

BioRegulatory Medicine

Diagnostic Assessments



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How are Bioregulatory Assessments different?



Heart Rate Variability

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Heart Rate Variability (HRV)

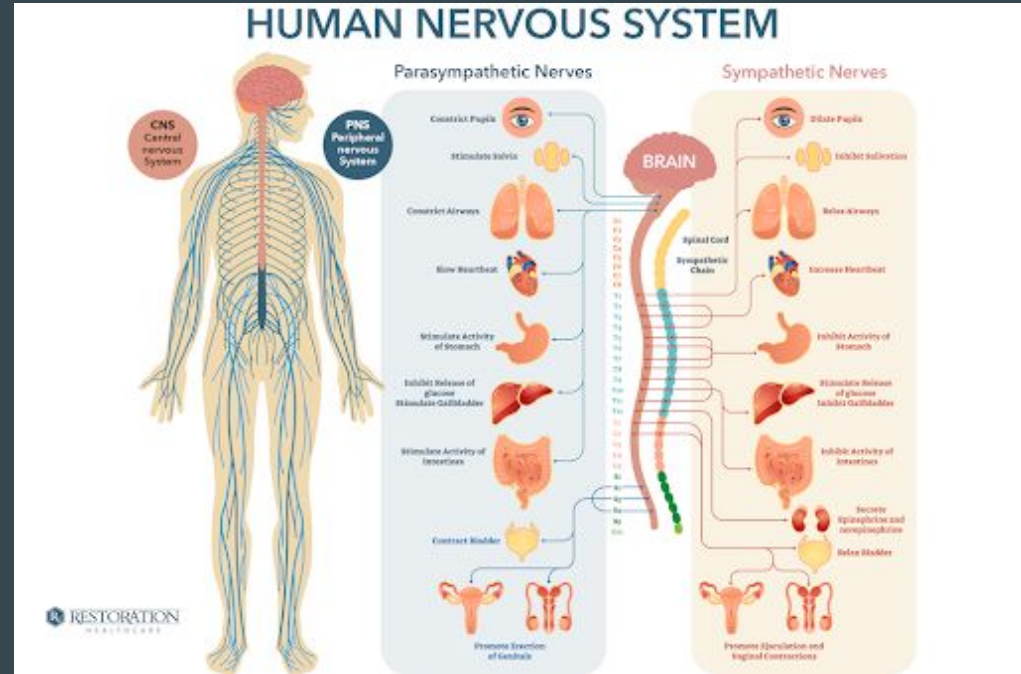
Measures the variation in time between each heartbeat

Controlled by the **autonomic nervous system (ANS)**

Sympathetic NS

Parasympathetic NS

Fight-or-flight vs. relaxation response



Why do we look at HRV?

Noninvasive

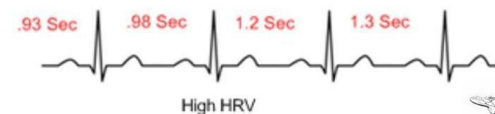
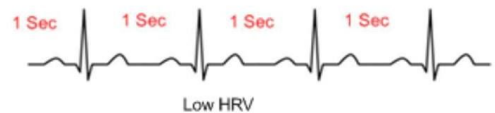
Identify ANS imbalances

Sympathetic, Fight-or-flight mode = variation between heartbeats is low

Parasympathetic, Relaxed state = variation between beats is high

Goal is to have a healthy, balanced, resilient, flexible nervous system that allows you to switch gears!

Heart Rate Variability



Low HRV

"Fight or Flight"

Easily exhausted

Low Adaptability

Decreased Cognition

High HRV

"Rest & Digest"

Improved Performance

High Adaptability

Improved Cognition

How does it work?

Heart rate monitor

Similar to an ECG

About 5 minutes

Laying, Standing, sitting Valsalva, deep breathing

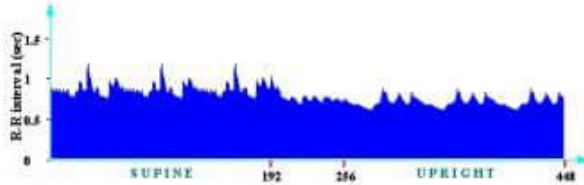


What can we learn from HRV?

