Hormone Help Hour
Hormone Insights Test (HIT)

Charlotte Hunter & Dr Shania Seeber
KBMO Diagnostics UK

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DIAGNOSTICS

Meet the Team

Charlotte Hunter
Head of KBMO UK

Linette Petrillo
Customer Services

Kelly Hutson
Business Relationships

Clare Kennedy
Operations Manager

Natasha Khan
Practitioner Relationships

Emily Birch
Communications & Support

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There IS Another Way!

- The Hormone Insight Test (HIT): Powered by the *Advanced Urine Hormone Metabolites Test by ZRT*
- Measures **44 hormone-related markers**
- 13 oestrogens, 8 androgens
- Diurnal cortisol & melatonin patterns
- Includes **BPA** (rarely assessed endocrine disruptor)

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The Hormone Insights Test (HIT)

- Developed by ZRT laboratory – pioneers in hormone testing
- The ORIGINAL urine metabolites test
- Built on decades of research and clinical use
- The HIT Test combines ZRT's scientific credibility with KBMO's practitioner-first support model.

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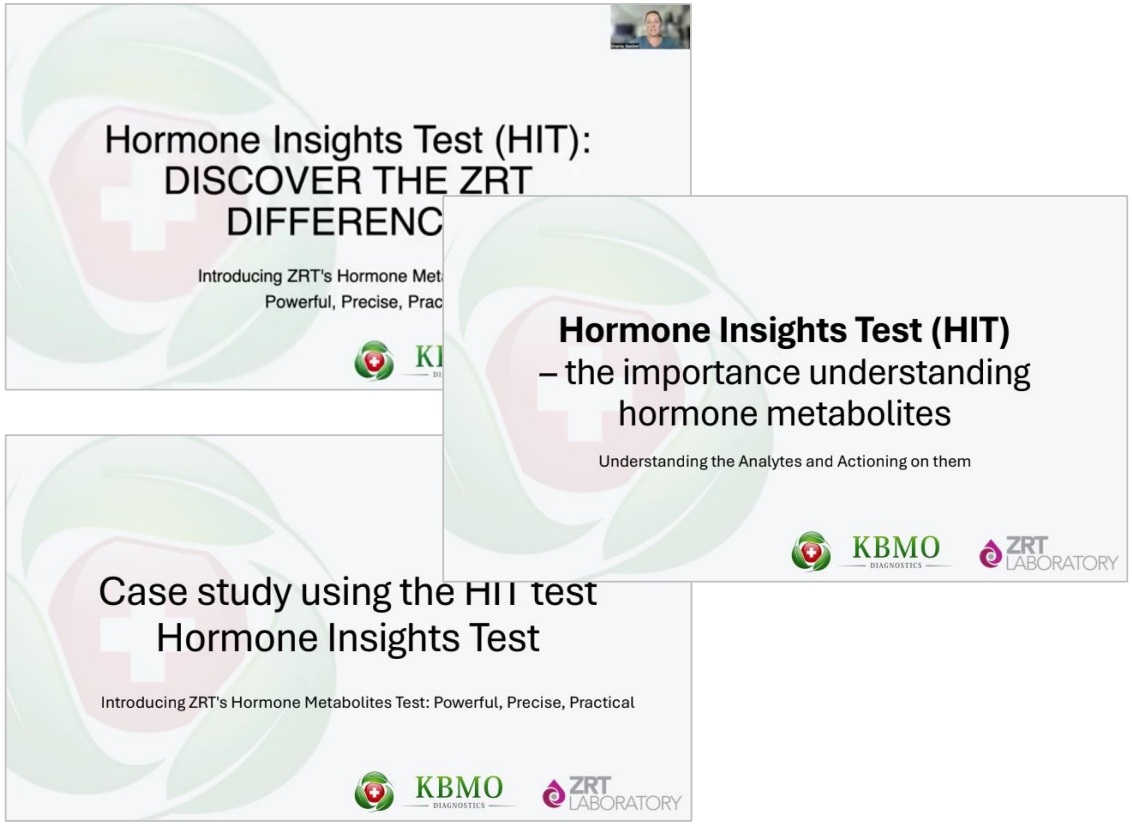
Dr Shania Seeber



