



Order: SAMPLE REPORT

Client #: 12345 Doctor: John Smith, MD Doctors Data Inc 3755 Illinois Ave St. Charles, 60175 IL Patient: Sample Patient Age: 51 DOB: 01/01/1966 Sex: Female Menopausal Status: Post-Menopausal

Sample Collection	Date/Time
Date Collected	01/01/2017
Morning	01/01/2017 0800
Noon	01/01/2017 1200
Evening	01/01/2017 1700
Night	01/01/2017 2100
Wake Up Time	01/01/2017 0800
Date Received	01/04/2017
Date Reported	01/06/2017

Analyte	Result	Unit	L	WR	H Optima	al Range	Reference In	terval
<b>Cortisol Morning</b>	0.67	nmol/L	↓		18 - 35		5.1-40	
Cortisol Noon	1.3	nmol/L	+		6.0 - 12	2	2.1 - 16	
Cortisol Evening	0.46	nmol/L	➡		2.0 - 5.	0	1.5-8.0	
Cortisol Night	1.1	nmol/L		$\diamond$	1.0 - 4.	0	0.33 - 7.0	
DHEA*	44	pg/mL	+				106 - 300	



## Hormone Comments:

- Diurnal cortisol pattern and reported symptoms are consistent with established (Phase 3) HPA axis (adrenal gland) dysfunction.
- While DHEA levels are expected to decline with age (adrenopause), the DHEA level measured here is below the age related decline. The low DHEA level may warrant supplementation for optimal well being. Note: Supplementation with DHEA may increase testosterone and/or estradiol levels.

#### Notes:

L (blue)= Low (below range), WR (green)= Within Range (optimal), WR (yellow)= Within Range (not optimal) H (red)= High (above range) \*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



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Analyte	Result	Unit	L	WR	н	Reference Inte	nterval Supplementation Range**			
Estrone (E1)*	15	pg/mL		$\diamond$		< 47				
Estradiol (E2)	<0.5	pg/mL	↓			0.5-3.2		1.5-7.2		
Estriol (E3)*	<5.0	pg/mL				< 66		67 - 708		
EQ (E3 / (E1 + E2)) Ratio	0.31		↓			> 1.0				
Progesterone (Pg)	27	pg/mL				18 - 126		500 - 3000		
Pg/E2 Ratio	54.2		↓			200 - 600				
Testosterone	30	pg/mL				6.0-49		30 - 60		
DHEA*	44	pg/mL	Ļ			106 - 300				



# Hormone Comments:

- The Estrogen Quotient (EQ) is low and estradiol is below the reference range. Estriol is less potent than the other estrogens and when present in sufficient quantities (as indicated by an optimal EQ) it plays an antagonistic role, and may govern the proliferative effects of estrone and estradiol. Estriol and estradiol (e.g. Biest E3:E2; 4:1 ratio) supplementation are considerations to balance this quotient and address the estrogen deficiency symptoms.
- Progesterone to estradiol (Pg/E2) ratio and reported symptoms are consistent with progesterone insufficiency (estrogen dominance). Supplementation with topical progesterone to correct this relative deficiency is a consideration.
- While DHEA levels are expected to decline with age (adrenopause), the DHEA level measured here is below the age
  related decline. The low DHEA level may warrant supplementation for optimal well being. Note: Supplementation with
  DHEA may increase testosterone and/or estradiol levels.

### Notes:

L (blue)= Low (below range), WR (green)= Within Range (optimal), WR (yellow)= Within Range (not optimal) H (red)= High (above range)

The Pg/E2 ratio is an optimal range established based on clinical observation. Progesterone supplementation is generally required to achieve this level in men and postmenopausal women.

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\*\*If supplementation is reported then the supplementation ranges will be graphed. The supplementation ranges depicted are for informational purposes only and were derived from a cohort of adult men and women utilizing physiologic transdermal bioidentical hormone therapy.

Methodology: Enzyme Immunoassay





**Order: SAMPLE REPORT** Patient: Sample Patient Sample Collection Date/Time Age: 51 DOB: 01/01/1966 **Date Collected** 01/01/2017 Sex: Female Morning 01/01/2017 0800 Client #: 12345 Noon 01/01/2017 1200 Doctor: John Smith, MD Menopausal Status: Post-Menopausal Evening 01/01/2017 1700 Doctors Data Inc Night 01/01/2017 2100 3755 Illinois Ave Wake Up Time 0800 St. Charles, 60175 IL **Date Received** 01/04/2017 **Date Reported** 01/06/2017

Analyte	Result	Unit per Creatinine	L	WR	н	Reference Interval
Serotonin	94.00	µg/g				52 - 155
Gamma-aminobutyrate (GABA)	3.20	nmol/g				1.6-8
Dopamine	265.00	µg/g				95-275
Norepinephrine	33.90	µg/g				15 - 78
Epinephrine	6.00	µg/g				1 - 11.1
Glutamate	11.00	nmol/g				10-52
Glycine	3600	nmol/g				350 - 3500
Histamine	22.15	µg/g				12-66
Phenethylamine (PEA)	11.9	nmol/g				20 - 176
Norepinephrine / Epinephrine ratio	5.65					< 11
Creatinine	143.00	mg/dL				

## 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.
- Upper range dopamine may be associated with repetitive behaviors, increased worry, distrust of others and decreased ability to interact socially, and is often found in patients
  with attention deficits and hyperactivity. Medications that may increase dopamine levels include L-dopa, methyldopa, select antidepressants and some ADD/ADHD medications.
  L-theanine may modulate catecholamine effects. Metabolism requires vitamins B2, B3 SAMe, magnesium, and iron, while conversion to norepinephrine requires vitamin C,
  copper and vitamin B3.
- Low range glutamate may be associated with depression, increased addictive tendencies including food seeking behaviors, and can contribute to mental fatigue and diminished mental stimulation. L-glutamine is a precursor amino acid.
- Elevated glycine levels may be associated with diminished intellectual functioning and adaptive behavior. Elevated levels may be seen with glycine supplementation, often used 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.
- Low phenethylamine (PEA) may be associated with depression, attention deficits and hyperactivity (ADHD), Parkinson's disease and bipolar disorder. Phenylalanine is the precursor amino acid to PEA, and vitamin B6 is a required co-factor in the conversion to this primary trace amine. Use of Reserpine can result in depletion of PEA.
- 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.