

BrainTap HRV SCAN Report of Findings

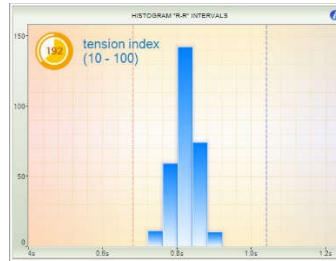
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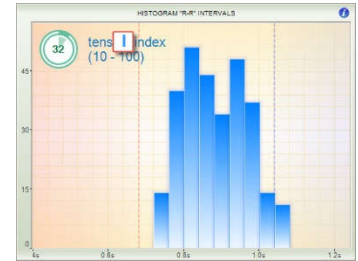
Stress Index (Tension Index)

How hard does the nervous system of the body have to work in order to achieve balance? 500 or over is a more critical issue. Lifestyle changes must be implemented.

Score _____



Out of Range -10 or + 100

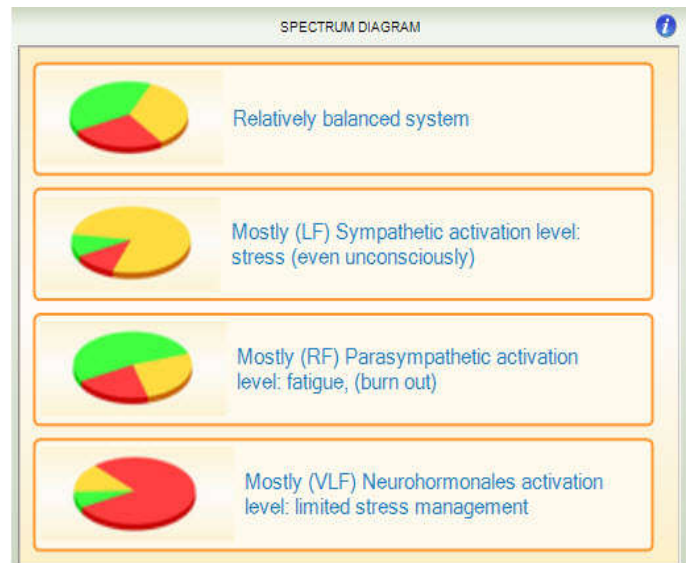


Within Range 10 to 100

Autonomic Nervous System Regulation

What you see on this screen is a circle with different colors. The yellow portion represents primarily the sympathetic nervous system and is labeled LF or low frequency. The green primarily represents the parasympathetic nervous system and is labeled HF for high frequency. Red is the NeuroHormonal back up system and is labeled VLF or very low frequency. The VLF also has some sympathetic nervous system regulation properties. You can see the percentage of each of these regulatory systems that will tell you the predominance of one system in relationship to the other.

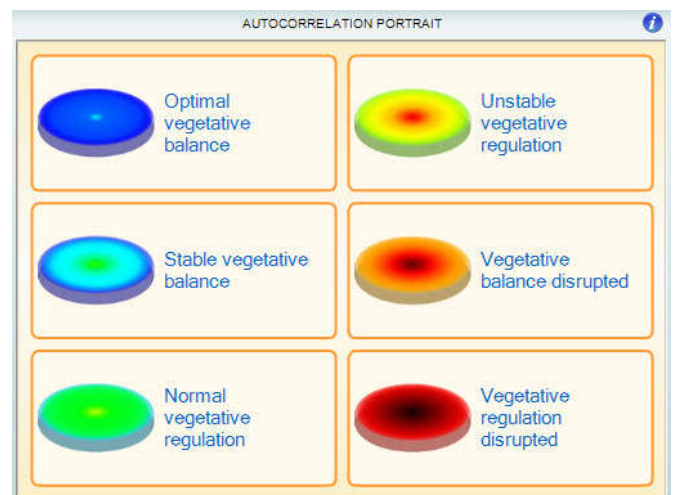
Score _____



Cardiovascular Adaptation

This has to do with the ability of the vessels of the body to contract and dilate as needed. A good example is if the body needs more blood supply, the vessels will need to dilate quickly such as when you go from sitting to running. Cardiovascular adaption is a good indication of orthostatic blood pressure and, if the Cardiovascular Adaption is low, there is a good possibility that the blood pressure will go up if the sympathetic nervous system is dominant and the blood pressure can also go low if the patient is in adrenal exhaustion. The point is that the blood pressure can be unstable if the Cardiovascular Adaption is low.

