the day.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Food sensitivities may be a source of considerable discomfort in many chronic conditions and diseases. The symptoms are varied and individuals can react in different ways. Common conditions where food sensitivity may play a significant role include bloating and fluid retention, inflammatory bowel disease, irritable bowel syndrome, migraine, depression and mood swings, asthma, dermatological conditions, and behavioural problems in children.

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Secretory IgA (sIgA)
- Intestinal Permeability (IP)
## Food Sensitivity Profiles
### IgG 93 Food Sensitivity Panel

<table>
<thead>
<tr>
<th>Dairy &amp; Eggs</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow’s milk</td>
<td>Egg white</td>
<td>Egg yolk</td>
<td>Goat’s milk</td>
<td>Sheep’s milk</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fish</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cod</td>
<td>Herring</td>
<td>Mussel</td>
<td>Prawn</td>
<td>Sole</td>
<td>Tuna</td>
</tr>
<tr>
<td>Crab</td>
<td>Mackerel</td>
<td>Plaice</td>
<td>Salmon</td>
<td>Trout</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruits &amp; Vegetables</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>Grapefruit</td>
<td>Pear</td>
<td>Avocado</td>
<td>Celery</td>
<td>Onion</td>
</tr>
<tr>
<td>Apple</td>
<td>Kiwi fruit</td>
<td>Pineapple</td>
<td>Beetroot</td>
<td>Chicory</td>
<td>Peppers</td>
</tr>
<tr>
<td>Apricot</td>
<td>Lemon</td>
<td>Plum</td>
<td>Broccoli</td>
<td>Cucumber</td>
<td>Potato</td>
</tr>
<tr>
<td>Banana</td>
<td>Melon</td>
<td>Strawberry</td>
<td>Cabbage</td>
<td>Leek</td>
<td></td>
</tr>
<tr>
<td>Blackcurrant</td>
<td>Orange</td>
<td>Olive</td>
<td>Carrot</td>
<td>Lettuce</td>
<td></td>
</tr>
<tr>
<td>Grape</td>
<td>Peach</td>
<td>Aubergine</td>
<td>Cauliflower</td>
<td>Mushroom</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grains</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley</td>
<td>Corn</td>
<td>Millet</td>
<td>Rice</td>
<td>Wheat</td>
<td></td>
</tr>
<tr>
<td>Buckwheat</td>
<td>Durum wheat</td>
<td>Oat</td>
<td>Rye</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herbs, Spices &amp; Other</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilli</td>
<td>Garlic</td>
<td>Nutmeg</td>
<td>Tea</td>
<td>Yeast (brewer’s &amp; baker’s)</td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td>Ginger</td>
<td>Mint</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meats &amp; Poultry</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>Chicken</td>
<td>Lamb</td>
<td>Pork</td>
<td>Turkey</td>
<td>Venison</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nuts, Seeds &amp; Legumes</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashew nut</td>
<td>Sunflower seed</td>
<td>Almond</td>
<td>Cocoa bean</td>
<td>Haricot bean</td>
<td>Soy bean</td>
</tr>
<tr>
<td>Coconut</td>
<td>Brazil nut</td>
<td>Coffee</td>
<td>Kidney bean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazelnut</td>
<td>Vanilla bean</td>
<td>Cola nut</td>
<td>Lentil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peanut</td>
<td>Sesame seed</td>
<td>Carob</td>
<td>Rapeseed</td>
<td>Pea</td>
<td></td>
</tr>
</tbody>
</table>
### Food Sensitivity Profiles

#### IgG 40 Food Sensitivity Panel

<table>
<thead>
<tr>
<th>Fruit &amp; Vegetables</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple &amp; pear</td>
<td>Citrus mixture (lemon, orange, grapefruit)</td>
</tr>
<tr>
<td>Carrot</td>
<td>Berries mixture (raspberry, strawberry, blackberry)</td>
</tr>
<tr>
<td>Potato</td>
<td>Mustard mixture (cabbage, broccoli, cauliflower)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>Oat</td>
</tr>
<tr>
<td>Rice</td>
<td>Rye</td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dairy &amp; Eggs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow’s milk</td>
<td>Egg white</td>
</tr>
<tr>
<td>Egg yolk</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meats &amp; Poultry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>Turkey</td>
</tr>
<tr>
<td>Pork</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fish</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White fish mix (cod, haddock, plaice)</td>
<td>Shellfish mix (crab, lobster, prawn)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nuts, Seeds &amp; Legumes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Legume bean mixture</td>
<td>Nut mixture</td>
</tr>
<tr>
<td>(harricot, kidney, soya, pea)</td>
<td>(almond, cashew, hazelnut, peanut)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast (brewer’s &amp; baker’s)</td>
<td></td>
</tr>
</tbody>
</table>

### IgG 5 Food Sensitivity Panel

<table>
<thead>
<tr>
<th>Grains</th>
<th>Dairy &amp; Eggs</th>
<th>Fish</th>
<th>Other</th>
<th>Nuts &amp; Seeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>Cow’s milk</td>
<td>White fish mixture (cod, haddock, plaice)</td>
<td>Soya protein</td>
<td>Nut mixture (almond, cashew, hazelnut, peanut)</td>
</tr>
</tbody>
</table>
RAST Profiles
# RAST Profiles

## IgE

### Used to Assess
RAST Profiles measure the amount of IgE to a specific set of food allergens.

### Specimen Requirements
A blood specimen is required, which can be collected at any time of day.

### Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample.  
Speak to an expert on **1300 554 480**.