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HIT versus DUTCH

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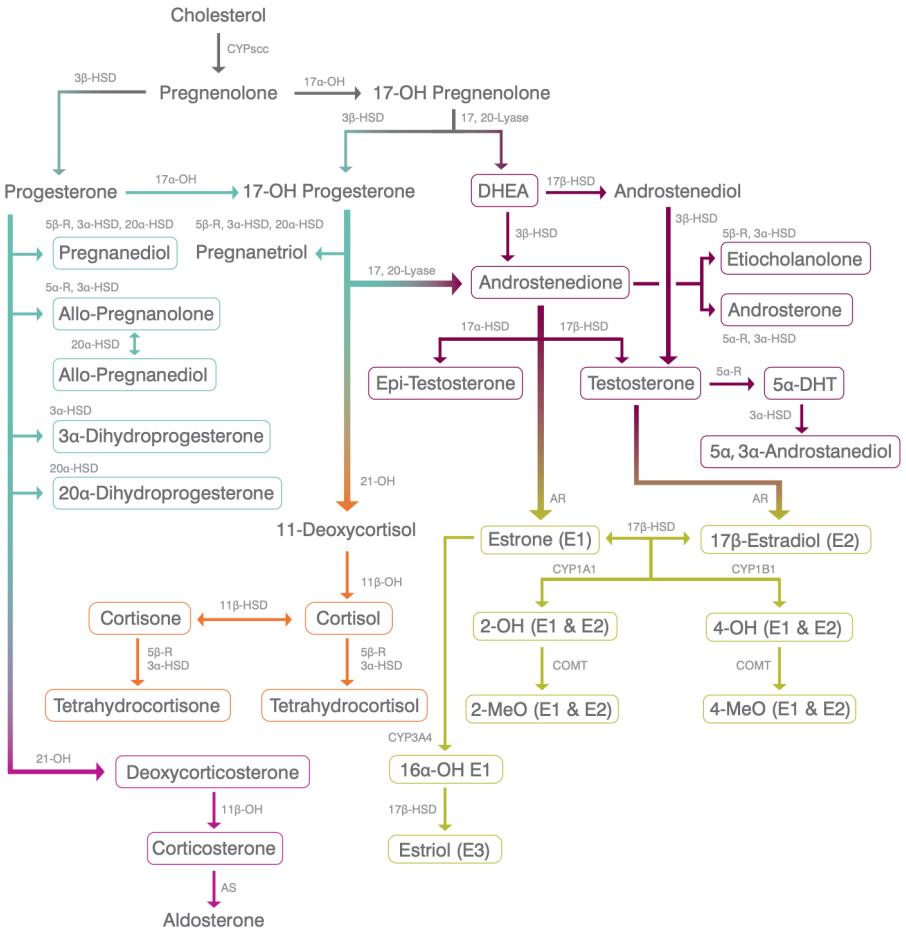
The Steroid Hormone Cascade



(11β-HSD) 11β-Hydroxysteroid dehydrogenase
(17α-HSD) 17α-Hydroxysteroid dehydrogenase
(17β-HSD) 17β-Hydroxysteroid dehydrogenase
(20α-HSD) 20α-Hydroxysteroid dehydrogenase
(AR) Aromatase
(AS) Aldosterone Synthase
(CYP) Cytochrome p450 (scc, 1A1, 1B1 & 3A4)
(COMT) Catechol-O-Methyl-Transferase

(5α-R) 5α-Reductase
(5β-R) 5β-Reductase
(11β-OH) 11β-Hydroxylase
(17α-OH) 17α-Hydroxylase
17,20-Lyase (same enzyme as 17α-OH)
(21-OH) 21-Hydroxylase
(3α-HSD) 3α-Hydroxysteroid dehydrogenase
(3β-HSD) 3β-Hydroxysteroid dehydrogenase

- Androgens
- Estrogens
- Glucocorticoids
- Mineralocorticoids
- Progestogens

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Disclaimer: Symptom Categories below show percent of symptoms self-reported by the patient compared to total available symptoms for each category. For detailed information on category breakdowns, go to www.zrtlab.com/patient-symptoms.

