



## Functional Testing Information

These are a selection of the more commonly used tests Tanya recommends. Tanya will only suggest testing if she feels that the findings would be a valuable asset to creating your unique treatment plan.

### Initial Screening Testing

#### Comprehensive Metabolic Blood Chemistry

£325

A comprehensive blood chemistry panel is the single most efficient and effective tool for evaluating your health, it screens for a wide range of conditions including several types of anemia, indications of gut, viral and bacterial infections, insulin resistance and hypoglycemia, liver and kidney issues, and thyroid function.

#### Organic Acid Test (OAT)

£250

The Organic Acids Test (OAT) offers a comprehensive metabolic snapshot of a patient's overall health with over 70 markers. It provides an accurate evaluation of intestinal yeast and bacteria. Abnormally high levels of these microorganisms can cause or worsen behavior disorders, hyperactivity, movement disorders, fatigue and immune function. Many people with chronic illnesses and neurological disorders often excrete several abnormal organic acids in their urine. The Organic Acids Test also includes markers for vitamin and mineral levels, oxidative stress, neurotransmitter levels, and is the only OAT to include markers for oxalates, which are highly correlated with many chronic illnesses.

## Specific Nutritional Testing

### Micronutrient Screen

£240

This profile covers a range of micronutrients to provide a comprehensive assessment of nutritional status:

- Plasma Minerals (calcium, magnesium, zinc, copper, chromium, manganese, and selenium) with red cell magnesium.
- Urine Iodine
- Vitamin profile (A, C, E, Carotenes, B1, B2 and B6)
- Coenzyme Q10
- Essential Fatty Acids Screen

### Omega Index and Trans Fats

£110

The Full Fatty Acid Profile (including Omega-3-Index and Trans Fats) measures:

- Omega-3 Index
- Trans Fat Index
- Omega-6/Omega-3 Ratio
- AA/EPA Ratio
- Full Fatty Acid Profile

The Omega-3 Index is the result of Dr. William Harris's 30 years of research in fatty acids and cardiovascular disease. It is a measure of omega-3 fatty acids, EPA and DHA in red blood cells, which relates to the risk for heart disease.

### Vitamin D

£39

### Iron, Ferritin, B12, Folate & Vitamin D

£89

## Gut Function Testing

### GI-MAP Stool Analysis

£335

### GI-MAP Plus Zonulin

£400

The **GI-MAP** includes the first comprehensive pathogens assay that is FDA

approved: the GPP assay by Luminex Corp. The pathogen targets include bacteria, parasites and viruses - another first for the market.

The test shows a balance of beneficial bacteria, parasites, markers of inflammation, digestions, absorption and DNA/PCR techniques. It also allows for the measurement of antibiotic resistance genes and virulence factors that contribute to pathogenicity. This is the true diagnostic solution for evaluating gut health.

GI-Effects Microbiome Stool Analysis £355

SIBO Breath Test (Lactulose or Glucose) £165

Advanced Intestinal Barrier Assessment £310

Measured Biomarkers:

- Zonulin is a protein that regulates tight gap junctions in the gastrointestinal tract and modulates intestinal permeability.
- Diamine Oxidase (DAO) is an enzyme that breaks down histamine.
- Histamine is a compound that affects immune response and physiological function of the digestive tract, and also acts as a neurotransmitter.
- LPS is a bacterial endotoxin that increases with transcellular permeability of the gastrointestinal lining (leaky gut).

Gastropanel £220

GastroPanel® consists of four ELISA assays. The assays measure concentrations of pepsinogen I (PGI), pepsinogen II (PGII), gastrin-17 (G17) and helicobacter IgG antibodies (Hp IgG) in a fasting blood sample.

With the GastroPanel®-test you can:

- Detect reliably gastritis and H. pylori infection.
- Detect the often asymptomatic condition atrophic gastritis, regardless of the presence of H. pylori infection.
- Find patients who need gastroscopy.
- Find patients with a healthy gastric mucosa.

Hydrogen Sulphide test £105

# Detoxification

## GPL-TOX(Toxic non metals)

£270

Every day, we are exposed to hundreds of toxic chemicals through products like pharmaceuticals, pesticides, packaged foods, household products, and environmental pollution. As we have become more exposed to chemical-laden products and to toxic chemicals in food, air, and water, we have been confronted with an accelerating rate of chronic illnesses like cancer, heart disease, chronic fatigue syndrome, chemical sensitivity, autism spectrum disorders, ADD/AD(H)D, autoimmune disorders, Parkinson's disease, and Alzheimer's disease.