### Clinical Relevance
Indication of the presence of a suspected allergy, available in the following panels:
- Staple food mix
- Seafood mix
- Cereal mix
- Nut mix

### Staple Food Mix
- Egg white
- Milk
- Fish
- Wheat
- Peanut
- Soybean

### Seafood Mix
- Cod
- Prawn
- Blue mussel
- Tuna
- Salmon

### Cereal mix
- Wheat
- Oat
- Corn
- Sesame
- Seed
- Buckwheat

### Nut Mix
- Peanut
- Hazelnut
- Brazil
- Almond
- Coconut

### Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Intestinal Permeability (IP)
Environmental Toxins
Environmental Toxins
Genova Toxic Effects CORE SM Profile

Used to Assess
Narrows down the areas of toxic burden that could be related to chronic, intractable symptoms in patients.

Specimen Requirements
One urine sample and one whole blood sample are required.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
This test assesses the lifelong chemicals patients are exposed to through food, air and the environment. This accumulation can lead to chronic health conditions such as autoimmune and neurodegenerative diseases, as well as cancer and diabetes.
Environmental Toxins
Genova Pthalates and Parabens Profile

Used to Assess
Identifies exposure to toxins from the use of items such as personal care products and plastic food containers.

Specimen Requirements
One urine specimen is required.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Pthalates and parabens are often classified as xenoestrogens, foreign compounds in the body functioning as endocrine disruptors by binding specifically to oestrogen receptors.

Endocrine disruptors are usually associated with diseases such as:

<table>
<thead>
<tr>
<th>Endometriosis</th>
<th>Prostate cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infertility</td>
<td>Testicular cancer</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>Decreased sperm count</td>
</tr>
<tr>
<td>Ovarian cancer</td>
<td></td>
</tr>
</tbody>
</table>

Other health problems associated with daily exposures are:

<table>
<thead>
<tr>
<th>Liver toxicity</th>
<th>Reproductive toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immune effects such as allergies and asthma</td>
<td>Pubertal development</td>
</tr>
</tbody>
</table>

Pthalates and parabens are primarily found in:

<table>
<thead>
<tr>
<th>Children's toys</th>
<th>Furniture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetics</td>
<td>Vinyl flooring</td>
</tr>
<tr>
<td>Cleaning products</td>
<td>Plastic food containers</td>
</tr>
<tr>
<td>Air fresheners</td>
<td>Medical products</td>
</tr>
<tr>
<td>Perfumes</td>
<td></td>
</tr>
</tbody>
</table>
Environmental Toxins
Genova Chlorinated Pesticides Profile

Used to Assess
Helps identify when a patient has been exposed to certain pesticides and insecticides, and how high a body burden of chlorinated pesticides the patient is carrying.

Specimen Requirements
One blood specimen is required.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
The primary toxic effect of chlorinated pesticides is at the site of nervous tissue and muscle membranes. These poisons are absorbed across the gut and interfere with nerve impulse transmissions. In humans, this interference normally shows up as chronic neurological problems, including mood disorders, and difficulties with learning and memory. These poisons have also been shown to cause fatigue, obesity, diabetes, some cancers, immune dysregulation, allergies, heart disease, and many other problems.
Environmental Toxins
Genova PCBs Profile

Used to Assess
Identifies which of the most toxic PCBs a patient has been exposed to, and the body burden of the patient.

Specimen Requirements
One blood specimen is required.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Since PCBs are not water-soluble, they are not excreted from the body and build up over a person’s lifetime, increasing the body burden. A PCB burden affects children more than adults. PCBs are most often passed to children through breastfeeding and trans-placental transfer. PCB exposure in children can impede neurobehavioural and immune system development. These impediments may cause delayed neurobehavioral development in motor skills and short term memory, and lower scores on intelligence, psychomotor, and behavioral tests. A lowered immune system can create many problems in children, including allergies, sensitivities and chronic infections.
Environmental Toxins
Genova Volatile Solvents Profile

Used to Assess
Identifies a patient’s prolonged exposure to most commonly found volatile solvents that have been shown to cause serious health problems.

Specimen Requirements
One blood specimen is required.

