

 Order ID
 6370821

 Lab ID
 4103170

 Patient ID
 P000927

 Ext ID
 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

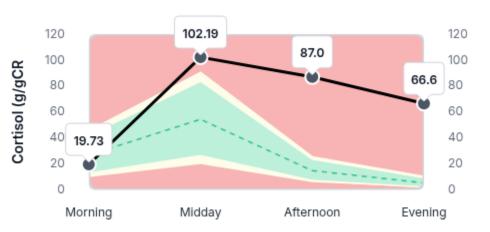
EndoMAP	Collected
Specimen type - Urine, Dried	14-May-25 06.08am, 08.12am, 05.39pm, 08.40pm

KEY STEROID HORMONES SUMMARY					
SERVICE	RESULT	H/L		REFERENCE	UNITS
Estradiol (E2)	0.24		•	(0.10-0.80)	ug/gCR
Progesterone (serum equivalent)	0.38	L		(0.60-4.00)	ng/mL
Testosterone	4.36	н		(0.50-3.05)	ug/gCR

Estrogens Balance (as %) Healthy Estrogens Balance



Adrenal Function - Free Cortisol								
SERVICE	RESULT	H/L	REFERENCE	UNITS				
Cortisol, Morning	19.73		(10.00-45.00)	ug/gCR				
Cortisol, Midday	102.19	Н	(20.00-90.00)	ug/gCR				
Cortisol, Afternoon	87.00	Н	(6.00-25.00)	ug/gCR				
Cortisol, Evening	66.60	Н	(2.00-10.00)	ug/gCR				



Adrenal Function - Key Markers					
SERVICE	RESULT	H/L		REFERENCE	UNITS
Total Cortisol	158.21	Н	•	(13.00-44.00)	ug/gCR
Tetrahydrocortisol (THF)	475			(150-860)	ug/gCR
DHEA Prod'n (DHEA+Androst+Etioch)	899.88			(500.00-3000.00)	ug/gCR
Metabolised Cortisol (THF + THE)	1397		•	(700-1700)	ug/gCR





Order ID 6370821 Lab ID 4103170 Patient ID P000927 Ext ID 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

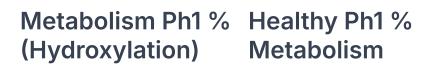
Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

PRIMARY ESTROGENS					
SERVICE	RESULT	H/L		REFERENCE	UNITS
Estradiol (E2)	0.24			(0.10-0.80)	ug/gCR
Estrone (E1)	0.35	L	•	(0.50-2.70)	ug/gCR
Estriol (E3)	0.13	L	•	(0.20-1.30)	ug/gCR
Estrogen Quotient - E3/[E2+E1]	0.22	L		(>0.25)	ratio

ESTROGEN METABOLISM - Phase 1		
SERVICE	RESULT H	/L REFERENCE UNITS
2-OH Estradiol	0.31	(0.05-0.45) ug/gCR
2-OH Estrone	0.42	● (0.20-1.10) ug/gCR
4-OH Estradiol	0.07	● (0.02-0.20) ug/gCR
4-OH Estrone	0.16	(0.06-0.22) ug/gCR
16-OH Estrone	0.29	● (0.05-0.45) ug/gCR
2-OH(E1+E2)/16-OHE1	2.56	(1.40-8.20) ratio

ESTROGEN METABOLISM - Phase 2					
SERVICE	RESULT	H/L		REFERENCE	UNITS
2-MeOH Estradiol	0.05		•	(0.01-0.08)	ug/gCR
2-MeOH Estrone	0.01	L		(0.05-0.35)	ug/gCR
 4-MeOH Estradiol 	0.01		•	(<0.05)	ug/gCR
 4-MeOH Estrone 	0.01		•	(<0.05)	ug/gCR
2-MeOH E1/2-OH E1	0.04	L		(0.15-0.40)	ratio
4-MeOH E2/4-OH E2	0.13			(0.10-0.80)	ratio
4-MeOH E1/4-OH E1	0.05		•	(0.02-0.40)	ratio





