



# Adrenal Hormone Report



### Order: SAMPLE REPORT



Client #: 12345  
Doctor: Sample Doctor  
Doctor's Data, Inc.  
3755 Illinois Ave.  
St. Charles, IL 60174

### Patient: Sample Patient

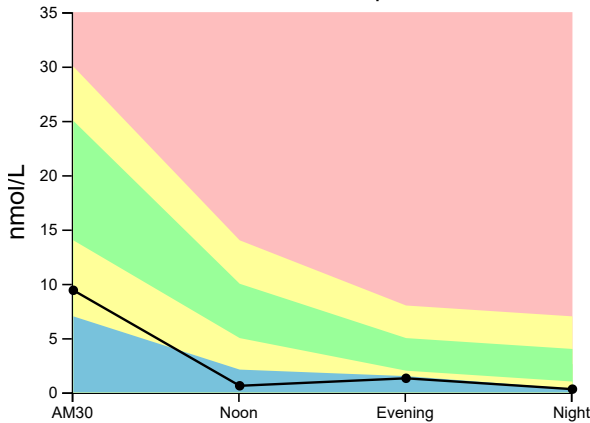
Age: 21  
Sex: Male

### Sample Collection Date/Time

Date Collected 02/22/2022  
AM30 02/22/2022 06:00  
Noon 02/22/2022 12:00  
Evening 02/22/2022 17:00  
Night 02/22/2022 22:00  
Date Received 02/23/2022  
Date Reported 02/24/2022

Analyte	Result	Unit	L	WRI	H	Optimal Range	Reference Interval
Cortisol AM30	9.4	nmol/L		◆		14.0 – 25.0	7.0 – 30.0
Cortisol Noon	0.61	nmol/L	↓			5.0 – 10.0	2.1 – 14.0
Cortisol Evening	1.3	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*	310	pg/mL		◆			137 – 336

Cortisol Graph



### Hormone Comments

- Diurnal cortisol pattern is consistent with evolving (Phase 2) HPA axis (adrenal gland) dysfunction.

### Adrenal Phase: 2



### Notes:

The current samples are routinely held three weeks from receipt for additional testing.

RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above RI)

\*This test was developed and its performance characteristics determined by Doctor's Data Laboratories in a manner consistent with CLIA requirements. The U. S. Food and Drug Administration (FDA) has not approved or cleared this test; however, FDA clearance is not currently required for clinical use. The results are not intended to be used as a sole means for clinical diagnosis or patient management decisions.

Methodology: Enzyme Immunoassay

**Order:** SAMPLE REPORT**Test:** U123456-7890**Client #:** 12345**Doctor:** Sample Doctor

Doctor's Data, Inc.

3755 Illinois Ave.

St. Charles, IL 60174

**Patient:** Sample Patient**Age:** 21**Sex:** Male**Body Mass Index (BMI):** 20.0**Sample Collection Date/Time****Date Collected** 03/02/2022**Wake Up Time** 07:30**Collection Period** 1st morning void**Date Received** 03/03/2022**Date Reported** 03/04/2022

Analyte	Result	Unit per Creatinine	L	WRI	H	Reference Interval
Serotonin	58.6	µg/g				50 – 98
Dopamine	169	µg/g				110 – 200
Norepinephrine	20.5	µg/g				18 – 42
Epinephrine	5.4	µg/g				1.3 – 7.3
Norepinephrine / Epinephrine ratio	3.8					< 13
Glutamate	16	nmol/g				9.0 – 40.0
Gamma-aminobutyrate (GABA)	3.9	nmol/g				1.6 – 3.5
Glycine	1585	nmol/g				350 – 1500
Histamine	27	µg/g				12 – 30
Phenethylamine (PEA)	26	nmol/g				26 – 70
Creatinine	72.3	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. Neurotransmitters are secreted all through the body, in neurons of both the central and peripheral nervous systems. 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 range serotonin may contribute to mood concerns including anxiety, OCD, depression, anger and a sense of discontentment. Low range 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.
- 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).
- Glycine is a non-essential amino acid that acts as an inhibitory neurotransmitter in the central nervous system. Elevated glycine levels may be associated with compromised cognitive processing. Elevated levels may be seen with glycine supplementation. Glycine may be given in conjunction with pharmaceutical agents when supporting schizophrenia or psychosis. Lipoic acid may enhance glycine break down. Break down of glycine requires vitamin B6 and tetrahydrofolate as cofactors. Note: High levels of glycine may interact with clozapine and decrease its clinical efficacy.
- 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.

