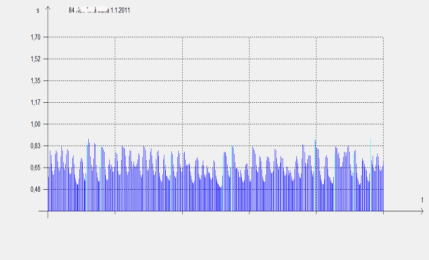
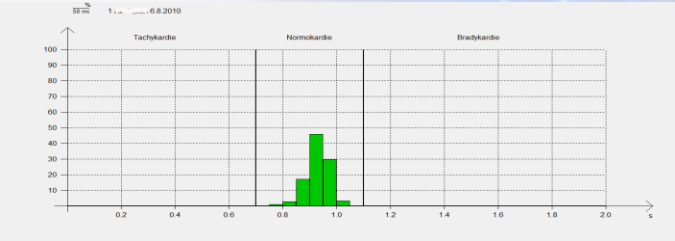
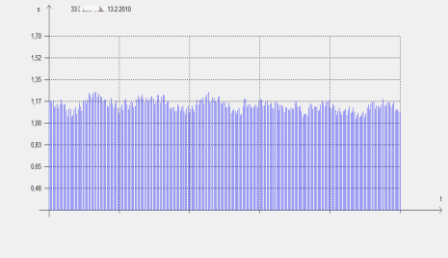
The Methodology of Heart Rate Variability in Communication

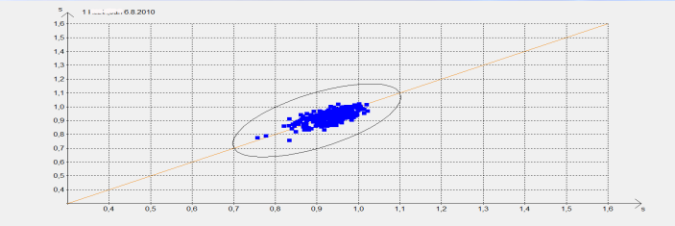
The graphs below denote optimal health in terms of communication:



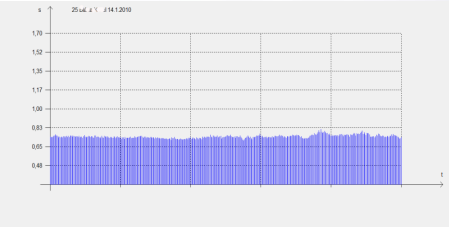


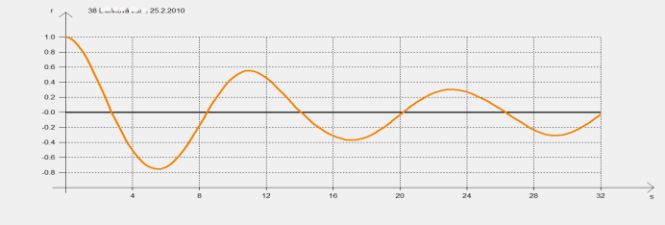
variabiliity
histogram





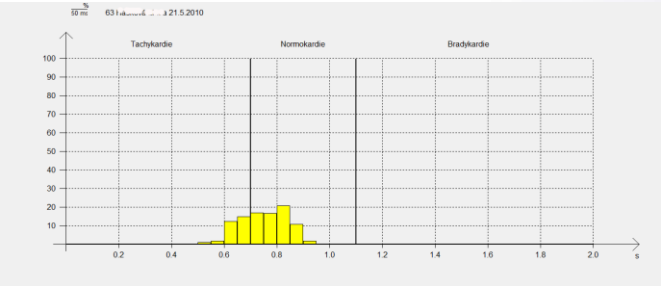
flexibility
scattergram





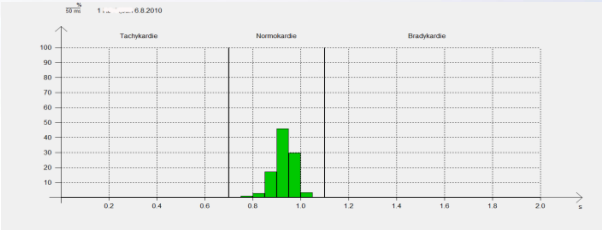
reserves
autocorrelation

Kardivar - Histograms



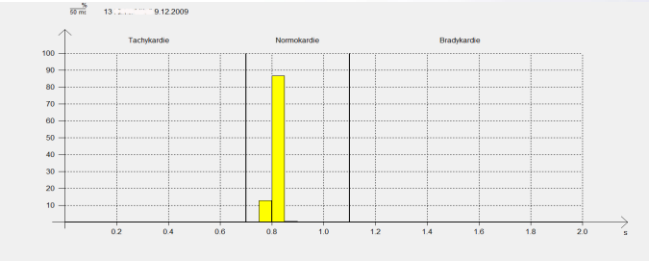
Parasympathetic (PS)Dominant

body working with little control from hypothalamus. Chaotic.



This show balance between

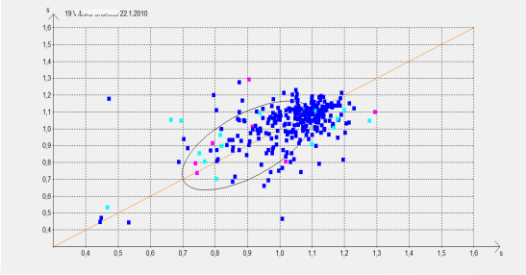
(PS v S)



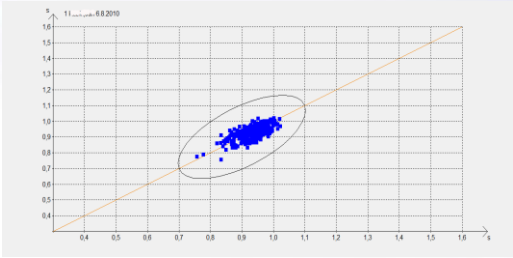
Sympathetic (S)Dominant

The body is working with too much control from hypothalamus

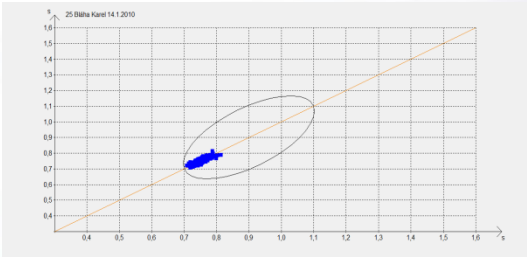
Kardivar - SCATTERGRAM



without control – collapsing system (PS)

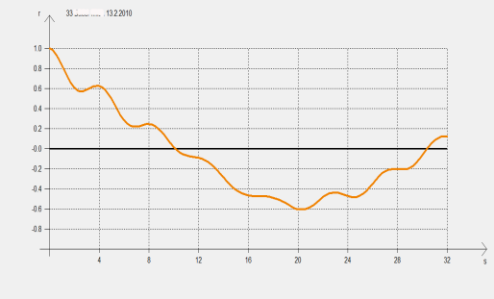


In balance - management working well, open communication



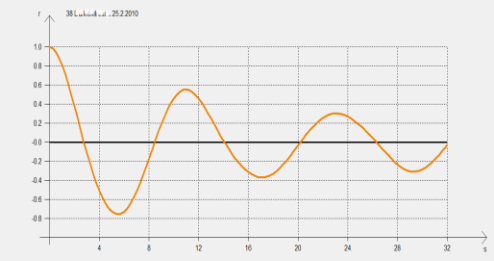
Out of balance too much control from the hypothalamus. (S)

How are reserves being used.

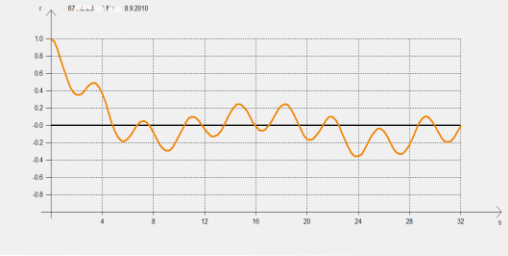


Enervation – reserves have run out.

Parasympathetic Dominance.



Balanced between PS v S. Planned work with plenty of reserves.