Metabolism Ph2 % Healthy Ph2 % (Methylation) Metabolism







 Order ID
 6370821

 Lab ID
 4103170

 Patient ID
 P000927

 Ext ID
 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

ENDOCRINE DISRUPTORS							
SERVICE	RESULT	H/L				REFERENCE	UNITS
Bisphenol A (BPA)	2.67					(<4.00)	ug/gCR
Polyfluoroalkyl Substances (PFAS)	0.05					(<0.70)	ug/gCR
Perfluorooctanoic Acid (PFOA)	0.04		•			(<0.10)	ug/gCR
Perfluorooctane Sulphonic Acid (PFOS)	0.01		•			(<0.60)	ug/gCR
Aluminium	0.88		•			(<14.00)	ug/gCR
Arsenic	<dl< td=""><td></td><td>•</td><td></td><td></td><td>(<26.50)</td><td>ug/gCR</td></dl<>		•			(<26.50)	ug/gCR
Cadmium	<dl< td=""><td></td><td>•</td><td></td><td></td><td>(<0.60)</td><td>ug/gCR</td></dl<>		•			(<0.60)	ug/gCR
Chromium	0.77		•			(<4.60)	ug/gCR
Lead	1.31					(<38.60)	ug/gCR
Mercury	<dl< td=""><td></td><td>•</td><td></td><td></td><td>(<17.9)</td><td>ug/gCR</td></dl<>		•			(<17.9)	ug/gCR
Nickel	<dl< td=""><td></td><td>•</td><td></td><td></td><td>(<1.23)</td><td>ug/gCR</td></dl<>		•			(<1.23)	ug/gCR
PROGESTERONE METABOLISM							
SERVICE	RESULT	H/L				REFERENCE	UNITS
Pregnanediol	34	L				(50-225)	ug/gCR
Allopregnanolone	0.20	L	•			(0.20-1.40)	ug/gCR
Allopregnanediol	3.68			•		(1.00-6.90)	ug/gCR
3a-Dihydroprogesterone	0.46			•		(0.15-1.00)	ug/gCR
20a-Dihydroprogesterone	0.99		•			(0.30-5.50)	ug/gCR
Deoxycorticosterone	2.45	Н				(0.30-2.10)	ug/gCR
Corticosterone	14.32	Н				(2.20-10.50)	ug/gCR
Pregnanediol/Estradiol	144	L	•			(500-1500)	ratio
PRIMARY ANDROGENS							
SERVICE	RESULT	H/L				REFERENCE	UNITS
DHEA	30.40	11/2			•	(8.00-39.00)	ug/gCR
DHEA-S	640.8					(350.0-2000.0)	ug/gCR
Androstenedione	10.34	н				(1.80-8.50)	ug/gCR
Androsterone	487	••				(145-550)	ug/gCR
Etiocholanolone	383		•			(220-800)	ug/gCR
Testosterone	4.36	Н				(0.50-3.05)	ug/gCR
Epi-Testosterone	0.80	••		•		(0.30-3.03)	ug/gCR ug/gCR
DiHydroxyTestosterone (DHT)	2.14	Н				(0.30-1.43)	ug/gCR ug/gCR
5a-Androstanediol	6.40	П				(2.20-9.00)	
Ja-Aliulostalieuloi	6.40					(2.20-3.00)	ug/gCR





Order ID 6370821 Lab ID 4103170 Patient ID P000927 Ext ID 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

