

EIS (Electro Interstitial Scan)

The EIS is a French electrochemical device, classified as a medical device in Europe and USA. It provides qualitative information and is not designed as a quantitative measurements system (unlike blood tests). Its benefit is where it measures- in the "cell soup"- the sea that cells bathe in and which is a good reflection of cell activity. It is cell activity that is the most important part- cells make up organs which make up our operating system.



The EIS scans the whole body in 3 minutes, and provides some functional information about body organs activity and some biochemical measurements. It is designed as a rapid initial screening tool, generally used for further exploration via other devices and laboratory or medical tests. It represents the status at the time of testing- it is real time. As such the results must be matched to client situation- time of day, closeness to meals etc. Certain hormones e.g. cortisol have a daily cycle and others like female hormones have a monthly cycle.

The values and interpretation are "functional"- they are not clinical information- they are not in any way diagnostic but informative in providing aspects of a jigsaw that may help with a clearer picture and narrow further investigations.

The measurement process

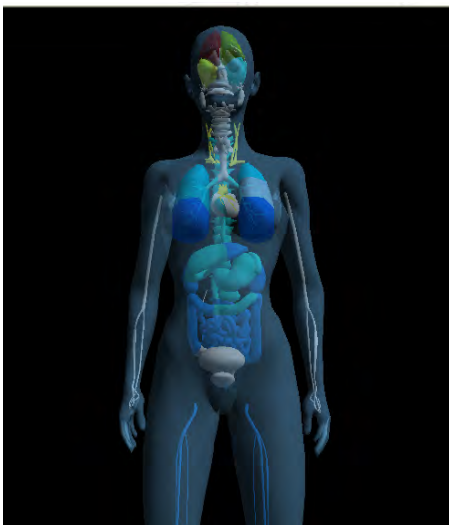
The EIS sends harmless, low voltage frequencies to and from 6 electrodes connected to the body. The computer software calculates everything based on the changes made to these signals on their path through the body. Most measurements are done based on the extracellular fluids, which is the environment of all cells. This is where the biochemistry is most important- cellular activity can be determined by looking at what goes into and out of the cells.



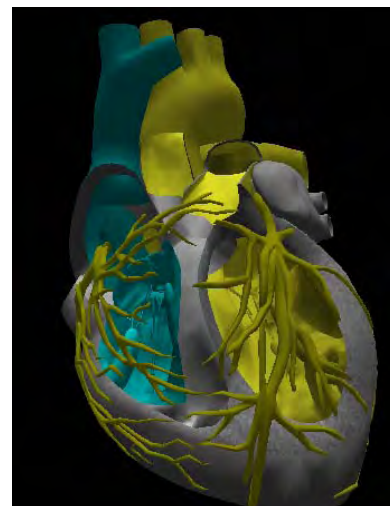
The Qualitative Information

Functional overview- principle organs are defined on a +100 to -100 scale. ("+" values represent hyper (over) -activity and "-" values hypo (under)-activity.

Overall



Heart



This covers functionality of major organ systems:

Brain Modeling:

1. Frontal lobes are the zone of the thought.
2. The limbic systems are the zone of emotions
3. The amygdalas are the zone of anguish or phobia

