# Adrenal Hormone Report

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

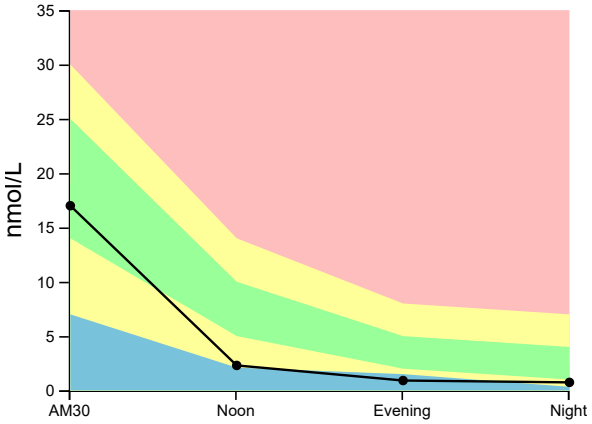
**Patient:** Sample Patient
**Age:** 54
**Sex:** Female

**Menopausal Status:** Post-menopausal

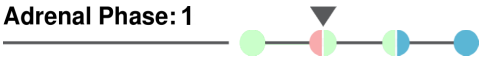
| Sample Collection | Date/Time |
|---|---|
| **Date Collected** | 02/22/2022 |
| **AM30** | 02/22/2022 06:00 |
| **Noon** | 02/22/2022 12:00 |
| **Evening** | 02/22/2022 17:00 |
| **Night** | 02/22/2022 22:00 |
| **Date Received** | 02/23/2022 |
| **Date Reported** | 02/24/2022 |

| Analyte | Result | Unit | L | WRI | H | Optimal Range | Reference Interval |
|---|---|---|---|---|---|---|---|
| **Cortisol AM30** | 17 | nmol/L | | ◆ | | 14.0 – 25.0 | 7.0 – 30.0 |
| **Cortisol Noon** | 2.3 | nmol/L | | ◆ | | 5.0 – 10.0 | 2.1 – 14.0 |
| **Cortisol Evening** | 0.91 | nmol/L | ↓ | | | 2.0 – 5.0 | 1.5 – 8.0 |
| **Cortisol Night** | 0.74 | nmol/L | | ◆ | | 1.0 – 4.0 | 0.33 – 7.0 |
| **DHEA*** | 85 | pg/mL | ↓ | | | | 106 – 300 |

Cortisol Graph




**Adrenal Phase:** 1



## Hormone Comments

- AM cortisol level appears adequate, although the suboptimal diurnal cortisol pattern is suggestive of early (Phase 1) HPA axis (adrenal gland) dysfunction.
- DHEA levels typically decline with age and the level measured here is below the reference range. Note: Supplementation with DHEA may increase testosterone and/or estradiol levels.

**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

# 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:** 54
**Sex:** Female

**Menopausal Status:** Post-menopausal

| 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 | Reference Interval | Supplementation Range** |
|---|---|---|---|---|---|---|---|
| **Estrone (E1)*** | 32.8 | pg/mL | | ◆ | | < 35 | |
| **Estradiol (E2)** | 0.60 | pg/mL | | ◆ | | 0.5 – 3.2 | 1.0 – 6.0 |
| **Estriol (E3)*** | <5.0 | pg/mL | ↓ | | | 7.5 – 66 | 45 – 680 |
| **EQ (E3 / (E1 + E2)) Ratio** | 0.15 | | ↓ | | | ≥ 1.0 | |
| **Progesterone (Pg)** | 30 | pg/mL | | ◆ | | 18 – 130 | 400 – 4000 |
| **Pg/E2 Ratio†** | 50.0 | | | | | | ≥ 200 |
| **Testosterone** | 13 | pg/mL | | ◆ | | 6 – 49 | 25 – 60 |
| **DHEA*** | 85 | pg/mL | ↓ | | | 106 – 300 | |