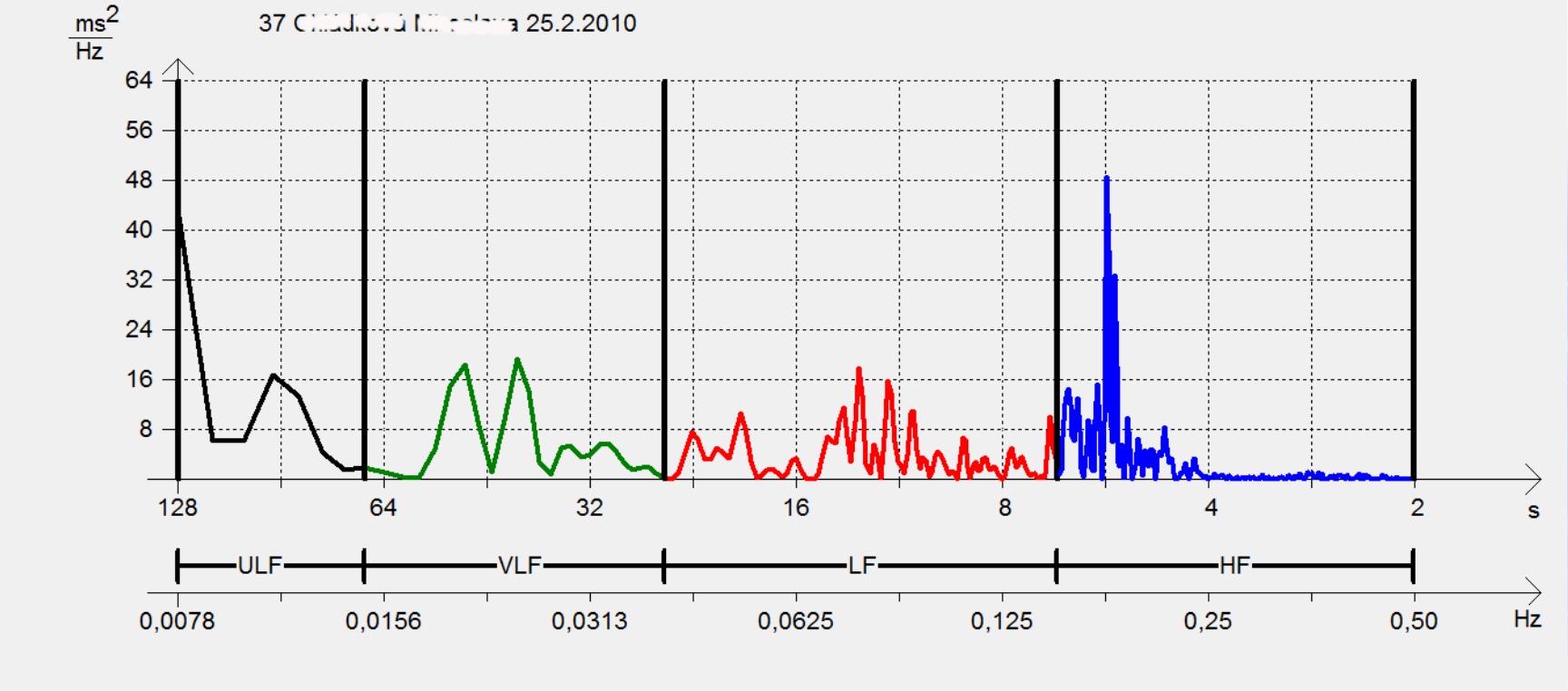


Sympathetic Dominant - reserves decrease under pressure (S)

The different coloured lines in the graph below correspond to different areas of the regulatory systems.