KEY ANDROGEN RATIOS								
SERVICE	RESULT	H/L					REFERENCE	UNITS
DHEA Prod'n (DHEA+Androst+Etioch)	899.88		•				(500.00-3000.00)	ug/gCR
5a-Reductase Activity (Androst/Etioch)	1.27			•			(0.60-2.20)	ratio
Testosterone/Epi-Testosterone	5.45					•	(0.40-5.50)	ratio
Nutritional Organic Acids								
SERVICE	RESULT	H/L					REFERENCE	UNITS
Xanthurenic Acid	0.01		•				(<0.96)	mmol/molCR
b-Hydroxyisovaleric Acid	2.7						(<29.0)	mmol/molCR
Methylmalonic Acid	3.0	Н					(<1.9)	mmol/molCR
Homovanillic Acid (HVA)	3.0				•		(0.1-5.3)	mmol/molCR
Vanillylmandelic Acid (VMA)	0.6						(0.4-3.6)	mmol/molCR
Kynurenic Acid	0.4		•				(<2.2)	mmol/molCR
Quinolinic Acid	4.9			•			(<9.1)	mmol/molCR
Other Organic Acids								
SERVICE	RESULT	H/L					REFERENCE	UNITS
8-OH-deoxyguanosine	0.20		•				(<2.70)	mmol/molCR
Pyroglutamic Acid	12.02			•			(4.50-33.00)	mmol/molCR
Indoleacetic Acid	0.53						(<11.00)	mmol/molCR
URINE CREATININES								
SERVICE	RESULT	H/L					REFERENCE	UNITS
Creatinine, Urine Pooled	0.51		•				(0.30-2.20)	mg/ml
Creatinine, Urine Morning	0.53						(0.30-2.20)	mg/ml
Creatinine, Urine Midday	0.32		•				(0.30-2.20)	mg/ml
Creatinine, Urine Afternoon	0.80			•			(0.30-2.20)	mg/ml
Overations Union Francis	0.44						(0.20, 0.20)	una au luna l

Creatinine, Urine Evening

(0.30-2.20)

mg/ml

0.41



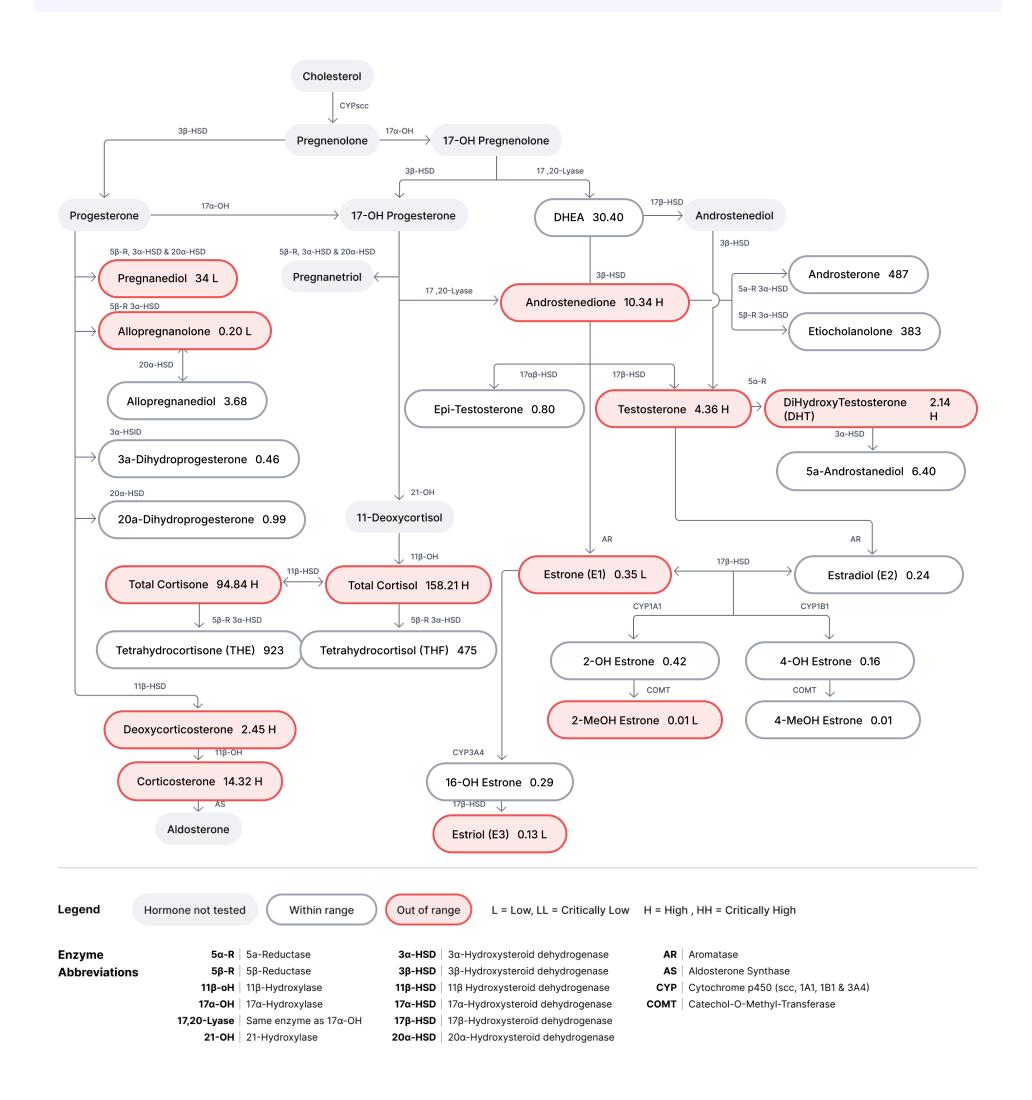
Order ID 6370821 Lab ID 4103170 Patient ID P000927 Ext ID 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25





