Adrenal Hormone Report; saliva

HOR14 Sample Report
Age: 31   **DOB:** 07/26/1987
Sex: Male
Body Mass Index (BMI): 20.1

Sample Collection	Date/Time
Date Collected	02/12/2019
AM30	02/12/2019 0730
Noon	02/12/2019 1145
Evening	02/12/2019 1900
Night	02/12/2019 2300
Date Received	02/22/2019
Date Reported	02/27/2019

Analyte	Result	Unit	L	WRI	H	Optimal Range	Reference Interval
Cortisol AM30	8.6	nmol/L		◆ (yellow)		14.0 - 25.0	7.0 - 30.0
Cortisol Noon	13	nmol/L		◆ (yellow)		5.0 - 10.0	2.1 - 14.0
Cortisol Evening	1.2	nmol/L	⬇			2.0 - 5.0	1.5 - 8.0
Cortisol Night	<0.33	nmol/L	⬇			1.0 - 4.0	0.33 - 7.0
DHEA*	>1000	pg/mL			⬆		137 - 336

Cortisol Graph
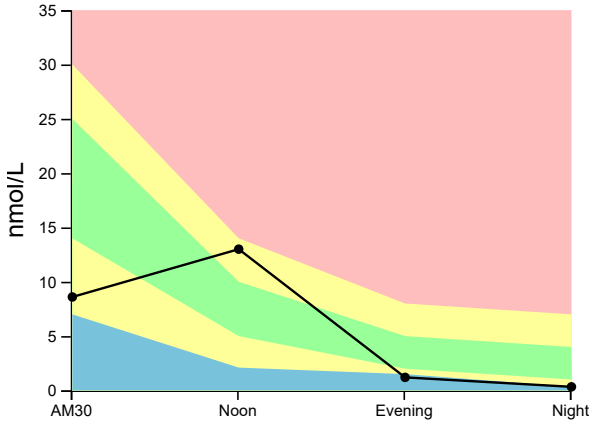
Adrenal Phase: 1

Hormone Comments:

- The upper range cortisol level(s) and diurnal pattern are consistent with hypothalamic pituitary axis (HPA) dysregulation (Phase 1).
- DHEA level is consistent with stress response or supplementation.

Notes:
The DHEA result was confirmed via repeat analysis.
RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above RI)
The current samples are routinely held three weeks from receipt for additional testing.

*This test was developed and its performance characteristics determined by Doctor's Data, Inc. The FDA has not approved or cleared this test; however, FDA clearance or approval is not currently required for clinical use. The results are not intended to be used as the sole means for clinical diagnosis or patient management decisions.

Methodology: Enzyme Immunoassay

Neuro Basic Profile; urine

Analyte	Result	Unit per Creatinine	L	WRI	H	Reference Interval
Serotonin	49.4	µg/g				50 - 98
Dopamine	154	µg/g				110 - 200
Norepinephrine	15.4	µg/g				18 - 42
Epinephrine	2.6	µg/g				1.3 - 7.3
Norepinephrine / Epinephrine ratio	5.9					< 12
Glutamate	16	µmol/g				9.0 - 40.0
Gamma-aminobutyrate (GABA)	3.7	µmol/g				1.6 - 3.5
Glycine	1198	µmol/g				350 - 1500
Histamine	15	µg/g				12 - 30
Phenethylamine (PEA)	211	nmol/g				26 - 70
Creatinine	182	mg/dL				35 - 240

Neurotransmitter Comments:

- Urinary neurotransmitter levels provide an overall assessment of the body's ability to make and break down neurotransmitters and are representative of whole body levels. They are required for neurotransmission throughout the body. Direct assessment of neurotransmitter levels and metabolism in the central nervous system is not clinically feasible and approximately twenty percent of the total urinary levels are derived from the brain. The enzymes, cofactors and precursors in neurotransmitter metabolism in general are the same in the periphery and in the central nervous system. Therefore, alterations in urinary neurotransmitter levels assessed in urine provide important clinical information, and may be associated with many symptoms including cognitive and mood concerns, diminished drive, fatigue and sleep difficulties, cravings, addictions and pain.
- Low serotonin may contribute to mood concerns including anxiety, OCD, depression, anger and a sense of discontentment. Low serotonin may also be associated with poor sleep quality and appetite changes, as well as chronic fatigue, rheumatoid arthritis, and over-all lassitude. Failure to regenerate tetrahydrobiopterin [BH4], an essential cofactor for serotonin synthesis, may decrease serotonin levels, and could be reflected in urine. BH4 regeneration may be supported by folates, vitamin B3, C, molybdenum and zinc. Additionally, production of serotonin requires vitamin D, iron and vitamin B6. Tryptophan is the essential precursor of serotonin. 5-HTP may increase serotonin, and L-theanine may affect serotonin function.
- Low norepinephrine and low range epinephrine may be associated with depression and mood changes as well as fatigue, difficulty concentrating, decreased ability to stay focused on tasks and diminished sense of personal/professional drive. Norepinephrine is converted from dopamine requiring vitamin C, copper and niacin (B3). L-tyrosine, L-theanine and Mucuna pruriens influence this pathway.
- Elevated GABA may contribute to difficulty concentrating, diminished memory, dampened mood and decreased cognitive processing as well as fatigue, decreased exercise endurance, sleepiness and an inability to feel alert. Elevated GABA levels may be compensatory in the presence of elevated excitatory neurotransmitters, and may result with gabapentin use. L-theanine may modulate the effects of elevated GABA levels. Elevated GABA levels may be associated with bacterial overgrowth (i.e. urinary tract infection or gastrointestinal dysbiosis).
- Elevated phenethylamine (PEA) may contribute to anxiety, with very high levels having amphetamine-like effects. Elevations in PEA may occur due to supplementation, use of monoamine oxidase inhibitors or antipsychotic medications, high protein diets, and production by protein-fermenting gut microbes. PEA and other trace amines are found in fermented foods (wine, cheese, chocolate, etc.). Elevated PEA levels may be associated with higher cortisol levels.
- Considerations to address the demonstrated imbalances beyond the identified co-factors and amino acid precursors may include dosage adjustments if indicated, as well as nervine and adaptogenic herbs, methylation support, vitamin D, and gastrointestinal health optimization.

Notes:
Results are creatinine corrected to account for urine dilution variations. Creatinine is not meant to be used as an indicator of renal function.
RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above RI)
Methodology: LCMS QQQ,Creatinine by Jaffe Reaction

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