Test Kit
Patients will be required to visit their nearest Australian Clinical Labs collection centre to draw the sample. Visit clinicallabs.com.au for locations. Speak to an expert on 1300 554 480.

Clinical Relevance
Overexposure or chronic exposure to volatile solvents damages the central nervous system and causes chemical-driven liver and kidney damage. Benzene, in particular, has a severe toxic effect on the haematological system and is a recognized human carcinogen. Other solvents contribute to atrophy of skeletal muscles, loss of coordination, vision problems, and depression of the central nervous system.
Environmental Toxins
Genova Organophosphates Profile

Used to Assess
Identifies a patient’s prolonged exposure to organophosphate pesticides; uncovers exposure to these pesticides, insecticides, and herbicides to determine if avoidance and detoxification are needed for optimal health.

Specimen Requirements
One urine specimen is required.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Organophosphates from pesticides can be hazardous to the neurological development of children and foetuses in the womb, producing lower IQs. Other adverse health effects caused by pesticides include chronic fatigue, asthma, wheezing, immune system disorders, impaired memory, disorientation, depression, irritability and flu-like symptoms; they may also increase risk of cancer and Alzheimer’s disease. Most exposure to organophosphates occurs from ingestion via food. Direct dermal exposure can also occur for people that work directly with these chemicals.
Environmental Toxins
Genova Bisphenol A (BPA) Profile

Used to Assess
Identifies exposure to the common disruptors BPA, triclosan, and 4-nonylphenol.

Specimen Requirements
One urine specimen is required.

Test Kit
Self-collection urine test kit.
Speak to an expert on 1300 554 480.
Order online at clinicallabs.com.au

Clinical Relevance
Endocrine disruptors bind weakly to estrogen receptors, which can affect the endocrine, nervous, and immune systems as well as block thyroid hormone action. Exposure to chemicals that are xenoestrogens disrupt the proper function of the body’s endocrine system. Children and foetuses in the womb are most susceptible to hormonal and neurological development issues after exposure.
Environmental Toxins
Comprehensive Urine Elements Profile (CUEP)

Used to Assess
Assesses the urinary excretion of 15 nutrient elements and 20 toxic metals, acquired through either chronic or acute exposure. This is an ideal test for patients suspected of toxic metal exposure as well as potential nutrient deficiency. The toxic elements measured are aluminium, antimony, arsenic, barium, bismuth, cadmium, caesium, gadolinium, lead, mercury, nickel, niobium, platinum, rubidium, thallium, thorium, tin, tungsten and uranium.

The nutrient elements measured are calcium, chromium, cobalt, copper, iron, lithium, magnesium, manganese, molybdenum, potassium, selenium, strontium, sulphur, vanadium and zinc.

Specimen Requirements
Two urine specimens are required from the first morning void.

Test Kit
Self-collection urine test kit. Speak to an expert on 1300 554 480. Order online at clinicallabs.com.au

Clinical Relevance
Accumulation of toxic elements can occur in the body in response to occupational and environmental exposure, and from toxic release in air, soil and industrial waste. Evidence suggests that toxic element exposure can adversely affect respiratory, renal, hepatic and immune function; and compromise cognitive and neurological health. In addition to the classic elemental toxins, this profile also measures newer technology toxins used in commercial, industrial, and medical science (such as gadolinium, which is used in manufacturing for computer memory, compact discs and medical imaging).

Companion Tests
- Complete Digestive Stool Analysis (CDSA)
- Organix Comprehensive Profile
- Intestinal Permeability (IP)
# General Profiles & Additional Tests

## General Profiles

### Cardiovascular (CD)
- Full Cardiovascular Profile
- C-Reactive Protein - Highly Sensitive
- Fibrinogen
- Homocysteine

### General Profile (AGP)
- Full General Profile
- CRP
- Full Blood Examination / ESR
- Glucose
- HFPAGP
- Iron Studies
- Lipid Studies HDL/LDL
- Liver Function Test
- Urea, Electrolytes & Creatine

### Glucose Tolerance
- Fasting Glucose, 1hr & 2hr samples
- Fasting Insulin

### Methylation Profile
- Full Methylation Profile
- Homocysteine
# General Profiles & Additional Tests

## Additional Tests

<table>
<thead>
<tr>
<th>Coeliac Profile</th>
<th>Other Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coeliac Gene Test (HLA DQ2, DQ8)</td>
<td>Haemochromatosis Test (C2827, H63)</td>
</tr>
<tr>
<td>Endomysial Antibodies</td>
<td>Whole Blood Histamine</td>
</tr>
<tr>
<td>Gliadin Antibodies</td>
<td></td>
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<tr>
<td>IgA</td>
<td></td>
</tr>
<tr>
<td>Respiratory Virus PCR</td>
<td></td>
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<tr>
<td>Tissue Transglutaminase</td>
<td></td>
</tr>
<tr>
<td>Urinary Pyrroleds (VIC only)</td>
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</tbody>
</table>
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