

INVESTIGATING CHRONIC ILLNESS

Performing laboratory tests is routine for many medical workups. Generally, many freely available local laboratory tests are either limited in scope, or not easily accessible to the public or general practitioners – but do have value in supporting or refuting a possible diagnosis. Where they may be of limited value is in assessing the deeper *functioning* of a system. This is of great value when investigating chronic or unresponsive conditions.

For chronically unwell persons who don't appear to be progressing in 'the system' – we can use additional focused and specialised testing at US or Australian lab facilities of high caliber.

Any functional tests ordered must first be decided on a cost-benefit consideration – in other words, will the results, whatever the outcome, benefit the future management of your case? On occasions, a negative result, although 'disappointing' can be very useful to rule out conditions.

The following tests probe biological functioning based on major advances in scientific knowledge of human physiology and biochemistry.

Costs are an approximate guide only. It is generally easy to send blood samples overseas via that labs NZ agent.

	Laboratory	Information	Cost NZD	Feature
Toxic Metals and Biotoxins				
Hair analysis	Doctors Data FX Med NZ	22 mineral elements + 17 toxic metals + 5 ratios	\$125.35	Shows current <u>exposure</u> to toxic metals. Certain <u>good</u> essential mineral results can be meaningful
Urine Toxic Metals UTM	Doctors Data FX Med NZ	Assesses 20 accumulated toxic metals. Option to do one or two tests – pre and post	\$136.85 Per test	Very useful for accumulated toxic metal body burden vs exposure. Can just do the 'post' test to save money. Lead, mercury, arsenic and more.
Urine Toxic Metals plus Urine Essential Minerals	Doctors Data FX Med NZ	Assesses 20 accumulated toxic metals and 18 Essential Minerals. Option to do one or two tests – pre and post.	\$228.85 Per test	

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Urine Iodine Loading test	Doctors Data FX Med NZ	Iodine loading then measure output. Indicates body sufficiency of iodine	\$182.85 Pre and post load	Iodine isn't accurate to assess by blood testing. This is a preferred test. Urine spot test is commonly used but highly dependent on recent iodine intake.
Environmental Pollutants Panel (EPP)	US Biotek FXMed NZ	11 Chemical toxin analytes	\$281.75	
MOULDS GPL-MycoTOX	The Great Plains Lab. Inc. FX Med NZ	11 Mycotoxins. Urine test from 40 species of moulds.	\$495	Majority of moulds are from foods and inhalation. Mould in homes and workplaces
GPL Tox	The Great Plains Lab. Inc. FX Med NZ	172 environmental pollutants using 18 metabolites	\$327 (\$249 if added to Moulds)	
Metabolic Analysis				
Metabolic Analysis Profile - Organic Acids Test (OATS) Code 4040	GENOVA USA Nutriseach Agent	Cellular energy Neurotransmitters Vitamin and nutrient markers. Toxin and Detox markers Tyrosine metabolism	\$558.15	Mood disorders Fatigue Digestive complaints Weight issues
ONE Profile Code 4048	GENOVA USA Nutriseach Agent	Cellular energy Neurotransmitters Vitamin Mineral markers Toxin and Detox markers Tyrosine metabolism Fatty Acids profile 36 Amino acids – blood or urine Oxidative Stress	\$982.50	Comprehensive OATS plus more
ORGANIX Comprehensive Profile Code 4041	GENOVA USA Nutriseach Agent	Good value – but not as comprehensive	\$379.95	OATS
ION Profile Individual - Optimal - Nutritional Code 4046	GENOVA USA Nutriseach Agent	Combines: Organix Amino Acids Fatty Acids Profile Nutrient and Toxic Elements AntiOxidant Vitamins Lipid peroxidases Homocysteine	\$999.95	Comprehensive