## Hormone Comments

- Suboptimal estradiol may warrant supplementation for bone, brain, vascular, and cognitive benefits.
- Low estriol levels are often associated with vaginal dryness.
- Henry Lemon MD developed the Estrogen Quotient (EQ), a simple ratio of the cancer protective E3 relative to the proliferative estrogens E1 and E2, to assess breast cancer risk. A lower number (<1.0) indicates increased risk, and a higher number (>1.0) signifies lower risk. Dr. Lemon stated that for maximum protection, an optimal EQ is >1.5.
- The Estrogen Quotient (EQ) is low. Estriol supplementation is a consideration to balance this quotient and reduce associated risks.
- A lack of ovulation in menopause results in a state of progesterone insufficiency. An in range Pg/E2 ratio in this stage is only attainable with progesterone supplementation. Progesterone supplementation is a consideration to benefit breast tissue, mood, cognition, cardiovascular and bone health.
- DHEA levels typically decline with age and the level measured here is below the reference range. Note: Supplementation with DHEA may increase testosterone and/or estradiol levels.
- Supplementation reference ranges are based on adherence to proper dosage interval(s). Please visit https://www.DoctorsData.com/Resources/BestPractices.pdf for more information.

**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.
†The Pg/E2 ratio is an optimal range established based on clinical observation. Reference intervals for Pg/E2 ratio have not been established in males and post-menopausal women who are not supplementing with progesterone and/or estrogens.
**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

# Neuro Basic Profile; urine

DOCTOR'S DATA INC.

**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:** 54
**Sex:** Female
**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 |

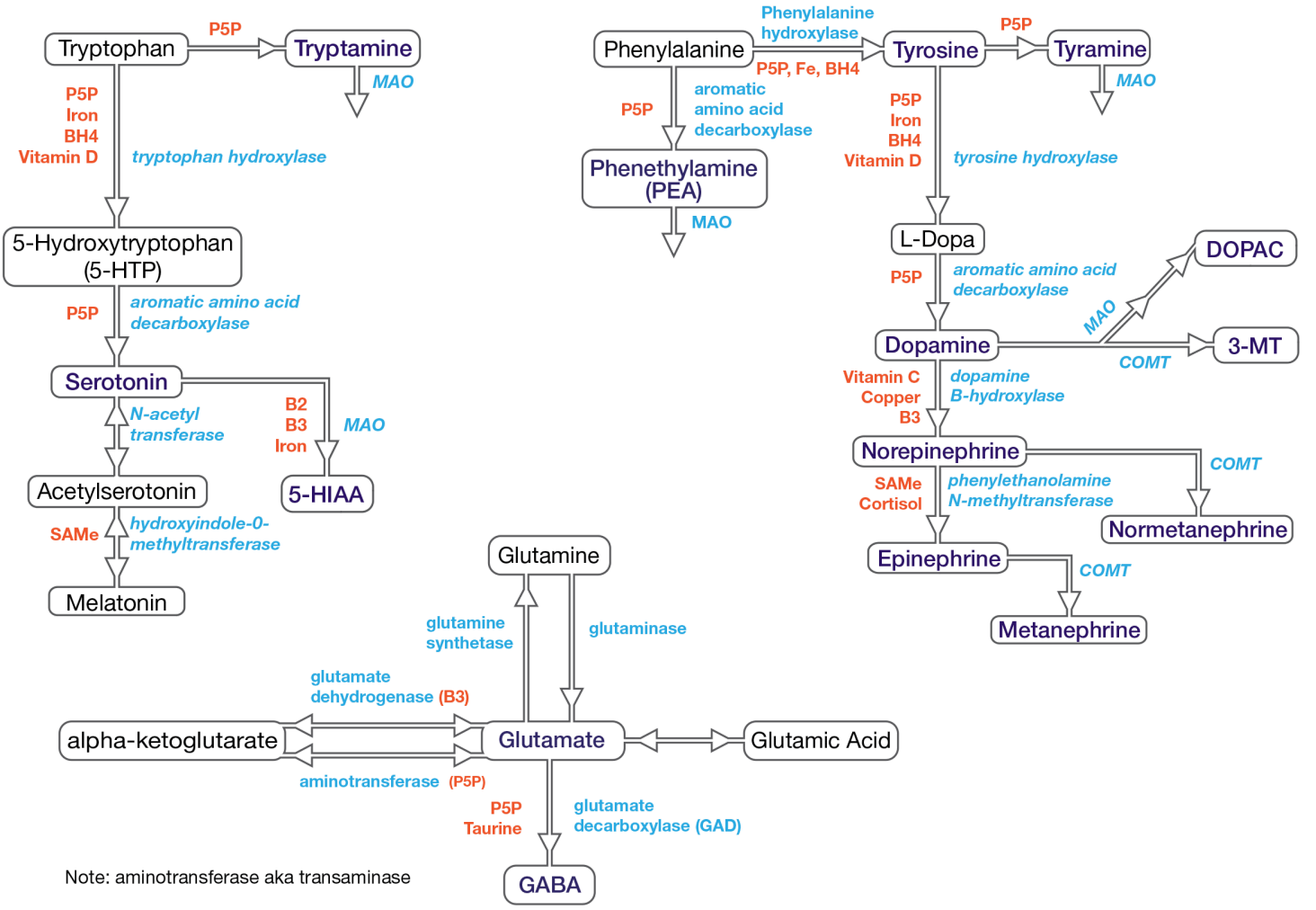
| Analyte | Result | Unit per Creatinine | L | WRI | H | Reference Interval |
|---|---|---|---|---|---|---|
| **Serotonin** | 90.7 | µg/g | | | | 60 – 125 |
| **Dopamine** | 190 | µg/g | | | | 125 – 250 |
| **Norepinephrine** | 14.6 | µg/g | | | | 22 – 50 |
| **Epinephrine** | 0.9 | µg/g | | | | 1.6 – 8.3 |
| **Norepinephrine / Epinephrine ratio** | 16.2 | | | | | < 13 |
| **Glutamate** | 15 | nmol/g | | | | 12.0 – 45.0 |
| **Gamma-aminobutyrate (GABA)** | 6 | nmol/g | | | | 2.0 – 5.6 |
| **Glycine** | 974 | nmol/g | | | | 450 – 2200 |
| **Histamine** | 12 | µg/g | | | | 14 – 44 |
| **Phenethylamine (PEA)** | 38 | nmol/g | | | | 32 – 84 |
| **Creatinine** | 72.3 | mg/dL | | | | 30 – 225 |