Heart Modeling

1. Ventricles
2. Vessels
3. Coronary
4. Baroreceptor reflex
5. Heart rate

Digestive system Modeling

1. Colons
2. Stomach
3. Liver
4. Pancreas

Urogenital and renal Modeling

1. Kidney
2. Bladder
3. Prostate
4. Uterus

Respiratory system Modeling

1. Lungs
2. Trachea and Bronchi

Thyroid Modeling

o $<-30=>$ hypo activity see the value of TSH in estimation interstitial hormone

Thymus Modeling

Spine Modeling

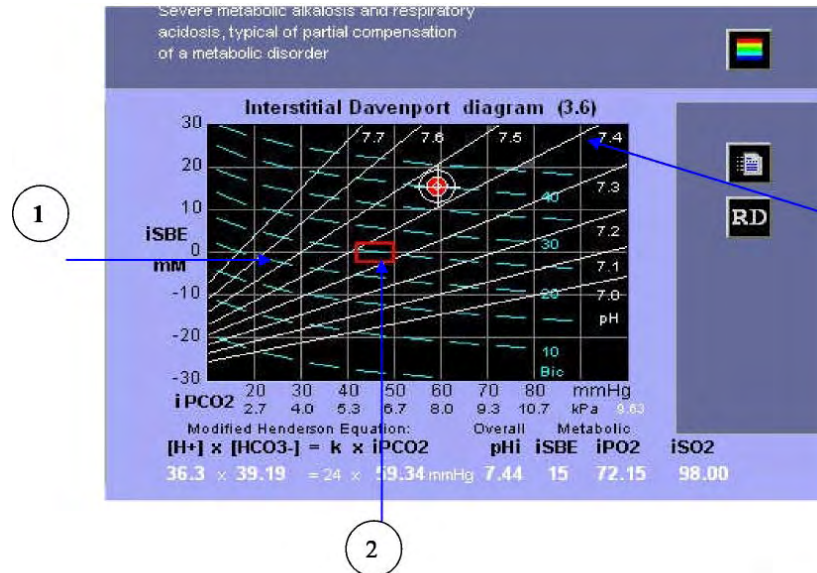
Muscular excitability Modeling

Neurovegetative or Autonomic Nervous System (A.N.S) effects Modeling

pH (acidity/alkalinity):

this is a critical function

which is very difficult to measure. An alkaline pH is a fundamental to health.



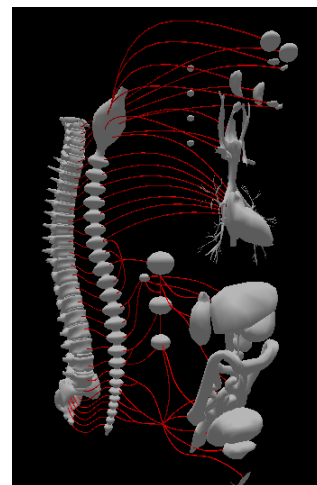
Three type or acidosis/alkalosis ratios exist:

1-Metabolic: depends of the level of the bicarbonates: Norms SBE=0. Lines of bicarbonates in blue (Bic): if the bicarbonates increased (SBE positive), the result is **metabolic alkalosis**, if the bicarbonates decreased (SBE negative), the result is **metabolic acidosis**

2-Respiratory: Norms PCO2= 46: if the PCO2 decreased (on the left), the result is respiratory alkalosis, if the PCO2 increased (on the right) , the result **is respiratory acidosis**

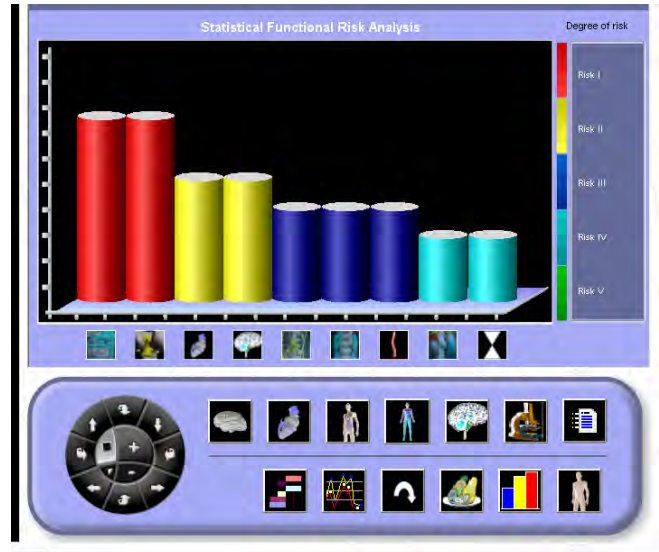
3-Interstitial Fluid **Norm**=7 .33

Autonomic Nervous System (ANS)- an organ can be under or over active from internal operation or from signaling via the autonomic nervous system. Thus if the stomach is over active and the ANS signal is high it is the signaling and not the stomach itself that needs consideration.



Risk Areas: these will be identified as possible areas of concern.