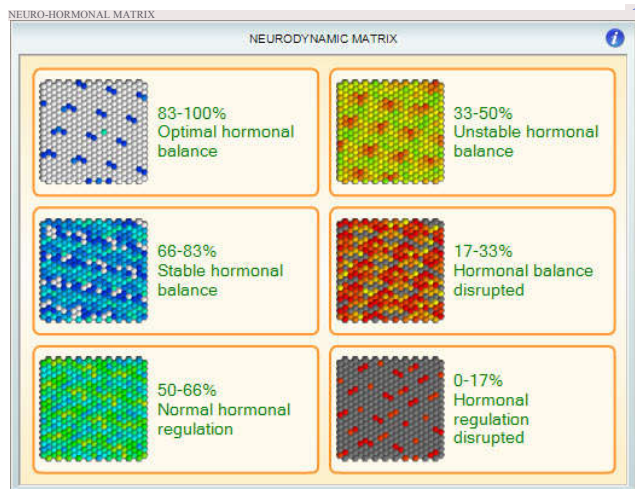
Score _____



Hormonal Regulation Index

The normal range is between 50-100 and this represents how well chemical messengers or hormones can communicate at the right time. Think of 600 different systems highly coordinated like a symphony orchestra working seamlessly together.

Normal range is between 50-100 Score _____



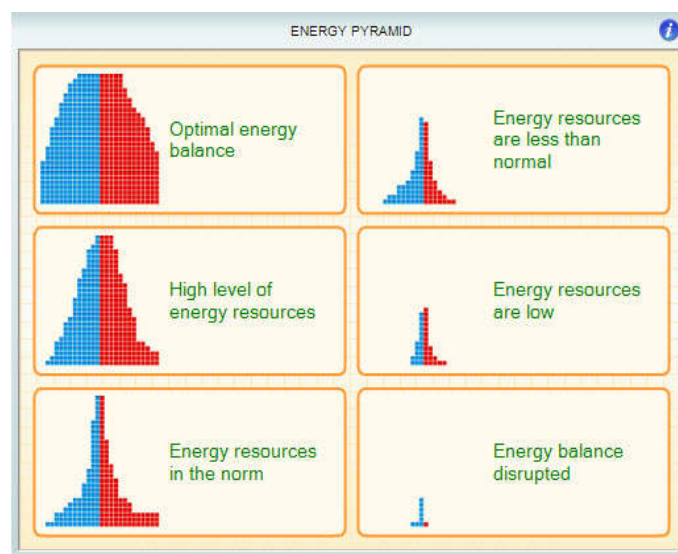
Metabolic Energy Resources (Energy Pyramid)

Normal range is 150-600. You need to have adequate metabolic energy to do the work to manage body processes. All body functions require energy. If you have a score below 150, you are a person who performs work but needs a lot of recovery time.

What you really want is a metabolic energy of 200 or more. Athletes should be higher and this indicates good recovery time after performing work. If your autonomic nervous system (the nervous system that controls most of your body's functions) is working perfectly, your body will be more efficient and use less energy.

If your brain has to do most of the work to coordinate and produce hormones, this system is not as efficient as your autonomic nervous system and you will be less energy efficient. This will affect the power house of your cells called the mitochondria and drain your body of vital resources.