Assessment of ANS functional state based on Heart Rate Variability analysis

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Electrocardiographic Rhythm Strip



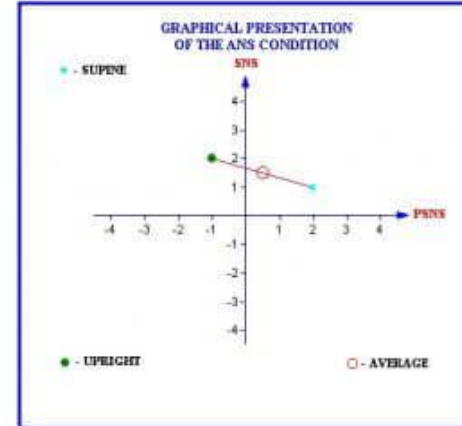
HR	RHF	R(LF1)	R(LF2)
47	14	11	12

HR	RHF	R(LF1)	R(LF2)
42	25	16	19

Extrasystoles analysis

Extrasystoles not recognized.

ANS ASSESSMENT (SUPINE)	ANS ASSESSMENT (UPRIGHT)
PARASYMPATHETIC SYSTEM IS INCREASED MODERATELY WHILE SYMPATHETIC IS INCREASED SLIGHTLY	PARASYMPATHETIC SYSTEM IS DECREASED SLIGHTLY WHILE SYMPATHETIC IS INCREASED MODERATELY



CONCLUSION
0.5 - ACTIVITY OF PARASYMPATHETIC SYSTEM
1.5 - ACTIVITY OF SYMPATHETIC SYSTEM

BiImpedence Analysis

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BioImpedence Analysis (BIA)

BIA can be used as a quick, easy, and non-invasive way of assessing a person's level of **systemic inflammation, hydration**, and gauge **overall cellular health**.



How does it work?

Non-invasive

2 electrodes on R hand and R foot

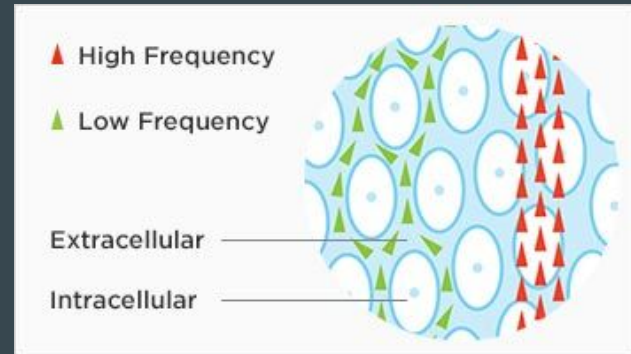
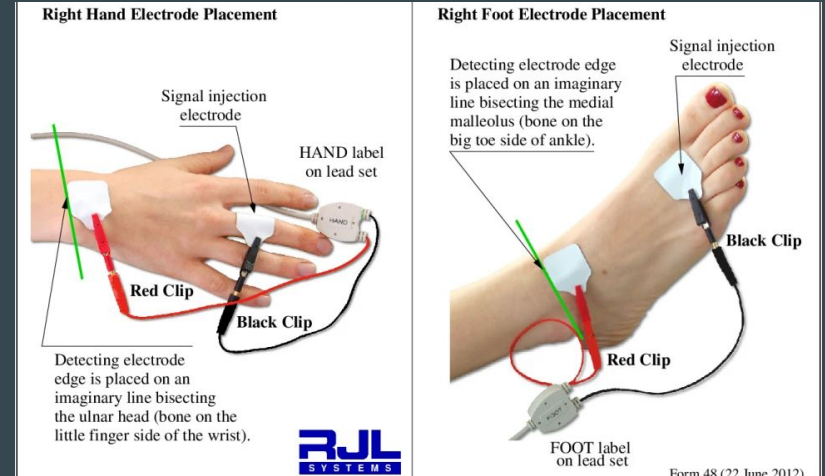
Low level, imperceptible electrical current is sent through the body

Flow of the current follows the water in the body

The device measures how this signal is impeded through different types of tissue

Tissues that contain large amounts of fluid and electrolytes, such as blood, have high conductivity, but fat and bone slow the signal down.

BIA determines the resistance to flow of the current as it passes through the body, it provides estimates of body water from which body fat is calculated using selected equations.



What can we learn from BIA?