Order ID 6370821 Lab ID 4103170 Patient ID P000927 Ext ID 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

URINARY GLUCOCORTICOIDS							
SERVICE	RESULT	H/L				REFERENCE	UNITS
Total Cortisol	158.21	Н			•	(13.00-44.00)	ug/gCR
Total Cortisone	94.84	Н			•	(22.00-62.00)	ug/gCR
Total Cortisol/Cortisone	1.67	Н			•	(0.20-0.70)	ratio
Tetrahydrocortisol (THF)	475			•		(150-860)	ug/gCR
Tetrahydrocortisone (THE)	923			•		(540-1550)	ug/gCR
Metabolised Cortisol (THF + THE)	1397			•		(700-1700)	ug/gCR
• 11b-HSD-Index (THF/THE)	0.51	L	•			(0.59-1.42)	ug/gCR

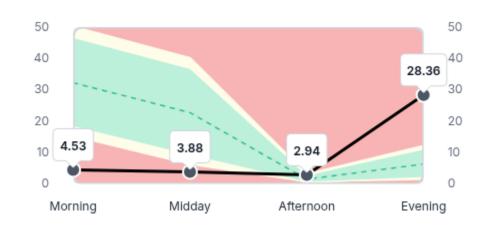
Free Cortisols				
SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisol, Morning	19.73		(10.00-45.00)	ug/gCR
Cortisol, Midday	102.19	Н	(20.00-90.00)	ug/gCR
Cortisol, Afternoon	87.00	Н	(6.00-25.00)	ug/gCR
Cortisol, Evening	66.60	Н	(2.00-10.00)	ug/gCR



Free Cortisones				
SERVICE	RESULT	H/L	REFERENCE	UNITS
Cortisone, Morning	113.00	Н	(30.00-110.00)	ug/gCR
Cortisone, Midday	134.00		(60.00-185.00)	ug/gCR
Cortisone, Afternoon	114.92	Н	(28.00-100.00)	ug/gCR
Cortisone, Evening	80.50	н	(10.00-45.00)	ug/gCR



URINARY MELATONINS				
SERVICE	RESULT	H/L	REFERENCE	UNITS
Melatonin, Morning	4.53	L	(15.00-50.00)	ug/gCR
Melatonin, Midday	3.88	L	(6.00-40.00)	ug/gCR
Melatonin, Afternoon	2.94		(0.50-3.00)	ug/gCR
Melatonin, Evening	28.36	Н	(1.20-12.00)	ug/gCR