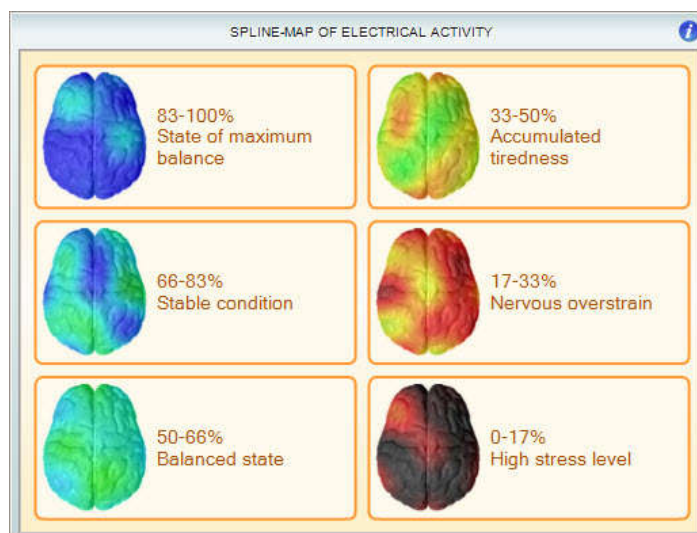
Normal range is 150-600 Score _____



Psycho-Emotional State Index

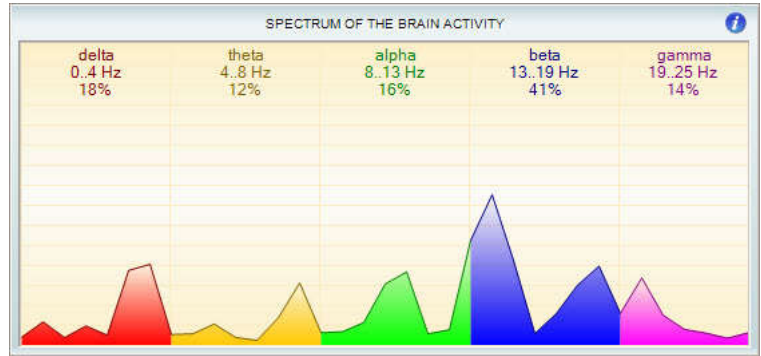
The normal range is between 50-100 and is looking at the total power of the spectral density of the frequencies that regulate brain function such as Delta, Theta, Alpha, Beta. This is not an EEG of the brain but comes from a mathematical calculation from the heart electrical cardiogram. This gives us an indication of overall brain function.

Normal range is between 50-100 Score _____



Spectrum of Brain Wave Activity

When looking at the electrical activity of the brain we are looking at the output of neurons in the cortex of the brain generating electrical activity. This is not an actual EEG but is a mathematical algorithm coming from the ECG of the heart to give us an approximation of brain activity. This analysis will break down this information into various frequencies that can tell us about different states of arousal. These are the Delta, Alpha, Beta, and Gamma (high Beta) waves.



Delta is related to sleep and brain stem functions. When high it can indicate white matter damage (brain injury) ,or sleep abnormalities. When it is abnormally higher than the other bands, it indicates an imbalance. You may feel sleepy, dreaming, detached awareness, depression.

Theta is related to memory, emotion, and emotional brain, (limbic system) functions where emotional memory is housed. Theta can be involved with being drowsy, deep relaxation, problem solving. Increased with catecholamine's such as dopamine, epinephrine (adrenaline), and norepinephrine.

Alpha is related to the brain at rest or routine activities. Can indicate processing incapacities. This can be elevated in experienced meditators. Alpha is increased with relaxation, meditation, creative visualization and increases serotonin.

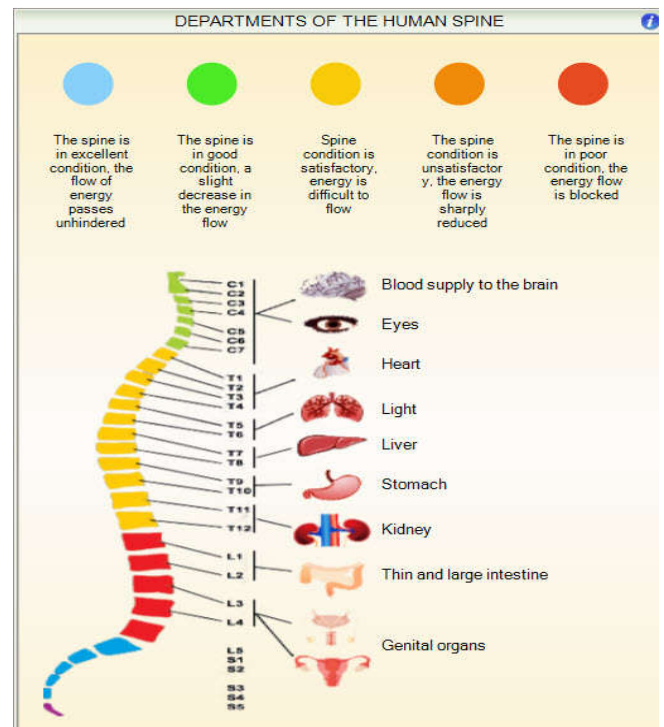
Beta is related to activation and processing in the cortex of the brain. Beta increases when alert, concentrating, cognition, restlessness, stressed, anxiety. . It can indicate over processing where the brain is ruminating. It can also show up with anxiety.