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Name: Paradise Eric

Test Date: 8:48 AM; March 23, 2021

Report Printed on: 8:53 AM; March 23, 2021

Height	Weight	Age	Sex	Resistance	Reactance	Frame	Target Wt.	Activity Level	Equation Set
5 ft 9.0 in (69 in)	175 lbs	46.0	Male	354.0 Ω	49.7 Ω	Medium	160 lbs	Very Light	NHANES-III

Current Test Data

	Amount	% of Weight	% of FFM	% of TBW	% of LST
Weight	175.0 lbs				
Fat	16.3 lbs	9.3 %			
Fat-Free Mass (FFM)	158.7 lbs	90.7 %			
Lean Dry Mass (LDM)	39.4 lbs	22.5 %	24.8 %		
Total Body Water (TBW)	119.3 lbs	68.2 %	75.2 %		
Intra-Cellular Water (ICW)	67.6 lbs	38.6 %	42.6 %	56.6 %	
Extra-Cellular Water (ECW)	51.8 lbs	29.6 %	32.6 %	43.4 %	
Bone Mineral Content (BMC)	8.1 lbs	4.6 %	5.1 %		
Lean Soft Tissue (LST)	150.7 lbs	86.1 %	94.9 %		
Skeletal Muscle Mass (SMM)	83.8 lbs	47.9 %	52.8 %	55.6 %	
BMI	25.8				8.0
FMI	2.4				2,032.4 kCal
FFMI	23.4				2,642.1 kCal

Average Ranges

	Amount	% of Weight	% of FFM	% of TBW	% of LST
Weight	147.7 - 221.2 lbs				
Fat	29.4 - 66.6 lbs	19.5 - 31.2 %			
Fat-Free Mass (FFM)	114.1 - 158.8 lbs	68.8 - 80.5 %			
Lean Dry Mass (LDM)	28.9 - 41.1 lbs	17.7 - 20.5 %	24.8 - 26.4 %		
Total Body Water (TBW)	85.1 - 117.9 lbs	51.0 - 60.1 %	73.6 - 75.2 %		
Intra-Cellular Water (ICW)	51.1 - 67.6 lbs	29.8 - 35.4 %	42.4 - 44.9 %	57.2 - 60.1 %	
Extra-Cellular Water (ECW)	34.0 - 50.3 lbs	20.9 - 25.0 %	29.7 - 31.8 %	39.9 - 42.8 %	
Bone Mineral Content (BMC)	8.0 - 11.2 lbs	5.1 - 5.4 %	6.2 - 7.4 %		
Lean Soft Tissue (LST)	111.1 - 152.2 lbs	64.4 - 80.1 %	92.6 - 93.8 %		
Skeletal Muscle Mass (SMM)	62.7 - 87.1 lbs	36.5 - 45.7 %	50.4 - 55.7 %		
BMI	22.6 - 32.4				7.2 - 9.1
FMI	4.4 - 9.9				1,543.5 - 2,045.0 kCal
FFMI	17.6 - 23.1				

Please note that these ranges represent average values taken from a treatment of the NHANES-III survey data. They are not meant to be "Clinical" or "Ideal" ranges.

Zyto

Biocommunication Scan

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Zyto

A ZYTO scan involves presenting questions in the form of digital signatures that the body answers directly.

The ZYTO Hand Cradle measures the body's galvanic skin response to each unique signature and sends the data directly to the software for analysis.



How does it work?