Because exposure to environmental pollutants has been linked to many chronic diseases, The Great Plains Laboratory has created GPL-TOX, a toxic non-metal chemical profile that screens for the presence of 172 different toxic chemicals including organophosphate pesticides, phthalates, benzene, xylene, vinyl chloride, pyrethroid insecticides, acrylamide, perchlorate, diphenyl phosphate, ethylene oxide, acrylonitrile, and more. This profile also includes Tiglyglycine (TG), a marker for mitochondrial disorders resulting from mutations of mitochondrial DNA. These mutations can be caused by exposure to toxic chemicals, infections, inflammation, and nutritional deficiencies.

## MycoTOX

£350

Mycotoxins are some of the most prevalent toxins in the environment. Mycotoxins are metabolites produced by fungi like mould, which can infest buildings, vehicles, and foodstuffs. A majority of mycotoxin exposures are through food ingestion or airborne exposure. In the European Union, 20% of all grains harvested have been found to be contaminated with mycotoxins. Unfortunately, mycotoxins are resistant to heat and many processing procedures.

Fungi are able to grow on almost any surface, especially if the environment is warm and wet. Inner wall materials of buildings, wall paper, fiber glass insulation, ceiling tiles, and gypsum support are all good surfaces for fungi to colonize. These fungi then release mycotoxins into the environment causing symptoms of many different chronic diseases. Diseases and symptoms linked to mycotoxin exposure include fever, pneumonia-like symptoms, heart disease, rheumatic disease, asthma, sinusitis, cancer, memory loss, vision loss, chronic fatigue, skin rashes, depression, ADHD, anxiety, and liver damage.

# Functional Endocrinology

## Advanced Adrenal Saliva Test (home test kit)

£95

Adrenal testing is done by collecting saliva throughout the day, and can be very helpful in identifying the stage of adrenal dysfunction. These tests can also show a deficiency in Secretory IgA.

## DUTCH Complete

£287

### (Dried Urine Test for Comprehensive Hormones)

The DUTCH test is a urine steroid hormone profile that measures hormones and hormone metabolites (called conjugates) in a dried urine sample, and is performed from the comfort of your home. It is the most cutting-edge way to truly see what's going on when it comes to your hormones, because it doesn't just measure hormones, but also something called "metabolites", which are a measurement of hormone production and hormone breakdown.

## DUTCH plus the cortisol awakening response (CAR)

£382

## Advanced Root Cause Triggers:



IMMUNOLOGY



PATHOGENS



ENVIRONMENTAL

### Food Immune Profile

£450

This comprehensive food sensitivity and allergy panel includes IgG, Complement, IgE, IgG4 and Blocking Potential  
Or CYREX array 10  
CYREX array 10 -90 ( see end)

### FIT Test 132 - 132 Food IgG with C3 Compliment

£330

FIT test is an IgG food sensitivity tests that measures not only the IgG response to foods, but also a specific complement protein, C3d. Most food antigens enter the bloodstream through the intestinal epithelium and stimulate the production of IgG antibodies. IgG antibodies bind to food antigens that are free in the blood or that have deposited in tissues and form immune complexes (IC). The IC activates complement C3 which becomes covalently linked to the IgG forming IC-C3b. Ultimately, the C3b on the IC is cleaved forming IC-C3d. During this process, C3a (anaphylatoxin) is released which causes smooth muscle contraction and has a potent vascular effect. Under normal circumstances, circulating IC-C3b bind to the CR1 receptors on red blood cells and are cleared from the circulation in the liver and spleen. Continued production of antibody and formation of IC may result in deposition of IC in tissues which results in activation of the terminal complement pathway C5-9 on the surface of the tissue causing cell lysis and increased inflammation.

### Th1/Th2 test

£105

The Urine Balance Test aims at detecting alterations of the Th1/Th2 immune balance.

### Cytokine Profile

£240

With an assessment of 16 cytokines, this panel provides a powerful insight into the systemic immune regulatory function.

- Pro-inflammatory / anti-inflammatory cytokine balance
- Th1, Th2, Th3, Th17 and T-regulatory cytokine responses
- Efficacy of immune balancing and modulating approaches

### Environmental Pollutants

£180

(Inc. BPA, Benzene, Plastics, DAP, Organophosphates, Hexane)

## Element Profile

£206

Comprised of:

### **Elements – Dried Urine Profile:**

Tests included: Iodine, Bromine, Selenium, Arsenic, Mercury, Cadmium, and Creatinine

Assesses whether an individual has adequate, deficient, or excessive levels of the essential nutrients iodine and selenium, or if they have been exposed to excessive levels of the toxic elements bromine, arsenic, mercury, and cadmium.

## Mercury Tri-Test

£353

The Quicksilver Mercury Tri-Test is the *only* clinical test that utilises mercury speciation analysis, a patented advanced technology that separates methylmercury (MeHg) from inorganic Mercury (HgII) and measures each directly.

