Discover True Clinical Utility with the Industry’s Most Complete NEURO ENDOCRINE TESTING

ZRT LABORATORY
Why test neurotransmitters & hormones?

In the neurological system, hormones are synergistic with neurotransmitters – modulating their production, signaling and metabolism. Because of this complex interplay, testing hormones and neurotransmitters together is the ideal way to generate a more precise clinical assessment.

This combined assessment gives practitioners a more thorough evaluation of the systems that interact to govern key facets of our health including mood, memory, energy, sleep, weight, libido and fertility. It allows practitioners to target specific imbalances and get to the root of persistent conditions such as HPA axis dysfunction, anxiety and depression, menstrual cycle disorders, PCOS, insulin resistance, dysregulation of the sympathetic nervous system, low libido and appetite control.

This evaluation also gives practitioners a diagnostic edge over the traditional psychological inventory. It offers the advantage of zeroing in on which therapies are best suited for individual patients – cutting down on the time-consuming process of trial-and-error for identifying treatment options. This testing also allows practitioners to monitor individual biochemical changes during and after intervention.

ZRT is the only lab to offer

Diurnal Assessments in Urine for:

- Cortisol
- Cortisone
- Norepinephrine
- Epinephrine
- Melatonin

Most Complete

ZRT is the only lab to offer a 24-hour equivalent in four easy collections – resulting in a more accurate assessment of individual neurochemistry.

Most Comprehensive

ZRT combines 14 neurotransmitter tests with a collection of salivary or urine hormones and metabolites for the broadest evaluation possible.

Most Convenient

Discreet dried urine collection eliminates the hassle of liquid urine collection.

No Supplement Sales

ZRT is dedicated to testing. Unlike other labs, we don’t sell supplements – which avoids any conflict of interest.

our test:
Hormone Regulation of Neurotransmitter Activity

**Estradiol & Serotonin**
Estradiol synergizes serotonin signaling – stimulates biosynthesis, potentiates receptor activation, blocks re-uptake and inhibits degradation.

![Estradiol & Serotonin Diagram](image)

**Test when these symptoms are present:**
- Hot Flashes
- Night Sweats
- Mood Changes

**Progesterone & GABA**
Via allopregnanolone, progesterone modulates GABA production and GABA$_A$ receptor signaling.

![Progesterone & GABA Diagram](image)

**Test when these symptoms are present:**
- Irritability
- Anxiety
- Depression

**DHEA-S**
Stimulates adequate production of glutamate, dopamine, norepinephrine and epinephrine.

![DHEA-S Diagram](image)

**Test when these symptoms are present:**
- PMS/PMDD
- Anxiety
- Sleep Problems

**Testosterone & Dopamine**
Testosterone potentiates dopamine signaling – stimulates biosynthesis and blocks degradation.

![Testosterone & Dopamine Diagram](image)

**Test when these symptoms are present:**
- Depression
- Mood Changes

**Test when these symptoms are present:**
- “Tired and Wired”
- Depression
- PTSD

**Test when these symptoms are present:**
- Burned-Out Feeling
- Low Libido
- Irritability

**Test when these symptoms are present:**
- Addictive Behaviors
- Apathy
- Depression
Functional Assessment of Key Markers

- **Serotonin**, generally regarded as the “happiness molecule,” contributes to the feeling of calm and well-being that eases depression and anxiety, supports sleep, and decreases appetite. (5-HIAA [5-hydroxyindoleacetic acid] is a serotonin metabolite).

- **GABA** functions as the “off” switch in the brain and is the major inhibitory neurotransmitter in the brain that improves mood, relieves anxiety, and promotes sleep.

- **Glycine** plays a dual role as a neurotransmitter and amino acid that serves as a building block of proteins, improves sleep quality, calms aggression, and serves as an anti-inflammatory agent.

- **Glutamate** functions as the “on” switch in the brain and is the major excitatory neurotransmitter in the brain that decreases sleep, optimizes learning, memory, and mood, and improves libido.

- **Histamine** plays a dual role in the body as a neurotransmitter and immunomodulator that increases metabolism, promotes wakefulness, and suppresses appetite.

- **PEA (phenethylamine)** promotes energy, elevates mood, regulates attention and aggression, and serves as a biomarker for ADHD.

- **Dopamine**, generally regarded as the brain’s pleasure and reward center, plays the central role in addiction, improves attention, focus and motivation, and modulates movement control. (DOPAC [3,4-dihydroxyphenylacetic acid] and HVA [homovanillic acid] are dopamine metabolites).

- **Norepinephrine** and **Epinephrine** function as neurotransmitters and hormones that regulate the “fight or flight” response and elevate blood pressure and heart rate, stimulate wakefulness, and reduce digestive activity. (Normetanephrine is a norepinephrine metabolite; VMA [vanillylmandelic acid] is an epinephrine and norepinephrine metabolite).

### Available Add-ons

#### Hormone Panels
- **Saliva**: Estradiol, Progesterone, Testosterone, DHEA-S & Cortisol
- **Urine**: Estradiol, Pregnanediol, Allopregnanolone, Androstenedione, Testosterone, 5α-Dihydrotestosterone (5α-DHT), DHEA, 5α,3α-Androstanediol

#### Diurnal Panels
- **Diurnal Cortisol**
- **Diurnal Cortisol & Melatonin**
- **Diurnal Cortisol, Norepinephrine & Epinephrine**
- **Diurnal Cortisol, Melatonin, Norepinephrine & Epinephrine**

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**YOUR LAB of CHOICE**

**www.zrtlab.com**
1-866-600-1636  
info@zrtlab.com

**ZRT Laboratory**  
8605 SW Creekside Place  
Beaverton, OR 97008

**Free Educational Resources from ZRT**  
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