 Order ID
 6370821

 Lab ID
 4103170

 Patient ID
 P000927

 Ext ID
 25141-0015

SIMONE RAVEN

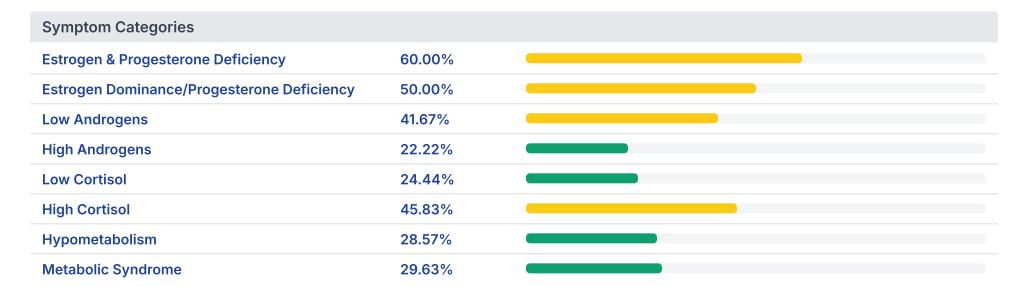
Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

Symptom Score

1. MILD	2. MODERATE	3. SEVERE
Sensitivity to chemicals	Cold body temperature	Decreased libido
Swelling or puffy eyes/face	Rapid aging	Bone loss
Nails breaking or brittle	Decreased stamina	Decreased muscle size
Rapid heartbeat	Headaches	Aches and pains
Depressed	Hot flashes	Fibromyalgia
Anxious	Foggy thinking	Vaginal dryness
Sugar craving	Hair dry or brittle	
Stress	Night sweats	
Hearing loss	Numbness - feet/hands	
Nervous	Sleep disturbed	
Heart palpitations	Fibrocystic breasts	
Low blood pressure		
Tender breasts		
Hoarseness		
Memory lapse		
Increased body/facial hair		
Tearful		
Mood swings		
Irritable		







Order ID6370821Lab ID4103170Patient IDP000927Ext ID25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

Urinary Estrogens Comment

ESTRONE LOW:

Estrone (E1) is one of the primary estrogens, predominantly produced in adipose tissue and, to a lesser extent, in the ovaries. While less potent than estradiol, E1 becomes the dominant estrogen in postmenopausal women. Low urinary E1 levels in postmenopausal women may suggest insufficient conversion of adrenal precursors to estrone, leading to estrogen deficiency and exacerbating symptoms such as hot flashes, mood disturbances, and osteoporosis. Consider Zinc (15–30 mg/day) and vitamin B6 (10–25 mg/day) to support the enzymatic activity of aromatase, which converts androgens into estrone. Additionally, the use of E2 supplementation will increase levels through peripheral conversion.

ESTRIOL LOW:

Estriol (E3), the weakest of the primary estrogens, plays a limited role post-menopause but may still contribute to overall estrogenic activity. Low urinary E3 levels in postmenopausal women can indicate reduced estrogen production, potentially exacerbating hypoestrogenic symptoms such as vaginal dryness, reduced bone density, and cardiovascular risks. While its clinical significance in postmenopausal women is less pronounced compared to estradiol and estrone, E3 levels may still provide insights into overall hormonal balance and the effectiveness of hormone replacement therapy (HRT).

ESTROGEN QUOTIENT LOW:

A low ratio suggests reduced E3 formation relative to E1 and E2. This may indicate altered estrogen metabolism and reduced protective weak estrogen effects. Further investigations may include TFT's.

2-METHOXY-ESTRONE LOW:

2-Methoxyestrone (2-MeO E1) is a metabolite of estrone with known anti-inflammatory and anti-cancer properties. Low levels of 2-MeO estrone suggest impaired methylation of 2-hydroxyestrone, which is a key detoxification pathway. This may result in the accumulation of more reactive and potentially harmful estrogen metabolites, increasing cancer risk.