Simple and painless scan

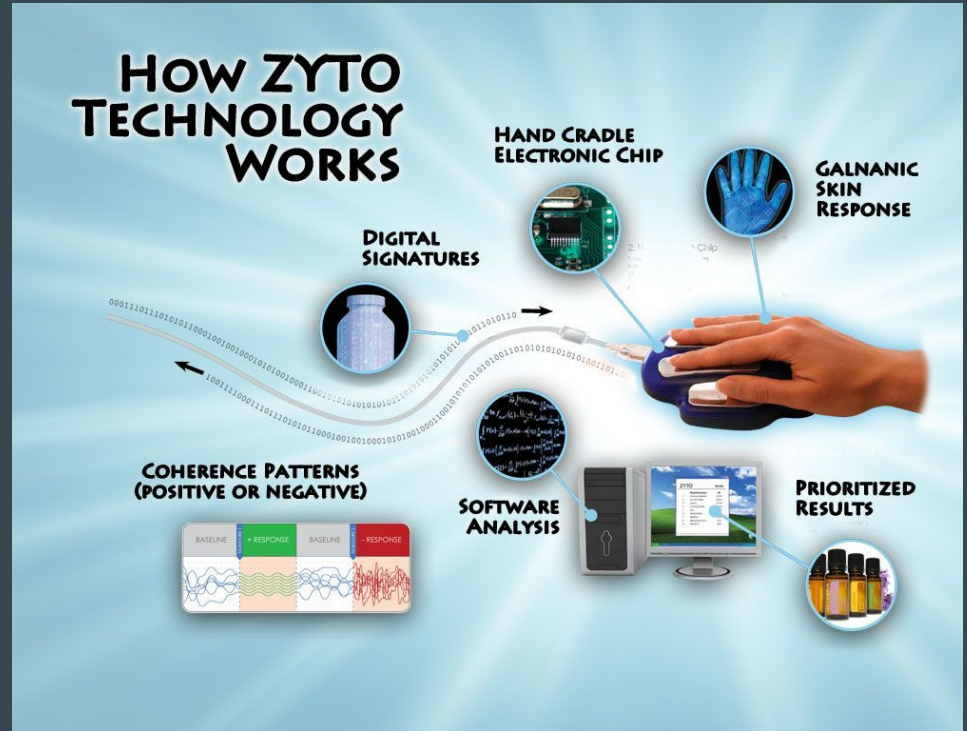
Place hand on the ZYTO Hand Cradle

Run the scan

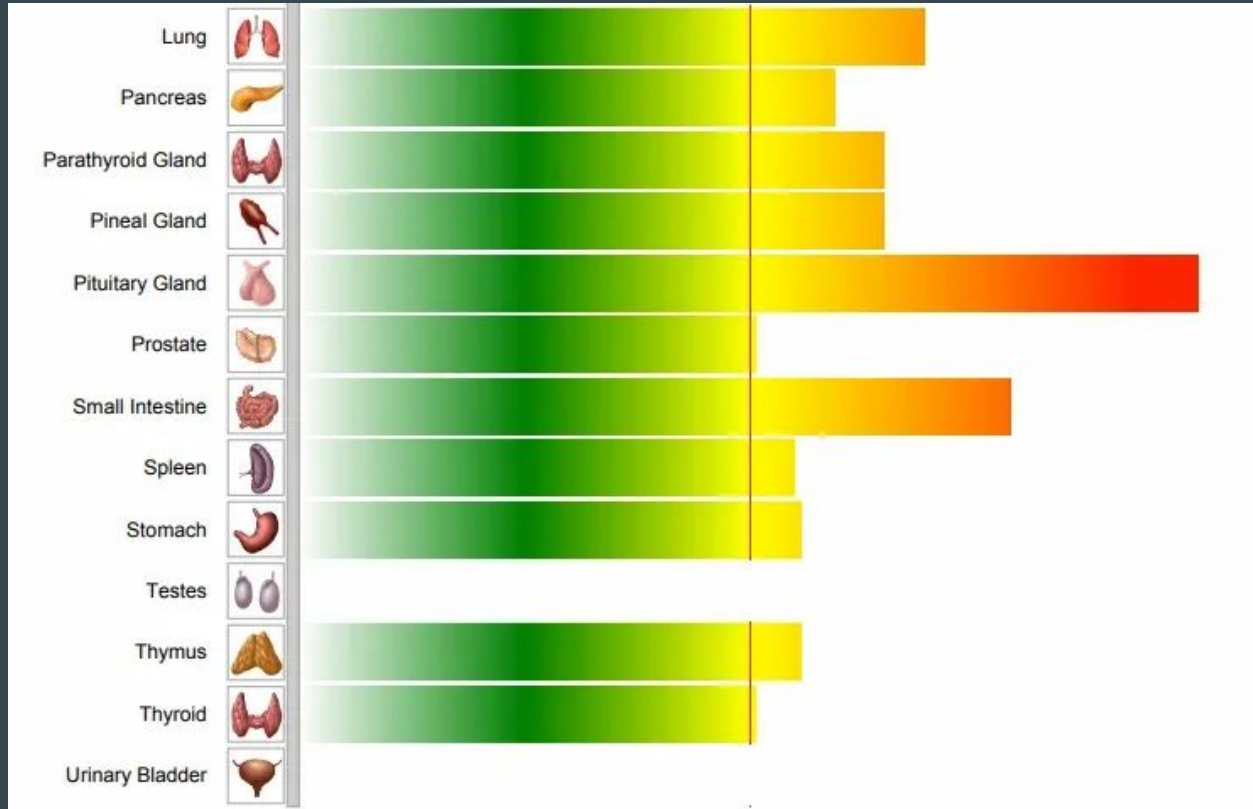
Subtle energetic impulses are introduced to the body and the body will naturally respond to this communication

The ZYTO software records each response.