SYMPTOM CATEGORIES	RESULTS | 10/07/25
Estrogen / Progesterone Deficiency	56%
Estrogen Dominance / Progesterone Deficiency	50%
Low Androgens (DHEA/Testosterone)	47%
High Androgens (DHEA/Testosterone)	35%
Low Cortisol	36%
High Cortisol	48%
Hypometabolism	34%
Metabolic Syndrome	7%

SYMPTOM CHECKLIST	MILD	MODERATE	SEVERE
Aches and Pains			
Acne			
ADD/ADHD			
Addictive Behaviors			
Allergies			
Anxious			
Autism Spectrum Disorder			
Bleeding Changes			
Blood Pressure High			
Blood Pressure Low			
Blood Sugar Low			
Body Temperature Cold			
Bone Loss			
Breast Cancer			
Breasts - Fibrocystic			
Breasts - Tender			
Chemical Sensitivity			
Cholesterol High			
Constipation			
Depressed			
Developmental Delays			
Eating Disorders			
Fatigue - Evening			
Fatigue - Morning			
Fibromyalgia			
Foggy Thinking			
Goiter			
Hair - Dry or Brittle			
Hair - Increased Facial or Body			
Hair - Scalp Loss			
Headaches			
Hearing Loss			
Heart Palpitations			
Hoarseness			
Hot Flashes			
Incontinence			
Infertility			
Irritable			
Libido Decreased			
Mania			

The above results and comments are for informational purposes only and are not to be construed as medical advice. Please consult your healthcare practitioner for diagnosis and treatment.

David T. Zava, Ph.D.
Laboratory Director

Alison McAllister, ND.
(Ordering Provider unless otherwise specified on page 1

SYMPTOM CHECKLIST	MILD	MODERATE	SEVERE
Memory Lapse			
Mood Swings			
Muscle Size Decreased			
Nails Breaking or Brittle			
Nervous			
Night Sweats			
Numbness - Feet or Hands			
OCD			
Panic Attacks			
PreMenstrual Dysphoric Disorder			
Pulse Rate Slow			
Rapid Aging			
Rapid Heartbeat			
Skin Thinning			
Sleep Disturbed			
Stamina Decreased			
Stress			
Sugar Cravings			
Sweating Decreased			
Swelling or Puffy Eyes/Face			
Tearful			
Triglycerides Elevated			
Urinary Urge Increased			
Uterine Fibroids			
Vaginal Dryness			
Water Retention			
Weight Gain - Hips			
Weight Gain - Waist			

Lab Comments

PARENT ESTROGENS (ESTRADIOL-E2, ESTRONE-E1, ESTRIOL-E3)

The parent estrogens estradiol (E2), estrone (E1), and estriol (E3) are higher than reference ranges seen in premenopausal women. This is often associated with symptoms of estrogen imbalance when progesterone is low (luteal insufficiency or anovulation) and the ratio of pregnanediol/estradiol is low. High estrogen occurs most commonly in the early teens and then again during the 10-15 or so years before menopause (perimenopause-usually about ages 35-52), when estrogens are produced at higher levels relative to progesterone.

Because estrogens are high consider means to lower the estrogen burden (diet consisting of more fiber and cruciferous vegetables, less red meat, weight reduction if problematic) and balance the estrogens with natural progesterone (assuming no contraindications) if the urinary pregnanediol is low or the ratio of PgDiol/E2 is low (see results below).

HYDROXYLATED (CATECHOL) ESTROGENS (2-OH E2 & E1, 4-OH E2 & E1, 16-OH E1) and 2-OH/16-OH RATIO

The hydroxylated estrogens (2-OH-E2, 2-OH-E1, 4-OH-E2, 4-OH-E1), referred to as catechol estrogens, are all within the upper quadrant of the reference ranges, or higher.

The hydroxylation of estradiol and estrone represent the first phase of metabolism and elimination of these estrogens via urine. Following hydroxylation at the 2-, 4-, or -16 positions, the estrogens undergo further modification (methylation, sulfation, glucuronidation) that increases their solubility and excretion in urine. The sulfate and glucuronide groups are removed by enzyme hydrolysis, which allows for measurement of the different types of hydroxylated estrogens that formed elsewhere in the body but were excreted in urine.

Research and clinical studies show that the 2-hydroxylated estrogens (2-OH E2 and 2-OH E1) are a safer pathway of hydroxylation than the 4-hydroxyestrogens (4-OH E2 and 4-OH E1), which are considered more toxic as they bind to DNA causing mutations that are associated with increased breast cancer risk. For reviews see: Cavalieri EL, Rogan EG Future Oncol 6(1): 75-79, 2010; and Lee, JR, Zava DT What Your Doctor May Not Tell You About BREAST CANCER: How Hormone Balance Can Help Save Your Life: Chapter 7.