Quicksilver Scientific's instruments are sensitive enough to measure ambient Mercury levels in the body without the need for challenge testing.

## Chronic Viral Panel

£275

Viruses are some of the major contributing factors in autoimmunity. Viruses can also affect the ability of T-cells to detect antigens by cross-reaction (molecular mimicry). If viral infections remain untreated, they may result in over-activation of the immune system, which may subsequently progress to autoimmune diseases.

Biomarkers:

- EBV Viral Capsid (VCA) IgG
- EBV Viral Capsid (VCA) IgM
- Cytomegalovirus (CMV) IgG
- Cytomegalovirus (CMV) IgM
- Herpes simplex Virus (HSV) 1+2 IgG
- Herpes simplex Virus (HSV) 1+2 IgM

## Lyme Panel

£640

Diagnosis of Lyme disease can be difficult because its symptoms share commonalities with ALF, autism, chronic fatigue syndrome, fibromyalgia, lupus,

Parkinson's and RA. It is crucial to combine clinical symptomatology with the most sensitive techniques available to properly diagnose Lyme disease.

Measured Biomarkers:

- Borrelia burgdorferi (IgG, IgM)
- OspA + OspC Peptides (IgG, IgM)
- OspE Peptide (IgG, IgM)
- Leukocyte Function Associated Antigen (IgG, IgM)
- Immunodominant Protein (IgG, IgM)
- Variable Major Protein (IgG, IgM)
- B. b. sensu stricto (IgG, IgM)
- B. garinii (IgG, IgM)
- B. afzelii (IgG, IgM)
- Babesia (IgG, IgM)
- Ehrlichia (IgG, IgM)
- Bartonella (IgG, IgM)
- Western Blot Assay B. burgdorferi (IgG, IgM)

### Mycotoxins Comprehensive

£555

RealTime Lab's mycotoxin test panel is the most comprehensive available, testing for the presence of 15 of the most common and toxic mycotoxins produced by indoor mold contaminants. Mycotoxins are small, toxic molecules produced by a number of toxigenic mold strains. These mycotoxins are extremely potent and can cause many types of cellular damage that can lead to disease.

### Chronic Inflammatory Response Syndrome Profile

£505

Chronic Inflammatory Response Syndrome (CIRS) describes a constellation of symptoms, associated laboratory findings and test results associated with biotoxin exposure in genetically susceptible individuals.

The diagnosis of CIRS relies on four major criteria:

1. Clinical picture consistent with biotoxin exposure
2. Symptoms of biotoxin-related illness
3. Abnormal Visual Contrast Sensitivity (VCS)
4. Abnormal laboratory results and clinical tests consistent with CIRS

The following biomarkers are measured in this CIRS panel:  
MSH, VIP, VEGF, C4A, TGF B, MMP

### Cyrex Panels

Tanya uses food immune reactivity testing from [Cyrex Labs](#) as these tests are extremely sensitive, consistent, and test foods in the state they are normally

consumed. For example, most labs only test foods in their raw state, including foods such as eggs and meat. Cooking changes the composition of proteins, and you may react to a food in its cooked state but not its raw state.

Cyrex™ is a Clinical Immunology Laboratory Specializing in Functional Immunology and Autoimmunity. Cyrex™ offers multi-tissue antibody testing for the early detection and monitoring of today's complex autoimmune conditions.

**Priced in USD** and have to be ordered through a clinician or Tanya's clinic  
See [www.cyrexlabs.com/CyrexTestsArrays](http://www.cyrexlabs.com/CyrexTestsArrays) for more information:

Array 2: Intestinal Antigenic Permeability Screen \$233

Array 3: Wheat/Gluten Reactivity and Autoimmunity £319

Array 4: Gluten Associated Cross Reactive Foods and Sensitivity \$269

Array 5: Multiple Autoimmune Reactivity Screen \$647

Array 6: Diabetes Autoimmune Reactivity Screen \$210

Array 7: Neurological Autoimmune Reactivity Screen \$327

Array 7x: Neurological Autoimmune Reactivity Screen Expanded \$506

Array 8: Joint Autoimmune Reactivity Screen \$232

Array 10: Multiple Food Immune Reactivity Screen \$626

Array 10-90 Food Immune Reactivity Screen \$385

Array 11: Chemical Immune Reactivity Screen \$414

Array 12: Pathogen Immune Associated Reactivity Screen \$425

Array 20: Blood Brain Barrier Permeability Screen \$259

Bundles

Array 2,3x &4 \$710

Arrays 3x 4 &10 \$1041

Arrays 3x,4 &10-90 \$870

\*Array 20 - when ordering any Cyrex test \$209

## Advanced Cardiovascular

### Advanced NMR Lipids LipoProfile

£145

The NMR LipoProfile® test may be ordered for individuals with obesity, metabolic syndrome or diabetes, or for those who have had a myocardial infarction. It may also be ordered for individuals who have a family history of cardiovascular disease and for those with low HDL and high triglyceride levels