The length of the scan can be as little as 3 minutes.



What can we learn from a Zyto scan?



**Computer Regulation Thermometry
Or
Whole-Body Regulation Thermometry
...**

About CRT - AlfaSight 9000

AlfaSight 9000

A functional test based on thermoregulation, neuroscience, and the autonomic response that measures the regulation capacity of organs, tissues and glands.

Again, we are looking at the the health of the autonomic nervous system and circulation around organs, glands and lymph.

A special temperature sensor with an infrared coupling sensor is used to pick up on the slight changes in skin temperature.

The sensor is non-invasive with no radiation, chemicals or electricity. It is a very sensitive measuring tool that picks up the slightest changes in skin temperature.



How does it work?

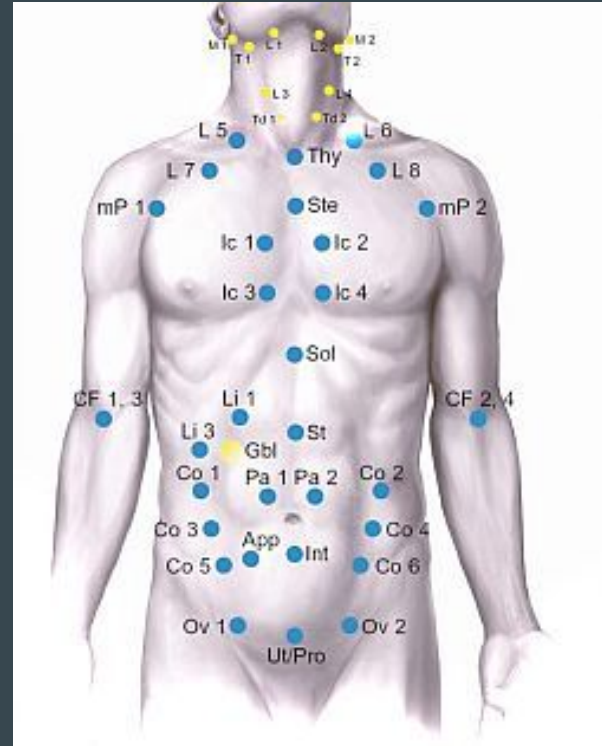
Temperature sensor with infrared coupling

Test 119 points all over the body

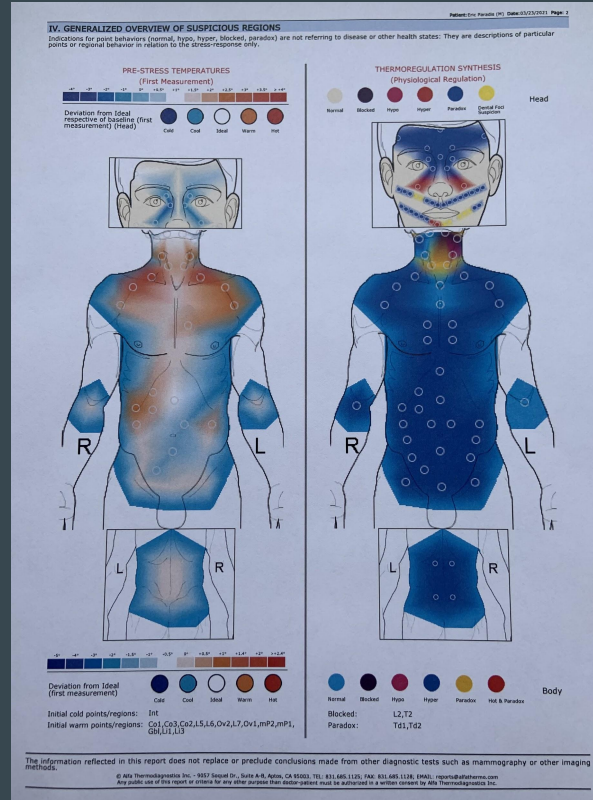
Exposed to a cool temperature for 10mins,
which is considered a stress on the body.

Recheck the 119 points after this cool exposure

All the points should be able to regulate themselves, if they can regulate themselves then the tissues are healthy, if they are unable to regulate then we can pick up on patterns of organ and system disturbances that are typically patterns for disease processes.