The safer 2-hydroxylated estrogen metabolism is increased, relative to the 4-hydroxylation pathways, with cruciferous vegetables and extracts of

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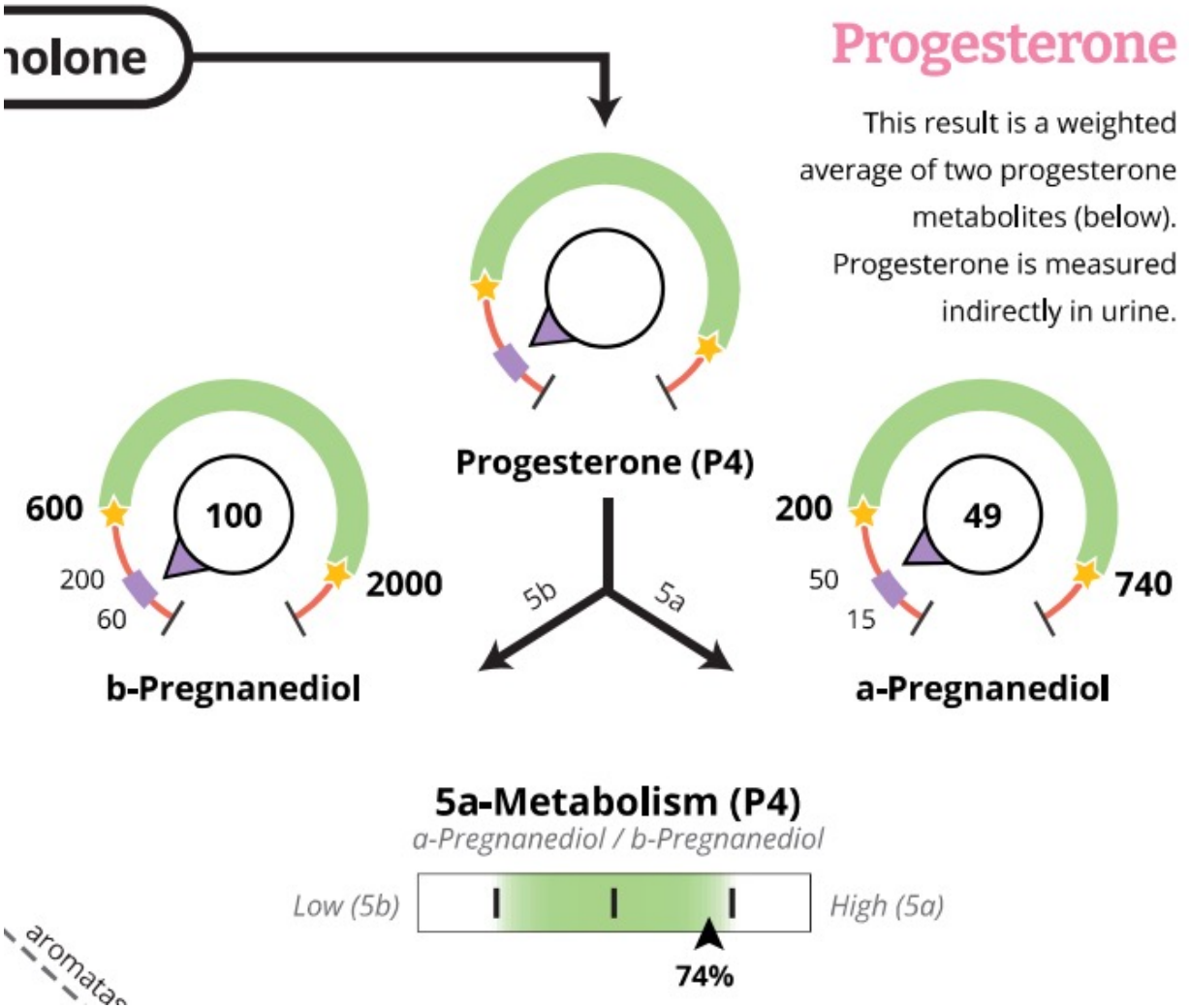