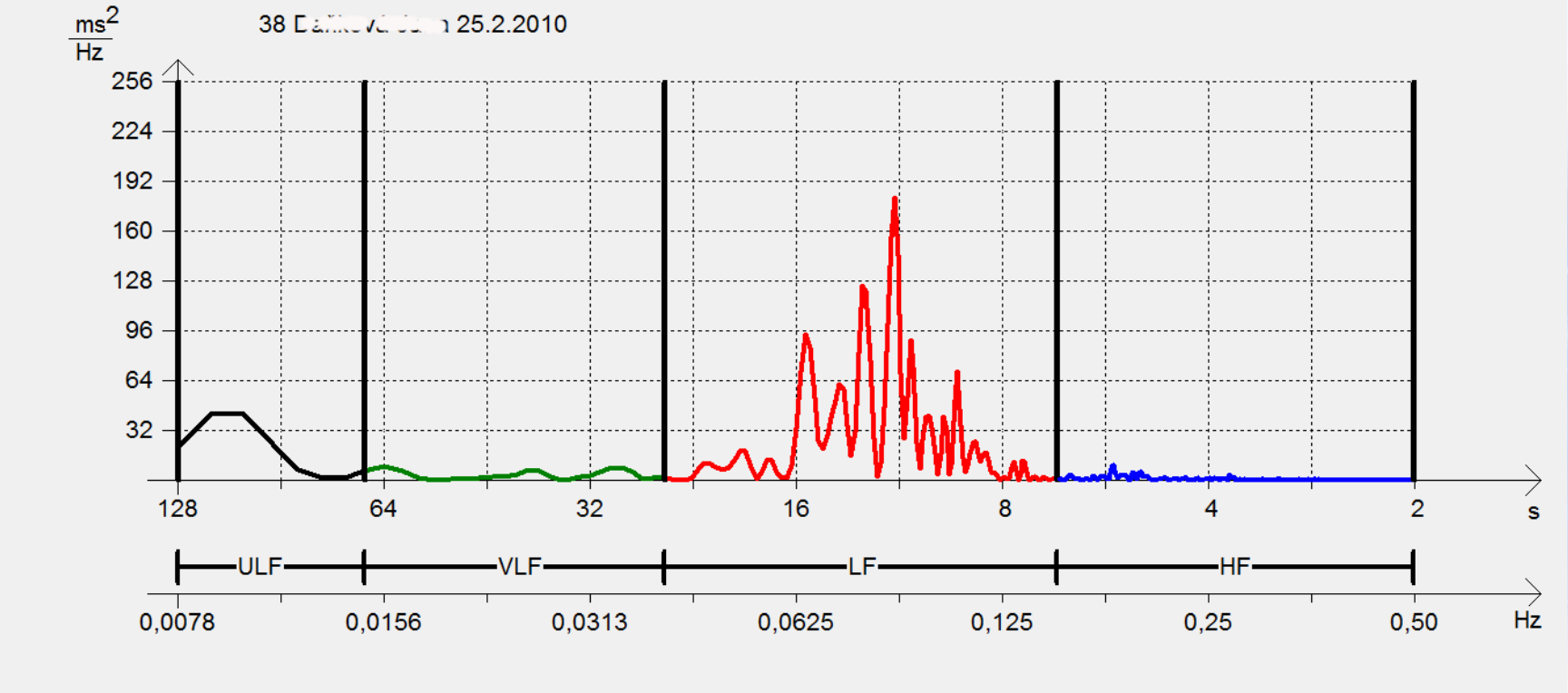
- Blue is the parasympathetic nervous system,
- The red line indicates the sympathetic nervous system,
- Green is the endocrine (hormonal) system.
- Black relates to the Limbic system but is not currently used in the calculations for heart rate variability on the Kardivar.

The graphs below show the different balances between all these systems:



