



Discover True Clinical Utility
with the Industry's Best

URINE METABOLITES TESTING

 ZRTLaboratory



MOST CONVENIENT

Discreet dried urine collection eliminates the hassle of jug urine collection



MOST COMPLETE

More Estrogens (13), More Cortisols (6), Diurnal Melatonin



BEST VALUE

ZRT has the largest commercial profile at the lowest cost per test of any lab

Why test urinary metabolites?

Metabolites testing provides a unique diagnostic view that no other hormone testing offers.

It shows how a patient is breaking down a variety of hormones – like estrogens, progesterones, androgens, cortisol and melatonin.

Gives practitioners insight into whether a patient is fully detoxifying their hormones, making them more or less at risk for a variety of diseases – like cancer.

Patients who benefit from urinary metabolites testing include those who:

- ▶ have a risk of hormone-dependent cancers
- ▶ are considering hormone replacement therapy
- ▶ are experiencing stress-related symptoms or symptoms of cortisol imbalance
- ▶ have normal saliva cortisol levels but are still experiencing symptoms of adrenal dysfunction
- ▶ have symptoms of hormonal imbalance such as weight gain, insomnia or mood swings

“...provides a unique diagnostic view unlike any other hormone testing.”

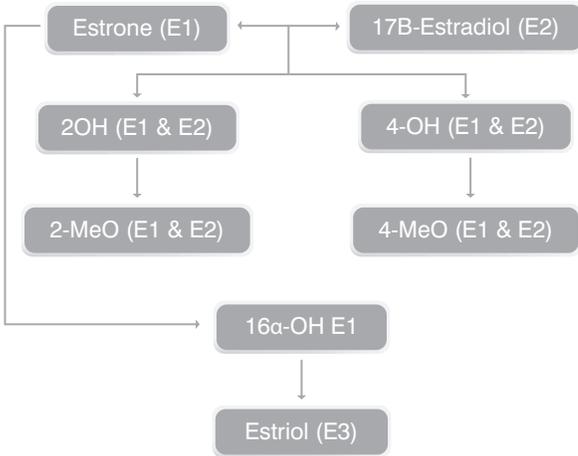
Compare us to other labs.

ZRT Laboratory offers the most complete **Urine Metabolites** testing with rapid turn-around.

Metabolite Testing	ZRT	Genova	Meridian Valley	Precision Analytical
Total Tests Available	44	25	35	32
Estrogens	13	9	8	8
Diurnal Cortisol	✓	—	—	✓
Diurnal Melatonin	✓	—	—	—
BPA	✓	✓	—	—
Standard Turn-Around Times	5 days	21 days	7-14 days	5 days
Cost Per Test	\$7.61	\$17.11	\$21.56	\$7.81



Estrogen Cascade



2-MeO Estrogens | 4-MeO Estrogens

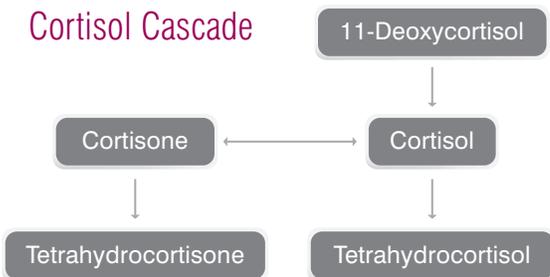
Healthy Phase II metabolism methylates 2-hydroxy (2-OH) estrogens to the more cancer-protective 2-methoxy (2-MeO) forms, and neutralizes the potentially carcinogenic 4-OH estrogens to their 4-MeO forms.

Low ratios 2-MeO E1/2-OH E1, 4-MeO E1/4-OH E1, and 4-MeO E2/4-OH E2 can indicate inadequate methylation and therefore may be associated with an **increased breast cancer risk**.

2-OH Estrogens | 4-OH Estrogens | 16α-OH Estrone

Healthy Phase I metabolism produces higher levels of 2-OH E2 and 2-OH E1 compared to 4-OH E2 and 4-OH E1. Excess of the 4-OH forms is associated with **increased breast cancer risk**. High 16-OH E1 relative to 2-OH E2 and 2-OH E1 may be linked with increased breast cancer risk in premenopausal women, but decreased risk in postmenopausal women.

Cortisol Cascade

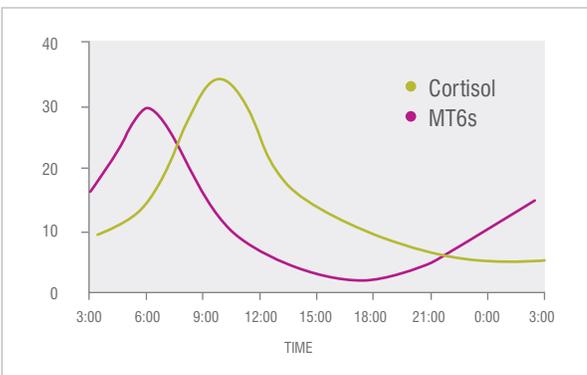


Total Cortisol, Total Cortisone | Free Cortisol x 4, Free Cortisone x 4 | Tetrahydrocortisol (THF) Tetrahydrocortisone (THE)

Total cortisol and cortisone, plus levels of their principal metabolites tetrahydrocortisol (THF) and tetrahydrocortisone (THE), indicate the extent of cortisol output from the adrenals.

4-point diurnal free cortisol and cortisone, graphed on test reports, indicates effects of stress and HPA axis dysfunction. High levels throughout the day show **HPA axis hyperactivation**, while loss of the morning peak indicates **adrenal suppression**.

Urinary Free Cortisol and Melatonin



Melatonin (MT6s) | Melatonin (MT6s) x 4

High melatonin metabolite (MT6) levels during the day can reflect melatonin supplementation or increased melatonin synthesis. **Poor sleep quality** can be the result of low evening melatonin or high night cortisol.

Low levels of melatonin are associated with **increased risk of cancer, type 2 diabetes and obesity**.

KEY DISTINCTIONS & CLINICAL UTILITY

MORE ESTROGEN MARKERS

ZRT provides the broadest view of estrogen metabolism by **analyzing more estrogen markers than any other lab**. This enables health care practitioners to glean deeper insight into how patients are breaking down estrogen hormones, leading to more accurate analysis of patient risk – especially for hormonally driven cancers like breast cancer and prostate cancer.

COMPLETE CORTISOL ASSESSMENT

ZRT is one of few labs to offer **diurnal cortisol and cortisone in urine**, which is an ideal second-step assessment for patients who present with adrenal symptoms but have normal saliva cortisol levels. These levels help identify patients who have excessive conversion of cortisol to cortisone.

MOST ACCURATE SLEEP CYCLE ASSESSMENT

ZRT is the only lab to combine sleep/wake cycle assessment with urine hormone metabolites, which is valuable for patients who are experiencing sleep disturbances. ZRT's sleep/wake cycle testing is also the most accurate because it **eliminates the 2:00am wake-up**.

BPA XENOESTROGEN ASSESSMENT

ZRT is one of few labs to include an assessment of BPA exposure with its urine hormone metabolites. Combining this level with the broader array of estrogen metabolites provides **a more comprehensive view of patient risk for hormonally driven cancers**.

 YOUR LAB *of* CHOICE

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Free, helpful ZRT Webinars on Metabolites at:
www.zrtlab.com/webinar-resources