2-METHOXY-ESTRONE/2-HYDROXY-ESTRONE RATIO LOW:

The ratio of 2-methoxyestrone (2-MeO E1) to 2-hydroxyestrone (2-OH E1) reflects estrogen metabolism pathways that favor protective versus proliferative metabolites. A lower ratio points to impaired methylation capacity, which can lead to an accumulation of unmetabolised 2-OH estrone, increasing oxidative stress and the potential for cellular damage. This imbalance may heighten the risk for estrogen-related diseases, including cancer.

Progesterone Metabolites Comment

PREGNANEDIOL/ESTRADIOL RATIO LOW:

The ratio of pregnanediol (Pgdiol) to estradiol (E2) provides valuable insights into progesterone and estrogen balance, particularly relevant in post-menopausal women, where the balance between these hormones is critical for overall health. A low Pgdiol/E2 ratio may indicate insufficient progesterone levels, which can exacerbate symptoms of estrogen dominance, including mood swings, weight gain, and an increased risk of estrogen-driven conditions such as breast cancer. This ratio can help assess the effectiveness of hormone replacement therapy (HRT) and guide treatment to restore hormonal equilibrium and reduce the risk of complications associated with estrogen dominance.

PREGNANEDIOL LOW:





Order ID6370821Lab ID4103170Patient IDP000927Ext ID25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

While progesterone cannot be directly measured in urine, pregnanediol, its primary metabolite, serves as a key indicator of progesterone activity. In post-menopausal women, low pregnanediol levels reflect insufficient progesterone metabolism, which may suggest reduced progesterone production, contributing to hormonal imbalance and potential estrogen dominance. This imbalance can exacerbate symptoms like hot flashes, mood swings, and increase the risk of conditions such as osteoporosis and cardiovascular disease. Hormone replacement therapy (HRT) doses can vary widely depending on the individual's clinical presentation, lab results, and health history which should be assessed by the treating physician. For progesterone-related metabolites, oral or topical progesterone (100-200 mg/day) may help raise levels.

ALLOPREGNANOLONE LOW:

Allopregnanolone, a neuroactive metabolite of progesterone, plays a crucial role in modulating the GABA-A receptor, thus influencing mood, anxiety, and overall neuroprotection. In post-menopausal women, low allopregnanolone levels may contribute to increased vulnerability to mood disturbances, including anxiety and depression, as well as potential sleep disturbances. These neurosteroid effects are vital for maintaining emotional stability and cognitive function. Clinically, measuring allopregnanolone levels in post-menopausal women provides valuable information regarding hormone imbalances and the need for therapeutic interventions, such as hormone replacement therapy (HRT).

DEOXYCORTICOSTERONE ELEVATED:

Deoxycorticosterone is a precursor to aldosterone, and elevated levels may indicate heightened adrenal production of corticosteroids, possibly reflecting increased stress response or adrenal hyperactivity. Elevated DOC levels could lead to mineralocorticoid imbalance, influencing blood pressure and electrolyte regulation. Review the urinary cortisol values within this report and provide adrenal support where required.

CORTICOSTERONE ELEVATED:

Corticosterone is involved in the stress response and metabolism. High corticosterone levels may indicate chronic stress or adrenal overactivity, influencing glucocorticoid and mineralocorticoid production. This could have implications for stress management, immune function, and overall adrenal health.

Urinary Androgen Comment

ANDROSTENEDIONE ELEVATED:

Androstenedione is a precursor hormone to both testosterone and estrogen. Elevated androstenedione levels may indicate ovarian or adrenal overproduction. In postmenopausal women, this could reflect hormonal imbalances or excessive androgen production, potentially leading to symptoms like hirsutism or acne.

TESTOSTERONE ELEVATED:

Elevated testosterone levels may indicate adrenal or ovarian hyperfunction, supplementation, or androgen resistance, potentially causing virilisation or other androgenic symptoms.

DIHYDROXYTESTOSTERONE (DHT) ELEVATED:

Dihydrotestosterone (DHT) is a potent androgen formed from testosterone, and elevated levels may indicate increased 5α -reductase activity, which can amplify androgenic effects. This could lead to conditions like hair loss, acne, or an increase in body hair. Elevated DHT may require further investigation, especially in postmenopausal women.