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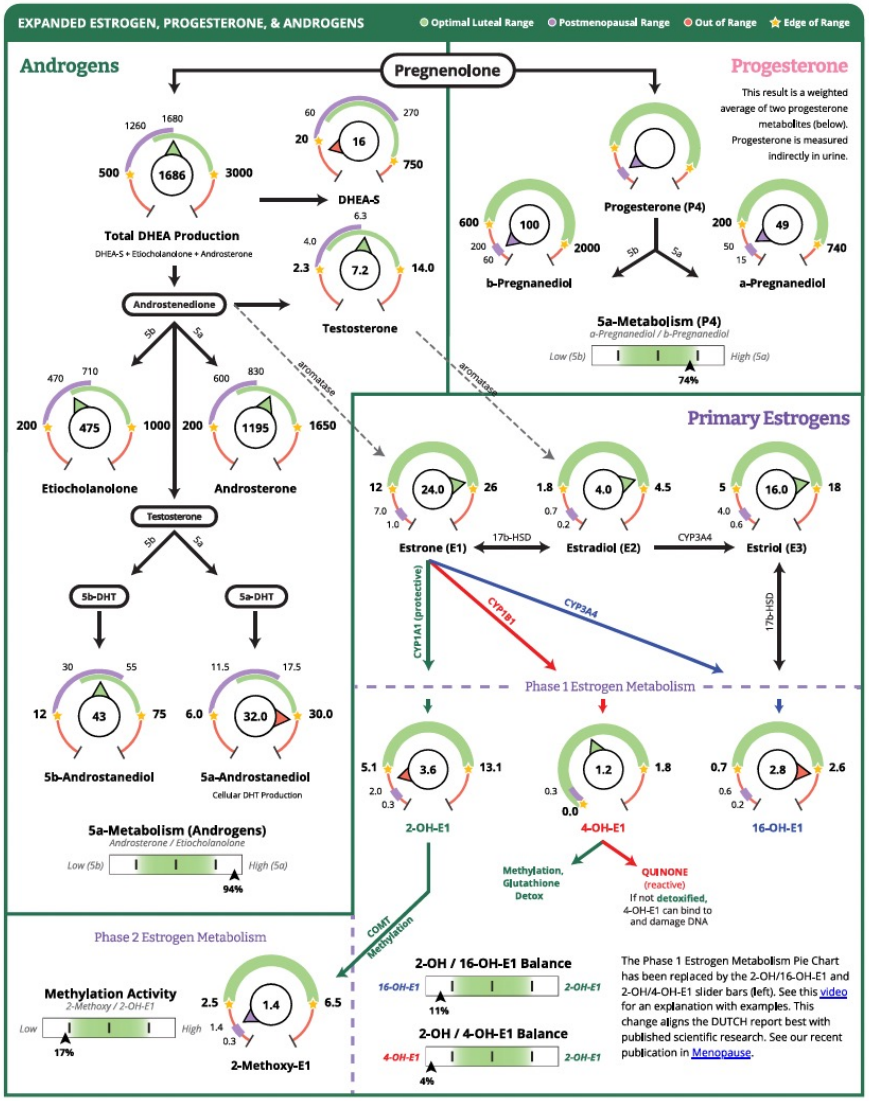

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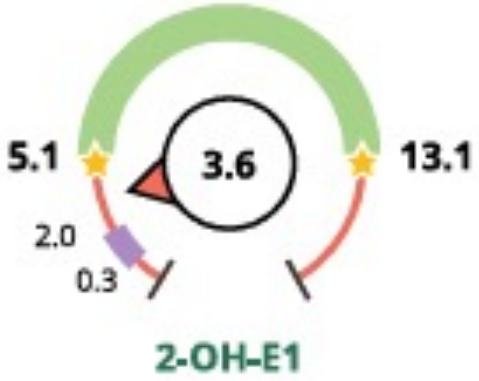