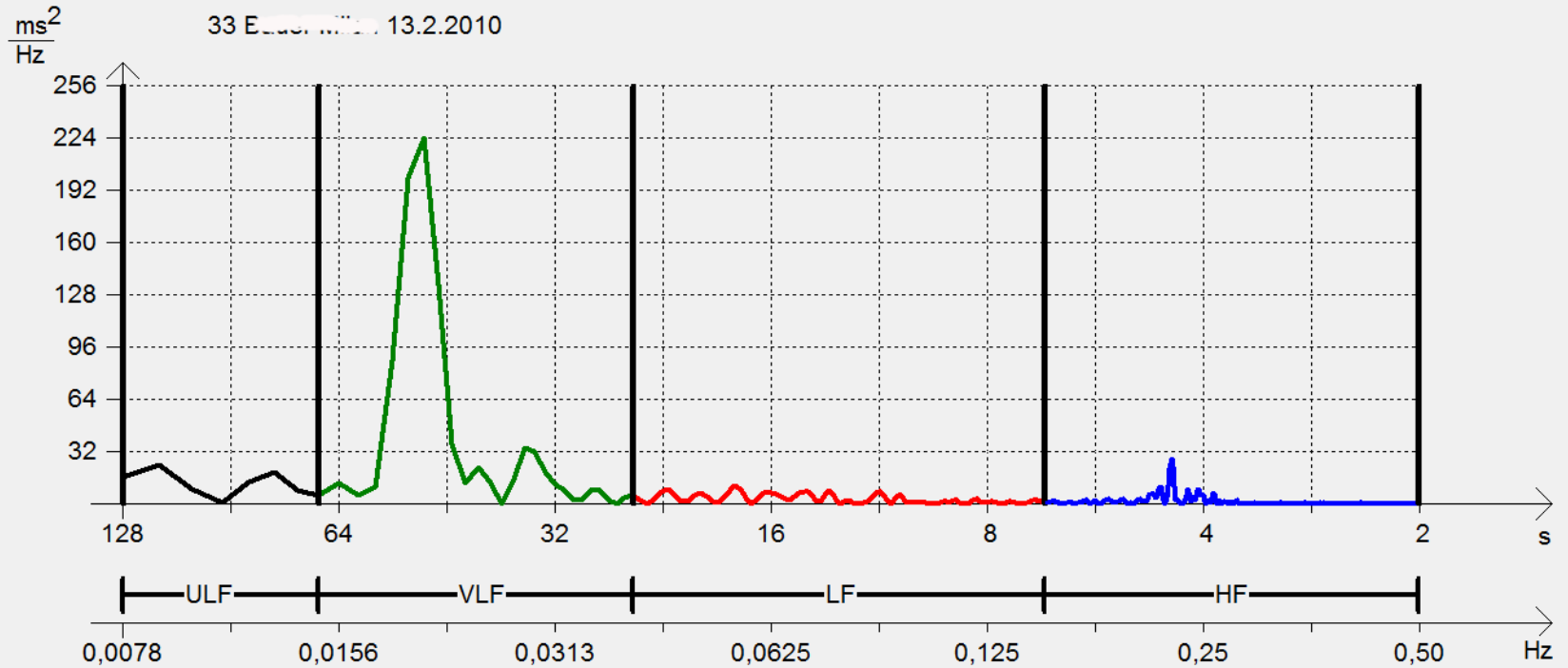
This graph below shows someone who is Parasympathetic dominant.
Blue = Parasympathetic.

The graphs below show the different balances between all these systems:



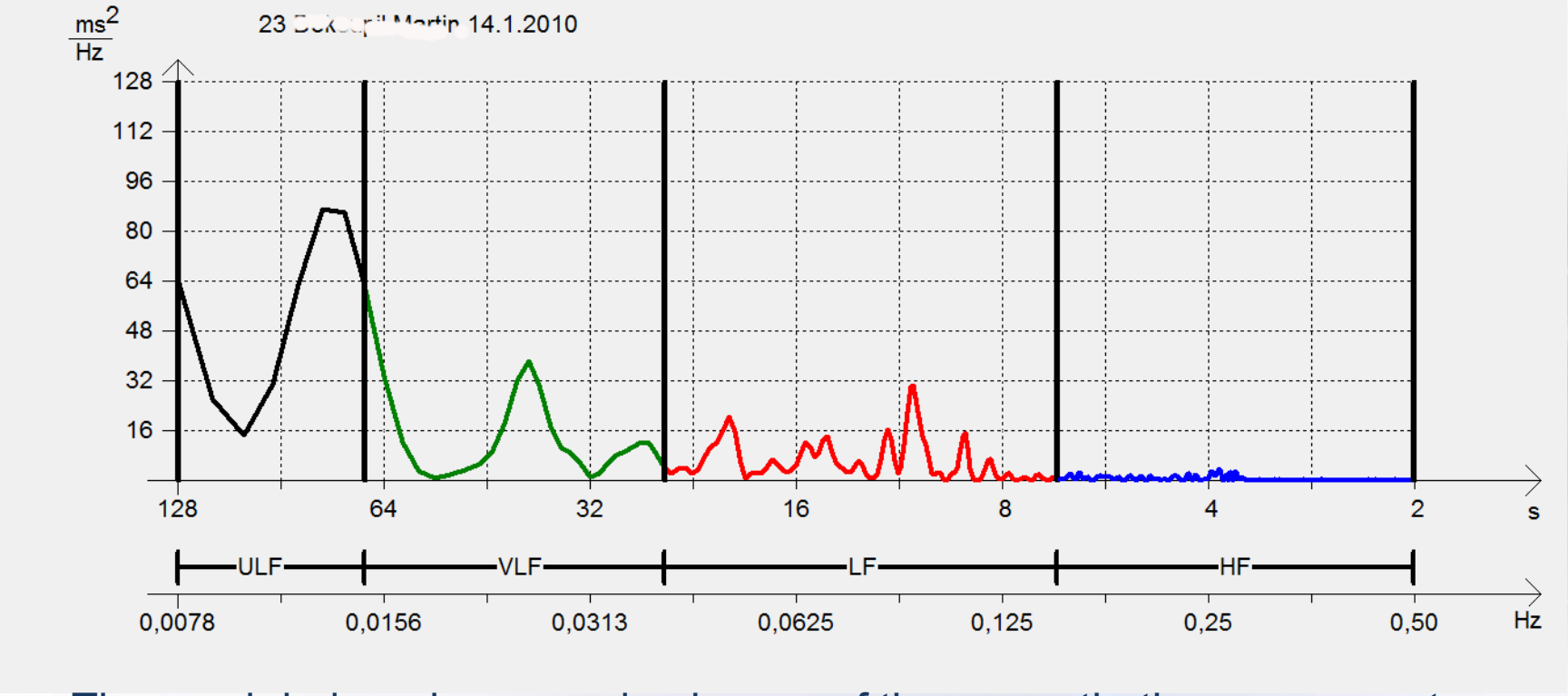
The graph below shows someone who is Sympathic dominant.
Red = Sympathetic