## Neurotransmitter Comments:

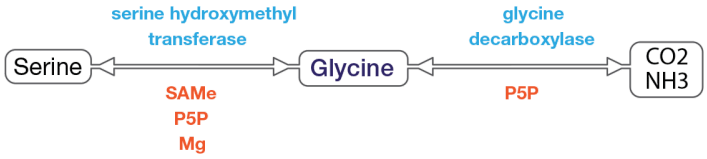
- Urinary neurotransmitter levels provide an overall assessment of the body's ability to make and break down neurotransmitters and are representative of whole body levels. Neurotransmitters are secreted all through the body, in neurons of both the central and peripheral nervous systems. The enzymes, 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 norepinephrine and low 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 N/E ratio is consistent with poor conversion of norepinephrine to epinephrine. This conversion is driven by the phenylethanolamine N-methyltransferase (PNMT) enzyme that requires SAMe, magnesium and cortisol (adequate HPA axis function) as cofactors. Suggest interpretation in context of cortisol levels/HPA axis function, with subsequent optimization of HPA axis function when clinically warranted.
- 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).
- Low histamine may affect digestion and appetite control, learning, memory, and mood, and may result in drowsiness. Histamine has been noted to modulate neurotransmitter release from neurons. Histamine levels may be supported by consumption of high-protein foods and whole grains, as well as L-histidine supplementation. Vitamin B6 is a cofactor for histamine synthesis.
- 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.

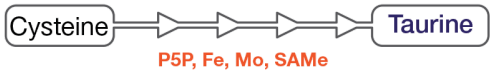
**Notes:**
Results are creatinine corrected to account for urine dilution variations. Creatinine is not meant to be used as an indicator of renal function.
*RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above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

# 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 =