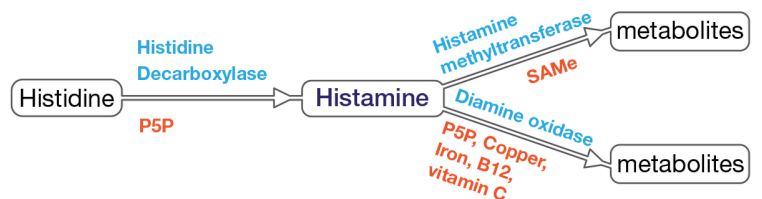
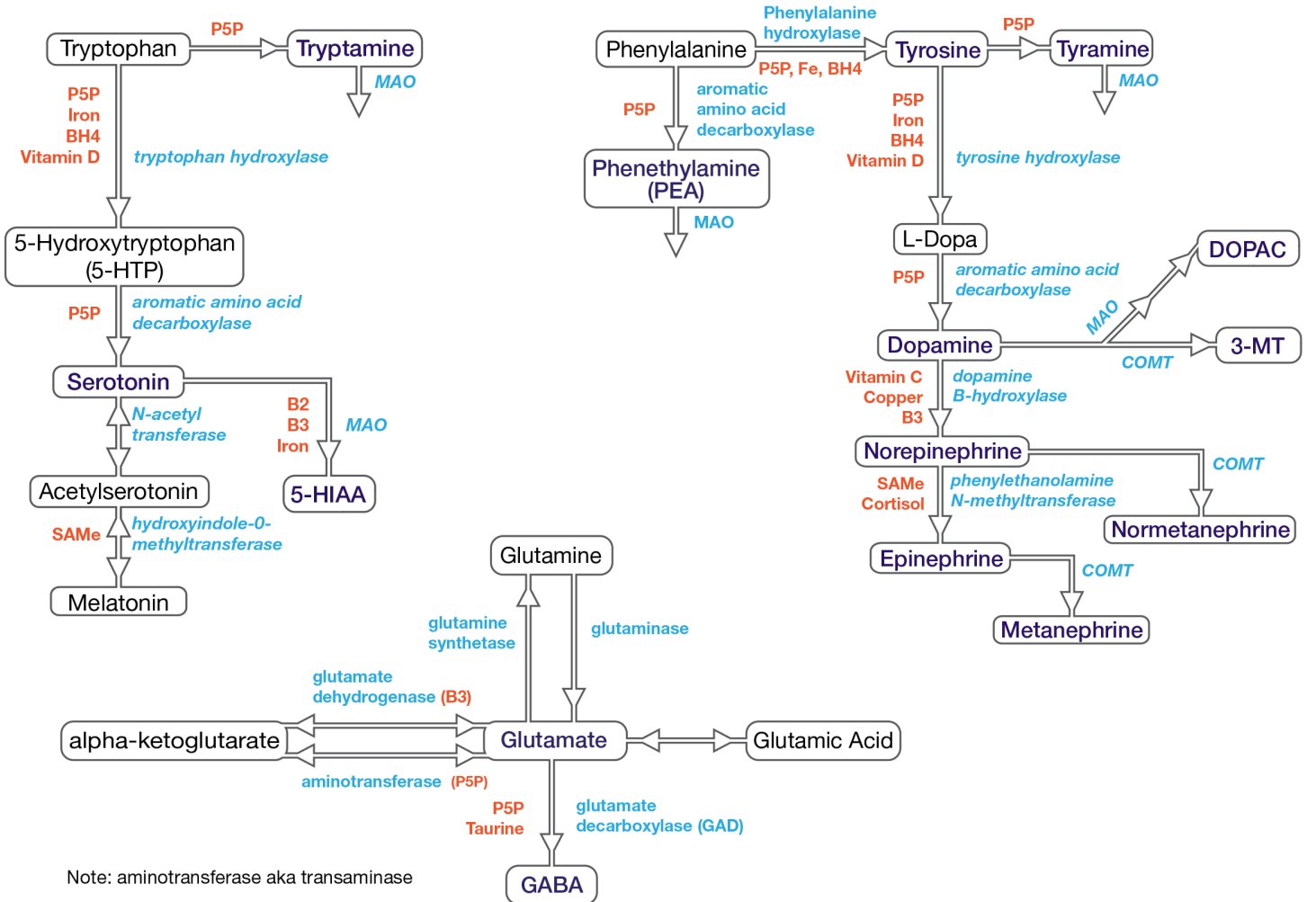
**Notes:**

Results are creatinine corrected to account for urine dilution variations. Creatinine is not meant to be used as an indicator of renal function.

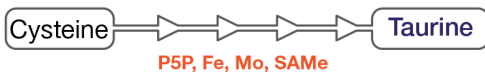
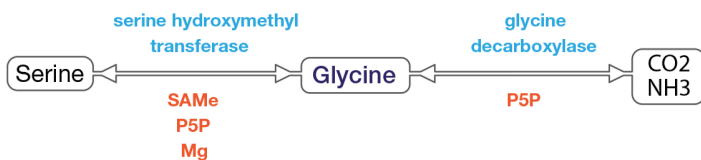
RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above RI)

Methodology: LCMS QQQ, Creatinine by Jaffe Reaction

# NT Neurotransmitter Pathways



"glycine cleavage system"



## KEY

**MAO** = monoamine oxidase

Cofactors for **MAO**: **B2, B3, P5P, Fe, Mg**

**COMT** = catechol-o-methyl-transferase

Cofactors for **COMT**: **SAmE, Mg**

**P5P** = (pyridoxal-5-phosphate) activated form of vitamin B6

**BH4** = (tetrahydrobiopterin)

Endogenous levels can be supported with SAmE, vitamin B3, C, Mo, Zn

**MTHF** = (methyltetrahydrofolate) active form of folate.

**SAmE** = endogenous levels can be supported with Mg, MTHF, and methylcobalamin supplementation.

Cofactors = ■

Enzymes = ■