- Respiratory
- Digestive
- Immune
- Renal
- Neuromuscular
- Cardiovascular
- Endocrine
- Neurological
- Metabolic



Biochemistry- this is measured in the extracellular fluid- not as normal in laboratory tests which use bloods. The interstitial fluid and the blood hormonal assessment are completely different except for the TSH measurement. (see clinical test Botkin hospital 2006)

The estimation of interstitial fluid hormonal assessment:

1. Is more stable because this compartment is stagnant.
2. Is the true target of the hormones, the bloodstream only a way for the distribution of the hormones into the tissue.

Interpretation of the results requires some physiology knowledge, in particular the chronobiology and the peak of production of the different hormones.

Minerals levels: these are determined against for sodium, potassium, chloride, magnesium, calcium, phosphates, iron.

Hormone levels: insulin, glucose, , thyroid hormones, cortisol, adrenal corticotrophic hormone, adrenal medulary hormones, follicle stimulating hormone, oestrogen (testosterone), urea and creatinine (kidney); triglycerides (fats) and atherosclerosis index.

Interstitial values	
Thyroid Stimulating Hormone	The production of the thyroid is increased if the body temperature is too high and/or if you need to increase your metabolism (stress, effort, sport) The production of thyroid hormone reduced the TSH production (feedback effect) At normal body temperature condition, and without stress or effort: The peak will be at 11am then decrease or stable related your activity.
Thyroid hormones	
DHEA	With inflammation: The production of cortisol is increased. The production of cortisol reduces the ACTH production (feedback effect) and DHEA balance in cortico adrenal production. Without inflammation: the peak is the morning (wake up), decrease until 11am, then increase until 4pm and then decrease.
Cortisol	
ACTH adrenal corticotrophic hormone	
Aldosterone	is increased in metabolic acidosis.
AdrenoMedulary	Increase with stress, and the production is related to your activity and

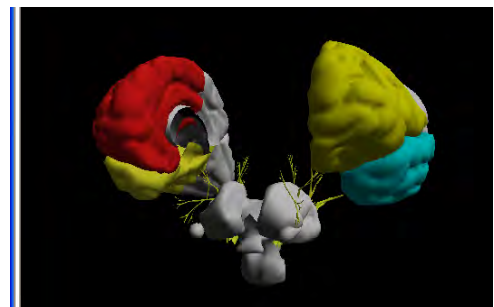
Hormones	lifestyle Reduced catecholamine are related to the symptom of fatigue.
FSH Follicle stimulating hormone	For women, related to their menstruation cycle The production of oestradiol reduces the FSH production (biofeedback effect)
Oestradiol	For men, the level of testosterone is related to the brain activity. Good news increases the level of testosterone, and bad news, depression, inflammation reduced the level of testosterone.
Insulin	Increases with food intake, in particular carbonic hydrate and sugars. Decreases if you do not eat.
PTH parathyroid hormone	hormone is related to calcemia levels.
ADH	is increased if there is dehydration.
Triglycerides	fat mass and depend on pancreatic function.
Urea	proteins concentration and kidney function.
Creatinine	muscle and kidney function
Glucose	pancreatic function and/or cell insulin resistance: When the glucose increase: possibility of microcirculation disorders cardiovascular, ocular and renal disorders.
A.I.	Ratio LDL (bad cholesterol) and HDL cholesterol (good

Neurotransmitters:

	Increased	Decreased
Serotonin	Insomnia, behaviour disorders	Depression, emotional disorders
Dopamin	addiction, hyperactivity, lack of concentration, aggressively	lack of communication, lassitude, lack of validity
Catecholamines	memory disorders, stress	lack of concentration, lack of validity, fatigue
Acetylcholin	Cranial parasympathetic increased and effects on the cardiac rate frequency (tachycardia)	Cranial parasympathetic decreased and effects on the cardiac rate frequency (bradycardia)

Brain Modeling: this can provide an indication of possible emotional disorders and whether these are recent or old.

1. Frontal lobes are the zone of the thought.
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Oxidative stress

I ONOOH	increase DNA damage	Mn
I NO	increase DNA damage	Mn
I OH-	increase DNA damage	Mn
I H2O2	Increase entropy	Se
I O2-	Increase entropy	Se