High Beta shows up with excitement. Excitement related to learning, sporting event, concert, ect. It can also relate to headaches and anxiety. On the Valeo Scan it shows up as Gamma but it is in the High Beta frequency range.

Name	Score %
Delta	
Theta	
Alpha	
Beta	
High Beta	

Departments of the Human Spine

The "functional state of the spine" tab displays information about the energy support of various departments of the spine and the activity of departments of the autonomic nervous system in different parts of the spine during testing. The screen displays areas of the spine in segments, the color of which depends on the state of the energy flow and the activity of the relevant departments of the autonomic nervous system. The screen also indicates the relative values for each segment and the activity of the corresponding section of the autonomic nervous system.



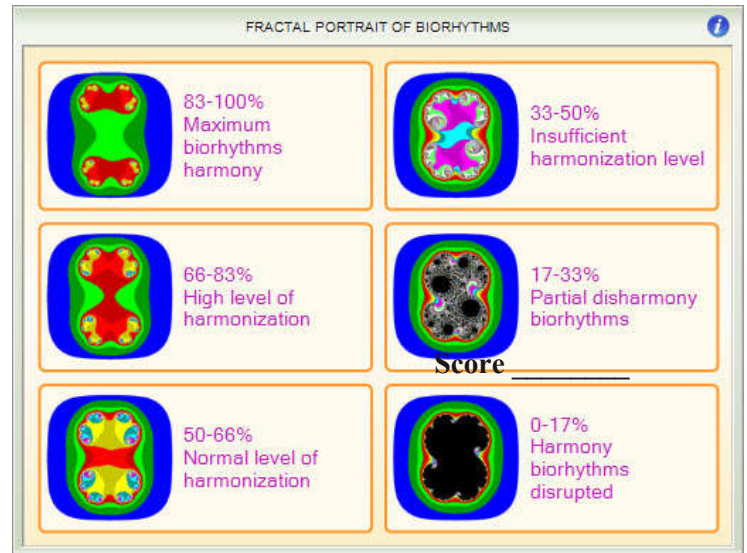
Fractal Analysis- Biorhythm Coherence

What is Biorhythm Coherence?

All systems of the body have the ability to adapt by going back and forth between active and resting states. This, for example, is seen in the electrical activity and rhythms of the heart and the brain; the breathing cycles of inspiration and expiration; blood pressure changes between systolic and diastolic blood pressure; between sympathetic (flight/flight) and parasympathetic (rest/digest).

The key is that every physiologic process has its own unique rhythm and polarity and they all need to be oscillating in harmony with the whole body. Every physiologic process has its own unique rhythm, although they are also similar but have a different time scale.

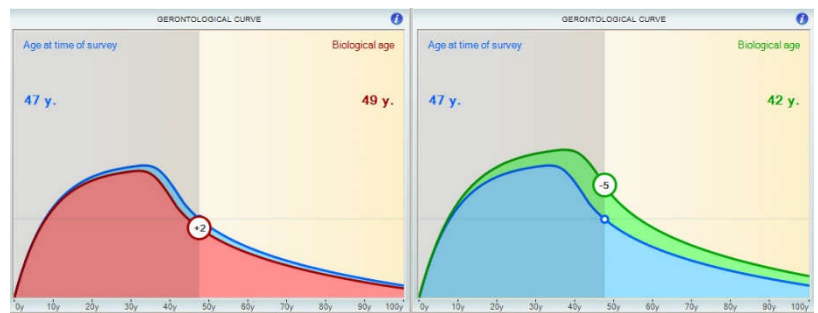
When examining one rhythm using a special mathematical system of fractal analysis from the heart rhythms, it is possible to draw conclusions about the structure and dynamics of other natural rhythms and how they are adapting in harmony with the whole body.