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OATS (Organic Acids Test)	The Great Plains Lab. Inc. FX Med NZ	Includes 70 markers for vitamin and minerals, oxidative stress, fatty acids, detoxification, mitochondrial energy, neurotransmitters, GIT yeast and bacterial markers and oxalates	\$327	Of overall health and Krebs cycle energy pathways. Cost effective. Link with clostridia markers and neurotransmitters
Pyroles test (Maue Test) Code	NutriPATH Au Nutrsearch		\$157.75	Marker for the Mauve Factor – which depletes B6 and Zinc especially
Red Blood Cell Elements	Doctors Data FX Med NZ	13 Nutrient minerals, 5 toxic elements	\$316.25	
Urine Porphyrins	Doctors Data FX Med NZ		\$217.35	
Neuro-Biogenic Amines Comprehensive	Doctors Data USA FX Med NZ	Neurotransmitters only plus metabolites	Basic \$259 Advanced \$435	
Neurotransmitters Advanced Code: 4035 (intermediate) Code 4036 (advanced)	NutriPATH Au Nutrsearch	Serotonin, Dopamine, Noradrenaline, Adrenalin, GABA, Glutamate, Histamine, PEA, Glycine, Plus Nor-metanephrines, DOPAC, HVA, VMA, 5HIAA.	Intermediate \$425 Advanced \$489.50	
Gastro-Intestinal				
CDSA – Complete Diagnostic Stool Analysis USA	Doctors Data USA FX Med NZ	Infection, microbiome balance, toxics, digestion. Uses high sensitivity MALDI-TOF culturing system. Casts a wide net compared with DNA testing methods.	No parasites \$431.25 Parasites x 1 \$483.00 Parasites x 3 \$540.50	Comprehensive Stool Analysis Comprehensive Parasitologyx1 Comprehensive Parasitology 1 or 3 samples
CDSA –GI-360 (New) USA	Doctors Data USA FX Med NZ	Microbiome diversity via DNA probes as well as MALDI-TOF culture. Parasites, Chemistry and b-Glucuronidase.	GI 360 \$699 GI 360 Essentials \$529 GI 360 Microbiome \$319	20% off until end Jan 2020
CDSA – Complete Diagnostic Stool Analysis Australia	NutriPATH Au Nutrsearch	Standard C&S method. Range of levels as with DD.	\$367 CDSA 3 \$430 CDSA 3+ \$415 CDSA 4 \$480 CDSA 4+	

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MicroBiome Mapping Australia Code 2206	NutriPATH Au Nutriscarch	DNA qPCR testing method. Bacterial, viral, parasitic and fungal targets.	\$549.50	New test using latest DNA probes. Limiting factor depends on number of DNA probes the lab has. One probe for each bacteria etc.
BIOSCREEN	Australia Bioscreen lab	MALDI-TOF		Specialising in GUT-BRAIN links
SIBO – Small Intestinal Bacterial Overgrowth	FX Med NZ Agent for House of Health	In home breath testing – over 4 hours	\$215.00	For more information request data sheet for SIBO
Intestinal Permeability	Doctors Data USA FX Med NZ	Lactulose/Mannitol test to establish if there is a ‘leaky gut’ allowing toxins and food molecule antigens to pass into body.	\$159.85	Also, good way of monitoring success of intestinal repair treatments
Food Allergy Testing With Candida	The Great Plains Lab. Inc. FX Med NZ	IgG antibody blood spot test for 93 foods. Allergies, foods, nasal-sinus, skin, joints, brain, GIT. Adds Candida antibodies as candida can produce a wide range of local and systemic symptoms.	\$309.35	IgG1,2,3 can cause inflammation. IgG4 (6% only) not so, but indicates immune tolerance to foods.
Dietary Antigen Test (DAT)	Dunwoody Labs FXMed NZ	IgG1-4 (delayed) food allergy testing. Added Complement C3d which increases reactions 1000x. 96 foods. Blood draw needed.	\$365.00	Best to be on a full diet before test done where possible. Full blood test. Can add modules for spices, herbs, vegetarian
Immunological Analysis				
Cytokine Panel Code: 4004	NutriPATH (Australia) NutriSearch	GM-CSF, Inteleukins 1-13, TNFa, iFNY	\$368.70	
Endocrinology Analysis				
Adrenocortex Stress Profile ASI	iPATH PCNZ	4 saliva samples	\$179.00	Evaluates key adrenal stress hormones over 24 hour circadian pattern
Adrenocortex Stress Profile ASI	NutriPATH Nutriscarch NZ	Basic 4 samples	\$102.25	Evaluates key adrenal stress hormones over