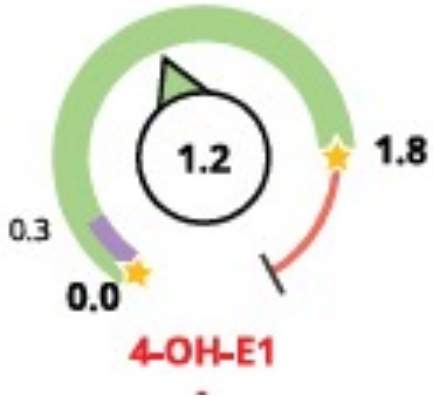

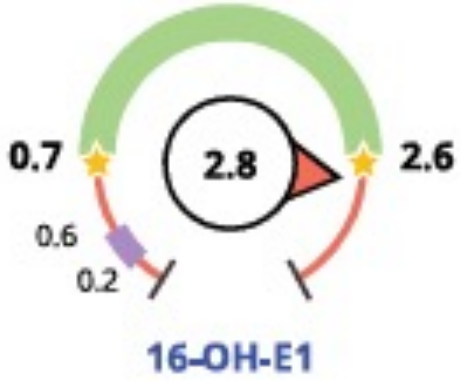

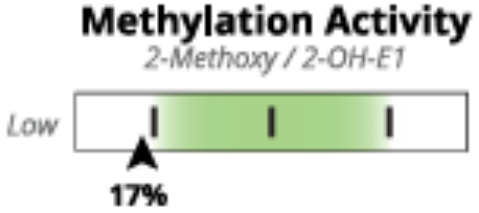

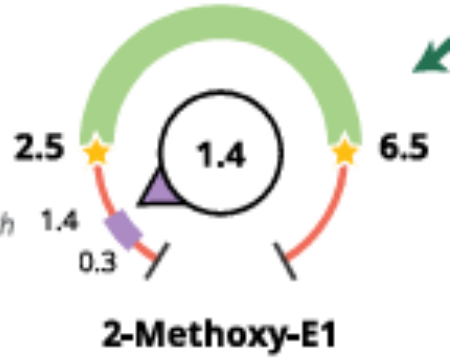

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TEST		RESULT	UNITS	NORMAL RANGE
Nutritional Organic Acids (Urine)				
Vitamin B12 Marker - May be deficient if high				
Methylmalonate (MMA)	Above range	4.9	ug/mg	0 - 2.5
Vitamin B6 Markers - May be deficient if high				
Xanthurenate	Above range	1.23	ug/mg	0.12 - 1.2
Kynurenate	Above range	5.4	ug/mg	0.8 - 4.5
Biotin Marker - May be deficient if high				
b-Hydroxyisovalerate	Within range	7.9	ug/mg	0 - 12.5
Glutathione Marker - May be deficient if high				
Pyroglutamate	Within range	42.0	ug/mg	28 - 58
Gut Marker - Potential gut putrefaction or dysbiosis if high				
Indican	Above range	114.0	ug/mg	0 - 100
Neuro-Related Markers (Urine)				
Dopamine Metabolite				
Homovanillate (HVA)	Within range	4.4	ug/mg	3 - 11
Norepinephrine/Epinephrine Metabolite				
Vanilmandelate (VMA)	Within range	4.3	ug/mg	2.2 - 5.5
Neuroinflammation Marker				
Quinolinate	Within range	8.0	ug/mg	0 - 9.6
Additional Markers (Urine)				
Melatonin - Waking				
6-OH-Melatonin-Sulfate	Below range	5.3	ng/mg	10 - 85
Oxidative Stress / DNA Damage				
8-Hydroxy-2-deoxyguanosine (8-OHdG)	Within range	2.6	ng/mg	0 - 5.2

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Gender	Last Menses	Height	Waist	Basal Body Temperature
Female	09/15/2025	5 ft 4 in	25 in	37.2°
DOB	**Menses Status**	**Weight**	**BMI**	
9/15/1994 (31 yrs)	Pre-Menopausal - Irregular	112 lb	19.2	

TEST NAME	RESULTS | 10/07/25	RANGE
Urinary Estrogens		
Estradiol	2.72 H	0.78-1.79 µg/g Cr Premeno-luteal or ERT
Estrone	9.95 H	2.27-5.22 µg/g Cr Premeno-luteal or ERT
Estriol	2.47 H	0.78-1.98 µg/g Cr Premeno-luteal or ERT
E3/(E1+E2)	0.19 L	>0.3 (> median value)
2-OH Estradiol	2.24 H	0.17-0.70 µg/g Cr Premeno-luteal or ERT
2-OH Estrone	6.31 H	0.70-2.54 µg/g Cr Premeno-luteal or ERT
4-OH Estradiol	0.46 H	0.10-0.18 µg/g Cr Premeno-luteal or ERT
4-OH Estrone	1.00 H	0.17-0.47 µg/g Cr Premeno-luteal or ERT
16α-OH Estrone	1.62 H	0.35-1.07 µg/g Cr Premeno-luteal or ERT
2-OH (E1 + E2)/16-α-OH E1	5.28	1.29-5.49 Premeno-luteal or ERT
2-MeO Estradiol	0.11 H	0.03-0.08 µg/g Cr Premeno-luteal or ERT
2-MeO Estrone	0.55	0.26-0.68 µg/g Cr Premeno-luteal or ERT
2-MeO E1/2-OH E1	0.09 L	0.21-0.38 Premeno-luteal or ERT
4-MeO Estradiol	0.07 H	<0.04 µg/g Cr
4-MeO Estrone	0.07 H	<0.04 µg/g Cr
4-MeO E1/4-OH E1	0.07	0.05-0.13 Premeno-luteal or ERT
4-MeO E2/4-OH E2	0.15	0.10-0.29 Premeno-luteal or ERT
Bisphenol A	<dl L	1.11-3.74 µg/g Cr Premeno-luteal