Urinary Cortisol Comment





 Order ID
 6370821

 Lab ID
 4103170

 Patient ID
 P000927

 Ext ID
 25141-0015

SIMONE RAVEN

Sex: Female • 61yrs • 06-Jun-63 7 MACQUARIE ROAD, MORISSET PARK NSW 2264

Clinical Notes: Ovestin | Estriol | Magnesium | Vitamin D | Zinc

RECEIVED 21-May-25

11b-HSD INDEX (THF/THE) LOW:

A low THF/THE ratio suggests reduced 11β-HSD1 activity, leading to decreased conversion of cortisone to active cortisol in tissues such as the liver and fat. This reduces intracellular cortisol action, potentially mimicking cortisol deficiency at the cellular level despite normal systemic levels. Low 11β-HSD1 activity has been linked to increased fatigue, reduced inflammatory regulation, and impaired metabolism. Consider anti-inflammatory and adrenal support, as well as cofactor repletion (e.g., NAD+, zinc).

TOTAL CORTISOL ELEVATED:

Elevated total urinary cortisol indicates increased systemic cortisol production, typically associated with chronic psychological or physiological stress, inflammation, or dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. High cortisol levels can suppress gonadotropin-releasing hormone (GnRH), reduce progesterone and testosterone synthesis, impair thyroid function, and promote insulin resistance. Management includes identifying stressors, supporting adrenal recovery (adaptogens, phosphatidylserine), and evaluating downstream hormonal impacts.

TOTAL CORTISONE ELEVATED:

Increased total cortisone suggests enhanced cortisol inactivation via 11β-HSD type 2 enzyme, which converts active cortisol to its inactive form. This may reflect a compensatory response to excess cortisol or increased 11β-HSD2 activity in tissues such as the kidney, often associated with mineralocorticoid effects (e.g., hypertension, potassium wasting). It may also signal redistribution of cortisol metabolism, affecting tissue-level hormone action. Evaluation of sodium balance, stress load, and renal function is recommended.

TOTAL CORTISOL/CORTISONE RATIO ELEVATED:

An elevated cortisol/cortisone ratio implies increased 11β -HSD type 1 activity, favoring conversion of cortisone back to active cortisol, particularly in liver and adipose tissue. This enhances cortisol action at the tissue level and is associated with visceral adiposity, insulin resistance, and metabolic syndrome. It may contribute to an elevated free cortisol burden despite normal serum levels. Support includes reducing inflammation, improving metabolic health, and supporting cortisol clearance pathways.

Urinary Cortisone Comment

URINE CORTISONES INTERPRETATION:

When the morning, third, and fourth cortisone samples are high, with the second sample being normal, it suggests sustained stress activation with failure of the body to properly lower cortisol levels after the morning surge. This pattern may be indicative of chronic stress, overactive HPA axis, or a dysregulated response to stress. It can lead to symptoms such as fatigue, anxiety, irritability, and difficulty unwinding at night. Management strategies should focus on lifestyle changes such as reducing exposure to stressors, improving sleep hygiene, and promoting relaxation with adaptogens (e.g., ashwagandha) and dietary support. Monitoring cortisol levels over time will help assess the effectiveness of interventions.

METHYLMALONATE (MMA) ELEVATED:

Elevated urinary methylmalonate indicates a functional vitamin B12 deficiency, impairing the conversion of methylmalonyl-CoA to succinyl-CoA. B12 is essential for methylation pathways that regulate DNA synthesis and steroid hormone receptor expression. Deficiency may lead to disrupted estrogen and androgen signaling via impaired methylation of hormone receptors and detoxification enzymes. Assessment of B12 status and methylation capacity is recommended, particularly in cases of hormonal imbalance.

Methodology

Liquid Chromatography-Mass Spectrometry (LC-MS/MS/MS), Inductively Coupled Plasma Mass Spectrometry (ICP-MS)