The graphs below show the different balances between all these systems:



The graph below shows predominance of the sympathetic nervous system in the endocrine/hormonal system (green line). The nervous system here is blocked and the hormonal/endocrine system is taking over to and maintain homeostatis.

The graphs below show the different balances between all these systems:



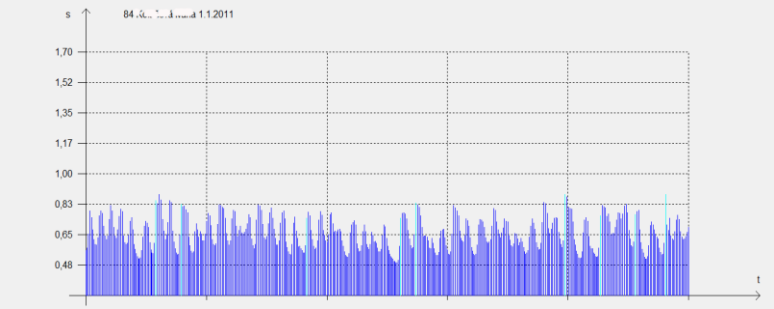
The graph below shows predominance of the sympathetic nervous system in the limbic system. The parasympathetic nervous system is blocked (blue – low variability) and the hormonal/endocrine system (green) and sympathetic system (red) is running below par. Consequently the Limbic system is taking over to try and maintain homeostasis.

Good communication and optimal health…

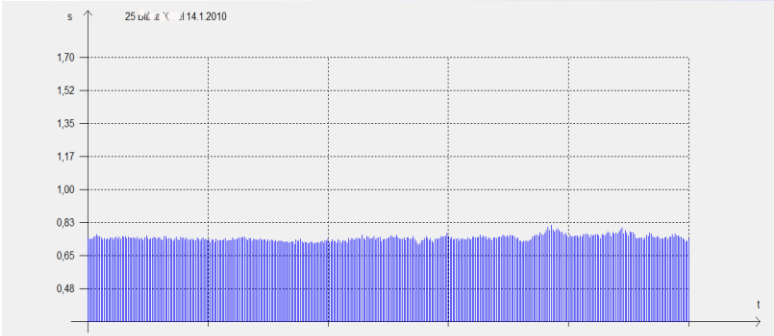
Compare the red line against the green v blue the ideal ratio should ne 2 to 1 i.e sympathetic can be 2 to the parasympathetic 1.

A less than optimal ratio would be anything extreme outside this parameter.

Imbalance between Sympathetic and Parasympathetic



This graph below shows extreme heart rate variability which is a problem. This indicates high parasympathetic influence.



The graph below shows very low heart rate variability and rigidity and this is also problem. This indicates high sympathetic dominance.