### Comprehensive Cardiac Health Assessment

£415

Myeloperoxidase  
Lp-PLA2 Activity  
ADMA/SDMA  
NMR LipoProfile with Lipids ( as above)  
HbA1c  
hsCRP  
Microalbumin/Creatinine  
Lipoprotein(a)  
OxLDL  
F2-Isoprostanes/Creatinine  
Comprehensive metabolic panel  
TMAO  
TSH  
CoQ10  
OmegaCheck  
Vitamin D

#### **Add ons to this profile available**

002 Essential Nutrients £85

(Vit D, Mg, B12, Iron metabolism, Folate)

003 Comprehensive Thyroid Profile £85

(TSH, TT3, FT3, Anti-thyroglobulin, Anti-TPO, FT4, T3 Uptake)



## GENETICS

### Genetic Methylation

### Testing

£249

Some individuals with chronic conditions may have a gene variation that prevents them from properly activating folic acid. This gene variation is present in up to 55% of the European population.

The gene involved is the MTHFR (Methylenetetrahydrofolate Reductase) gene, and genetic testing is available to show if someone has this gene variation. The MTHFR gene codes for the MTHFR enzyme, which is the enzyme that converts the amino acid homocysteine to methionine and is a building block for proteins.

Individuals with low activity of the MTHFR enzyme may present with elevated homocysteine levels, which have been associated with inflammation and heart disease, and potentially an impaired ability to detoxify.

Nutrient deficiencies in Folate, B<sub>6</sub> and B<sub>12</sub> have been associated with elevated homocysteine. However, individuals with the MTHFR gene are often deficient in folate, but actually have a difficult time processing folic acid.

#### Genes included:

- Folate Cycle: DHFR, GCPII, MTHFD1, MTHFR, RFC1, SHMT1 and TYMS
- Methionine Cycle: AHCY, BHMT, FUT2, MAT1A, MTR, MTRR, PEMT and TCN2
- Neurotransmitter Cycle: COMT, MAOA, MAOB, PNMT, QDPR and VDR
- Transsulfuration Cycle: CBS, CTH, GSS, MUT and SUOX
- Urea Cycle: NOS and SOD

### Detoxification Report

£249

The Detoxification Report focuses on the key genes and variants involved in regulating Phase I, II and III liver detoxification pathways, including those involved in the metabolism of caffeine, alcohol, hormones, neurotransmitters, pesticides and various common pharmaceutical drugs.

## Add-ons to the above

### Detoxification Report

£150

The Detoxification Report focuses on the key genes and variants involved in regulating Phase I, II and III liver detoxification pathways, including those involved in the metabolism of caffeine, alcohol, hormones, neurotransmitters, pesticides and various common pharmaceutical drugs.

#### Genes included:

- CYP450 family: CYP1A1, CYP1A2, CYP1B1, CYP2A6, CYP2C9, CYP2C19, CYP2D6, CYP2E1 and CYP3A4
- Alcohol: ADH1B, ADH1C and ALDH2
- Neurotransmitters: MAOA and MAOB
- Pesticides: PON1
- Glucuronidation: UGT1A1 and UGT1A6
- Sulphonation: SULT1A1, SULT1A2 and SULT2A1
- Glutathione conjugation: GSTM1, GSTP1 and GSTT1
- Acetylation: NAT1 and NAT2
- Methylation: COMT and TPMT
- Antiporter: ABCB1

### Add-on Histamine Report

£150

Histamine intolerance is a toxic response by the body resulting from an imbalance between accumulated histamine and the capacity to break it down.

Histamine toxicity is associated with numerous symptoms that mimic an allergic reaction, such as skin irritation, gastrointestinal upset, respiratory distress, headaches, insomnia and anxiety.

#### Genes included:

ALDH2, DAO, HNMT, MAOB and MTHFR

### Add - on Nervous system

£150

#### Genes included:

Serotonin-Melatonin: QDPR, TPH1, TPH2, VDR, 5-HT1A, 5-HT2A, SLC18A1, ASMT, MAOA, ALDH2 and MTNR1B

Dopamine-Noradrenaline-Adrenaline: QDPR, TH, DBH, VDR, DRD2, SLC18A1, SLC6A2, SLC6A3, PNMT, ADRB1, ADRB2, MAOA, MAOB, COMT and ALDH2

GABA: GABRA2

Inflammation: IFN gamma, TNF, FKBP5

Pharmacological: CYP2C19, CYP2D6, CYP3A4

Thyroid: DIO1, DIO2

Bonus: BDNF, FKBP5, HNMT, OPRM1