Score _____

Gerontological Performance Curve

Scientists took a population of 10,000 healthy people of different ages with a variety of healthy conditions and plotted this information on a bell shaped curve according to their age and where optimum would be for that age. This graph will show what your actual age is compared to your biological age. We all want to be younger than our actual age. This is a clear indication of anti-aging.

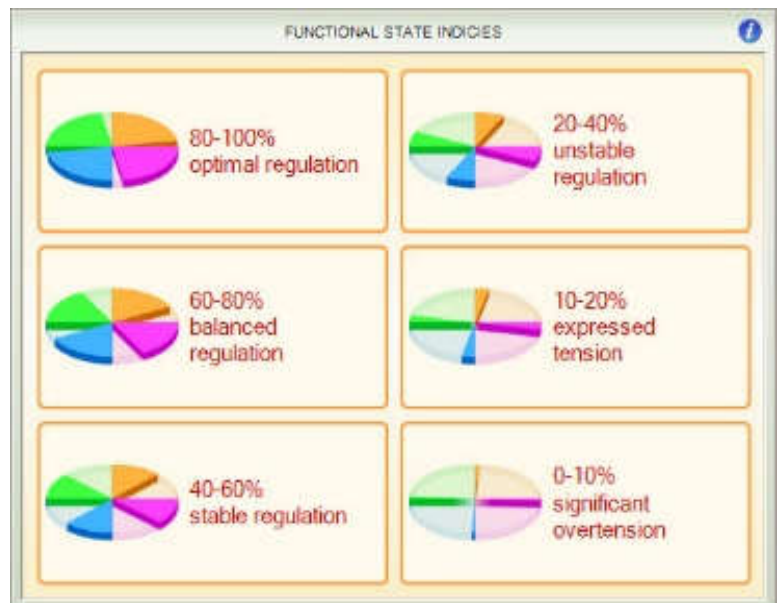


Actual Age _____ Biological Age _____

Functional State Indices

How well is the body able to compensate under stress using all its regulatory resources. Stress of all kinds contributes to all health related issues. Peak performance is looking at 4 major regulatory systems and gives us a comprehensive score. The higher the score, the better the overall health.

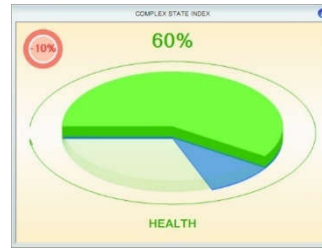
- A – Adaptation Level (Cardiovascular)
- B – Vegetative Regulation (Autonomic Nervous Sys)
- C – NeuroHormonal Regulation
- D – Psycho-Emotional State



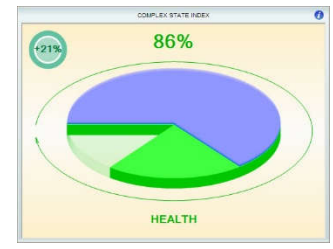
Score _____

Complex State Index

This screen is the total score of A-B-C-D to give you a percentage of total health. You will have a number with a % on the left of the pie in the small circle with a plus sign letting you know how much better the patient is over their age. This means their health capacity is good for their age. It will also tell us with a negative sign if their complex health parameters are worse than their age with a % as well.



Out of Range –Red Circle



Within Range + Green Circle

The BrainTap HRV - MAIN FEATURES

- ECG recording with real-time monitoring of functional state indices
- Assessment of the state of cardiovascular and vegetative nervous system by means of variance analysis
- Assessment of body's Neuro-hormonal regulation and energy resources by means of Neuro-dynamic analysis
- Assessment of current psycho-emotional state using the method of brain biorhythm mapping
- Assessment of organism adaptation level and level of harmonization of biological rhythms using the method of fractal analysis
- Determination of patient's biological age
- Simultaneous representation of two surveys' results with a view of comparative analysis
- Printout of survey results
- The software and the hardware of Dinamika meets the standards of measurement, physiological interpretation and clinical use of cardiac intervalometry indices, adopted by European Society of Cardiology and North American Association for Electrophysiology.
- Production facilities of Dinamika meet the quality standards ISO 9001:2008