What can we learn from CRT?



Oligo Scan

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Oligoscan

Minerals and antioxidants are necessary for the proper functioning of the body but accumulation of toxic metals can lead to health risks.

OligoScan is designed for precise evaluation of bioavailability of minerals, trace elements, and the rate of toxic metals in living tissues.

The measurement is made on the surface of the hand.

The advantage of epidermis analysis as opposed to a secretion one is that it gives more stable picture.

The OligoScan balance sheet allows us to observe what is in the tissue and therefore to assess intra-tissular BIO-AVAILABILITY.

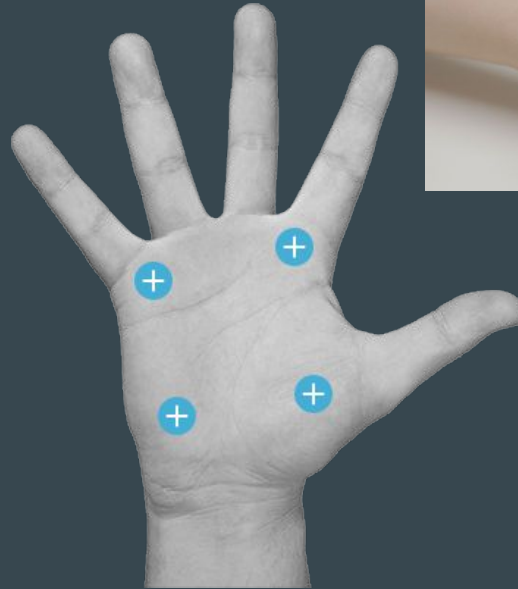


How does it work?

It is based on the principle of absorption, transmission or reflection of light by the chemical compounds over a certain wavelength range.

Using hand probe

Measure 4 sites on the palm



What can we learn from an Oligoscan?

Mineral Test Report

	Result	Normal			Low-	Low	Normal	OK	Normal+	High	High+
Calcium (Ca)	550.2	279.0	598.0								
Magnesium (Mg)	24.8	30.5	75.7								
Phosphorus (P)	129.9	144.0	199.0								
Silicon (Si)	17.5	15.0	31.0								
Sodium (Na)	51.9	21.0	89.0								
Potassium (K)	11.3	9.0	39.0								
Copper (Cu)	22.2	11.0	28.0								
Zinc (Zn)	165.9	125.0	155.0								
Iron (Fe)	10.5	5.0	15.0								
Manganese (Mn)	0.49	0.31	0.75								
Chromium (Cr)	0.97	0.82	1.25								
Vanadium (V)	0.024	0.009	0.083								
Boron (B)	2.64	0.84	2.87								
Cobalt (Co)	0.036	0.025	0.045								
Molybdenum (Mo)	0.045	0.035	0.085								
Iodine (I)	0.10	0.32	0.59								
Lithium (Li)	0.088	0.052	0.120								
Germanium (Ge)	0.024	0.003	0.028								
Selenium (Se)	1.70	0.95	1.77								
Sulphur (S)	51.2	48.1	52.0								

You can get help on the items by clicking on the item line

Mineral Balance

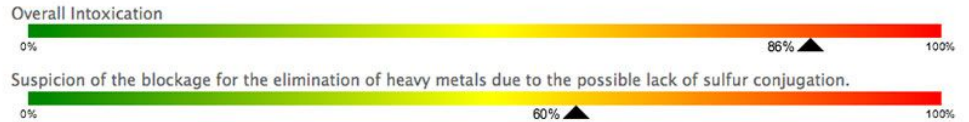


Heavy Metal Test Report

	Result	Normal	High -	High +	Excess
Aluminium (Al)	0.00959				
Antimony (Sb)	0.00243				
Silver (Ag)	0.01179				
Arsenic (As)	0.00486				
Barium (Ba)	0.00792				
Beryllium (Be)	0.00535				
Bismuth (Bi)	0.0137				
Cadmium (Cd)	0.01267				
Mercury (Hg)	0.01783				
Nickel (Ni)	0.00445				
Platinum (Pt)	0.00223				
Lead (Pb)	0.00678				
Thallium (Tl)	0.00192				
Thorium (Th)	0.00119				

You can get help on the items by clicking on the item line

Heavy Metals Intoxication



Questions?