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Code 1001		DHEA, Cortisols		24 hour circadian pattern
Cortisol Awakening Response CAR Code 1012	NutriPATH Nutrisearch NZ	Basic 6 samples on waking, +30, + 60 mins, 12, 4pm 8pm.	\$135	
DUTCH Advanced Adrenal Assessment	Precision Hormones NZ Nutrisearch	Excellent method – detailed biochemistry. Easy urine dipstick paper test	\$244.95	Assessing adrenal fatigue
DUTCH Complete	Precision Hormones NZ NutriSearch and FxMED	Combines adrenal and sex hormones. Limited OATS. Neurotransmitters	\$359.95	
DUTCH Plus CAR	Precision Hormones NZ NutriSearch and FxMED	Combines adrenal and sex hormones. Limited OATS. Neurotransmitters. Plus CAR (Cortisol Awakening Response)	\$397.95	
DUTCH Cycle Mapping Plus	Precision Hormones NZ NutriSearch and FxMED	Refer to types: - DUTCH Complete plus Mapping over a month.	\$499.00	
Comprehensive Thyroid Profile Code 1114	NutriPATH Nutrisearch NZ	T4,T3,TSH, rT3, TPO ab, ATG ab, TSH Receptor Ab	\$172.50	Especially looking for rT3 (revers T3)
Lipids				
Liposcreen Subfractions and Oxidised LDL Code 4028+4029	NutriPATH Nutrisearch NZ	Blood Serum	\$419.90	Provides information about the progress of endothelial damage and oxidative stress on cardiovascular tissue. T
Tumour Cells				
Maintrac CTC (Circulating Tumour Cells – Tumour Stem Cells)	Genostics Australia	Blood serum Complete form and fax to Australia for test kit. Local alb can take off the blood draw.	\$820.00AUD	Intended for baseline count and follow-up monitoring of cancer treatment. There are other addons. www.genostics.com.au

Genomics				
Maintrac – CTC – Circulating tumour cells	Genostics Australia	Blood serum	\$820.00 AUD Depends on any extra tests	Intended for baseline count and follow-up monitoring of cancer treatment.
Methylation SNPs	Online	Upload data from 23andme to geneticgenie for Methylation report.		www.23andme.com www.geneticgenie.org
Genetic Profiling	www.23andme.com	Saliva/oral swab	Approx \$200 – details on website	Refer to www.23andme.com
Mould CIRS Neurotoxins				
VCS Test (Visual Contrast Sensitivity Test)	VCS - See Dr Shoemaker website www.survivingmold.com	Online visual testing. Visual cortex and grey shades are highly sensitive to toxins and good marker. www.vctest.com	Approx US \$30	VCS testing can assist with the diagnosis of Biotxin illnesses such as Mould, Lyme, CFS/FMS, and other chronic fatigue illnesses
HLA-DQ/DR Genetic Test	Local Lab	Blood serum	? Available through Auckland blood bank	Determines whether you are genetically unable to properly detect and eliminate biotoxins from mould/lyme and other sources via the immune system.
HLA-DQ/DR Genetic Test Code 3401	NutriPath Au		\$288.80	
MARCoNS Code 3404	NutriPath Au	Nasal swab for Multiple Antibiotic Resistant Coagulase Negative Staphylococci	\$240.85	This staph bacteria is often associated with Biotxin related fatigue syndromes
Mould /Biotoxin Comprehensive Code 3402	NutriPath Au Time sensitive test	Initial assessment - C3a, C4a, TGFB-1, MMP-9, VEGF	\$598	CIRS – Chronic Inflammatory Response Syndromes
Mould /Biotoxin Basic Code 3403	NutriPath Au	Follow up panel – Leptin, MSH, VIP, ADH/Osmolality,	\$485.90	CIRS – Chronic Inflammatory Response Syndromes

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Further Notes:

Refer to websites:

<http://fxmed.co.nz/testing/>

<http://www.nutrishield.co.nz/lab-diagnostics/>

<https://www.doctorsdata.com/>

<http://nutripath.com.au/>

<http://23andme.com>

<https://www.houseofhealth.co.nz/services/functional-tests/breath-test/>

<http://www.genostics.com.au>

DUTCH Test: Precision Hormones -PH- (precisionhormones.com) – Available through NZ Agent Nutrishield

This lab provides very good service for assessing female and male hormones, including adrenal cortisol – especially your natural sex hormones and their balance. The whole issue of monitoring women and men on *transdermal 'bio-identical hormones'* is more confusing and inaccurate as most tests such as blood and saliva are very poor at measuring these hormones (*when on treatment*).

Precision Hormones have developed a dried urine test system which at least can give more reliable and comprehensive look at not only your sex hormones but also their breakdown metabolites in the liver and how safe that process is, considering your genetics and liver functioning. **No test** is 100% accurate with actual "levels" with exception of some oral or injectable hormones – the benefit is overall assessment especially *your actual response to treatment*.

DUTCH Mapping Blood Test: will measure your actual self-made hormones over a whole month (sampling every second day) – great for assessing fertility issues, monthly hormone balance and more. The PH website is a must see, having a huge repository of highly useful information, videos etc. www.precisionhormones.com.