A healthy person - optimal values

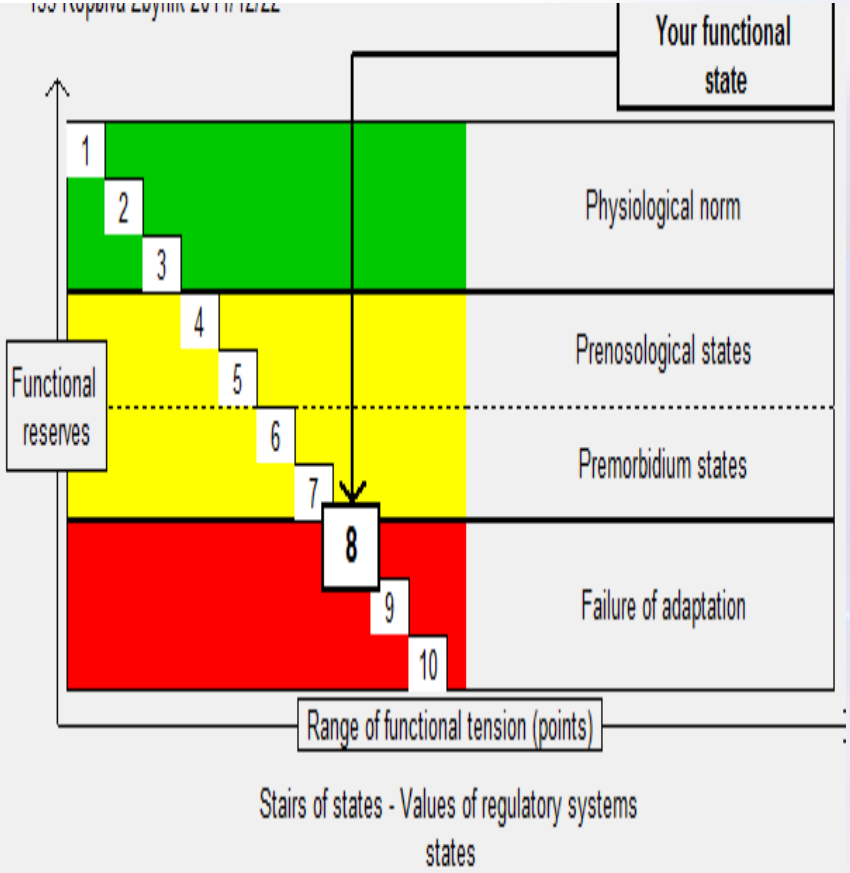
Name	Value	Norm
Heart rate (HR), bpm	68	60 - 75
Standard deviation (SDNN), ms	35.2	30 - 69
Coefficient of variation (CV), %	4.0	3 - 12
Stress index (SI), comp.un.	135	70 - 150
Index of centralization (IC), comp.un.	2.0	0.9 - 2.0
IARS, comp.un. (0, 0)	1	1 - 3
Nr. of arrythmias (NArr), %	0.0	0 - 0.5
Performance HF, %	33.6	20 - 39
Performance LF, %	35.5	15 - 39
Performance VLF, %	30.9	15 - 39
TP, ms^2	1188	1000 - 2000

Unhealthy person

This person was dead in 4 days. The * beside the values denote out of normal range and ** for very out of normal range. This reading shows extreme lack of communication between the regulatory systems.

Name	Value	Norm
Heart rate (HR), bpm	109**	60 - 75
Standard deviation (SDNN), ms	5.1**	30 - 69
Coefficient of variation (CV), %	0.9*	3 - 12
Stress index (SI), comp.un.	2161**	70 - 150
Index of centralization (IC), comp.un.	6.0**	0.9 - 2.0
IARS, comp.un. (8, 0)	8**	1 - 3
Nr. of arrythmias (NArr), %	0.2	0 - 0.5
Performance HF, %	14.2*	20 - 39
Performance LF, %	26.5	15 - 39
Performance VLF, %	59.3*	15 - 39
TP, ms^2	18**	1000 - 2000

Results



Stairs of states - Values of regulatory systems states

1-3 = perfectly balanced managemnent

4-7 = potential problems are occurring.

8-10 is the most serious situation and there is potential for the body to collapse.