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TEST NAME	RESULTS | 10/07/25	RANGE
Urinary Progestogens		
Pregnanediol	289 L	465-1609 µg/g Cr Premeno-luteal or PgRT
Allopregnanolone	37.86 H	2.23-14.87 µg/g Cr Premeno-luteal or PgRT
Allopregnanediol	164.59 H	14.65-76.71 µg/g Cr Premeno-luteal or PgRT
3α-Dihydroprogesterone	4.01 H	0.67-2.03 µg/g Cr Premeno-luteal or PgRT
20α-Dihydroprogesterone	11.34	3.93-11.62 µg/g Cr Premeno-luteal or PgRT
Deoxycorticosterone	4.75 H	0.69-2.23 µg/g Cr Premeno-luteal or PgRT
Corticosterone	19.40 H	3.19-9.59 µg/g Cr Premeno-luteal or PgRT
Pgdiol/E2	106.25 L	1000-1500 (Optimal Luteal Only)
Urinary Androgens		
DHEA	87.65	15.82-129.17 µg/g Cr Premeno-luteal or DHEAT
Androstenedione	9.45	3.93-13.53 µg/g Cr Premeno-luteal or ART
Androsterone	976 H	248-937 µg/g Cr Premeno-luteal or ART
Etiocholanolone	839	330-960 µg/g Cr Premeno-luteal or ART
Testosterone	4.19 H	1.22-3.97 µg/g Cr Premeno-luteal or ART
Epi-Testosterone	10.54 H	2.01-4.66 µg/g Cr Premeno-luteal
T/Epi-T	0.40 L	0.5-3.0
5α-DHT	2.28 H	0.28-1.52 µg/g Cr Premeno-luteal or ART
5α,3α-Androstanediol	16.15 H	2.98-13.10 µg/g Cr Premeno-luteal or ART
Urinary Glucocorticoids		
Total Cortisol	42.08 H	12.26-33.12 µg/g Cr Premeno-luteal
Total Cortisone	40.72	23.27-50.88 µg/g Cr Premeno-luteal
Cortisol/Cortisone	1.03 H	0.5-0.7
Tetrahydrocortisol	352	214-546 µg/g Cr Premeno-luteal
Tetrahydrocortisone	1036	437-1184 µg/g Cr Premeno-luteal
Urinary Free Diurnal Cortisol		
Free Cortisol	37.21 H	7.8-29.5 µg/g Cr (1st Morning)
Free Cortisol	26.15	23.4-68.9 µg/g Cr (2nd Morning)
Free Cortisol	15.43	6.0-19.2 µg/g Cr (Evening)

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TEST NAME	RESULTS | 10/07/25	RANGE
Urinary Free Diurnal Cortisol		
Free Cortisol	2.98	2.6-8.4 µg/g Cr (Night)
Urinary Free Diurnal Cortisone		
Free Cortisone	60.86	31.6-91.6 µg/g Cr (1st Morning)
Free Cortisone	63.88	63.3-175.8 µg/g Cr (2nd Morning)
Free Cortisone	112.19 H	30.6-88.5 µg/g Cr (Evening)
Free Cortisone	18.35	15.5-44.7 µg/g Cr (Night)
Urinary Diurnal Melatonin MT6s		
Melatonin	70.99 H	18.0 - 40.9 µg/g Cr (1st Morning)
Melatonin	29.51	7.3 - 31.9 µg/g Cr (2nd Morning)
Melatonin	2.36 H	0.7 - 2.2 µg/g Cr (Evening)
Melatonin	28.34 H	1.7 - 11.1 µg/g Cr (Night)
Urinary Creatinine		
Creatinine (pooled)	1.24	0.3-2.0 mg/mL
Creatinine	1.71	0.3-2.0 mg/mL (1st morning)
Creatinine	1.59	0.3-2.0 mg/mL (2nd morning)
Creatinine	0.28 L	0.3-2.0 mg/mL (Evening)
Creatinine	1.50	0.3-2.0 mg/mL (Night)

*<dl = Less than the detectable limit of the lab. **N/A** = Not applicable; 1 or more values used in this calculation is less than the detectable limit. **H** = High. **L** = Low.*

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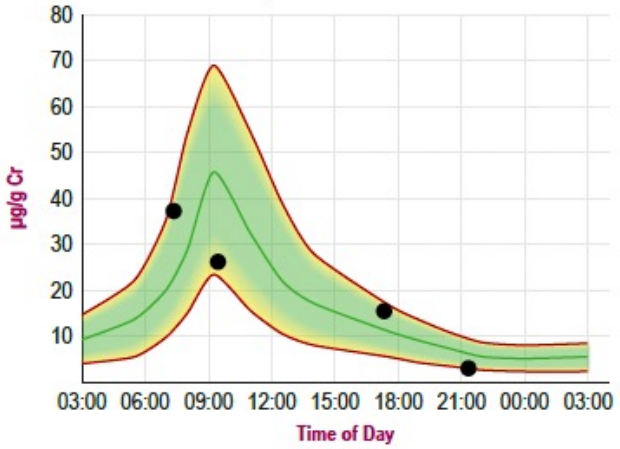
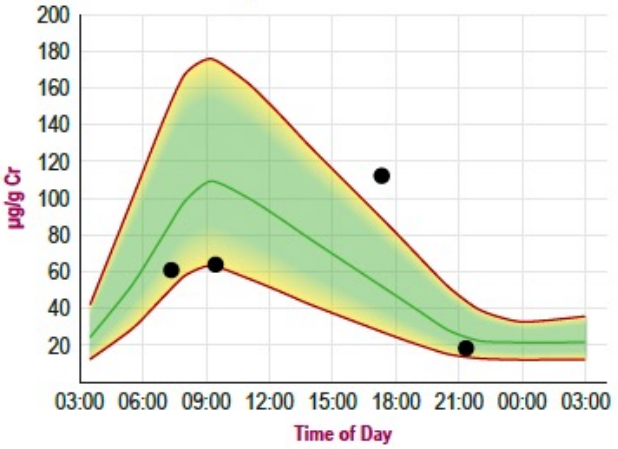
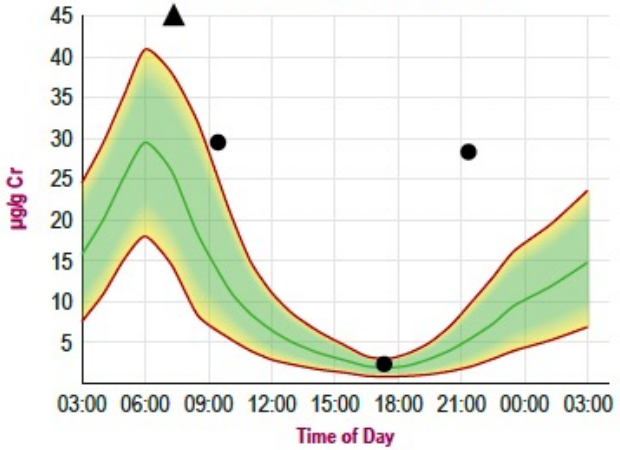
Urinary Free Cortisol



Urinary Free Cortisone



Urinary Melatonin (MT6s)



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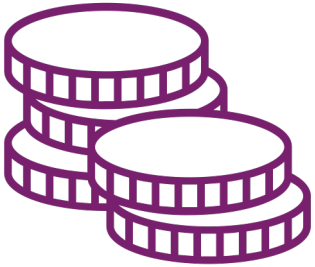
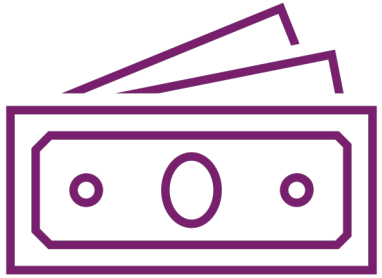
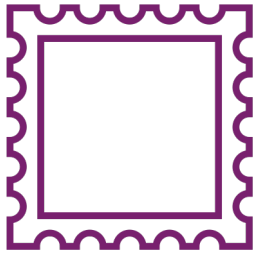
HIT Pricing



Practitioner Price
£249



Retail Price
£299



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