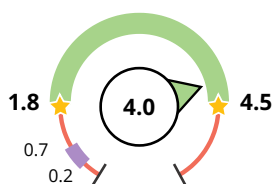


Ordering Provider:

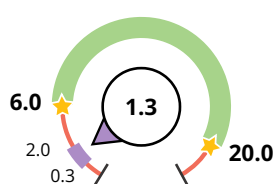
Precision Analytical

Hormone Testing Summary

ESTROGEN & PROGESTERONE



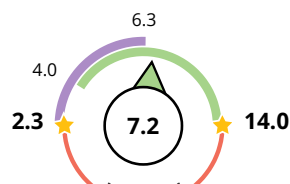
Estradiol (E2)



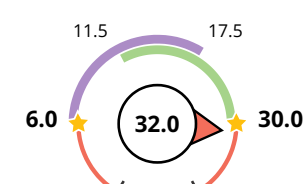
Progesterone

Serum Equivalent*, ng/mL

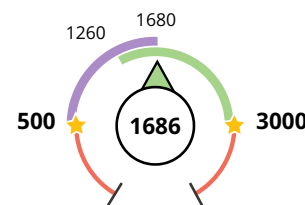
ANDROGENS



Testosterone



5a-Androstenediol

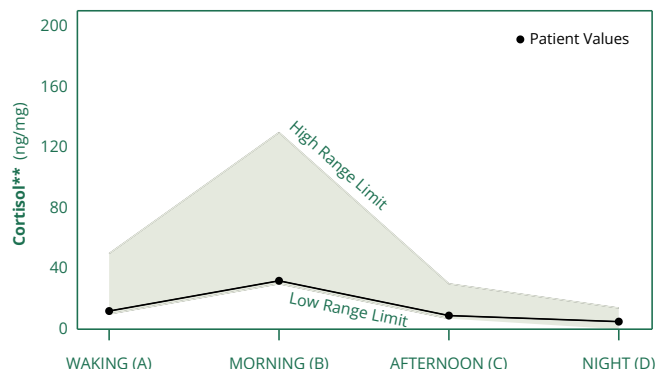


Total DHEA Production

DHEA-S + Etiocholanolone + Androsterone

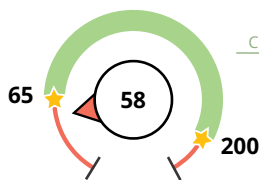
CORTISOL

Daily Free Cortisol Pattern



Cortisol Clearance Rate

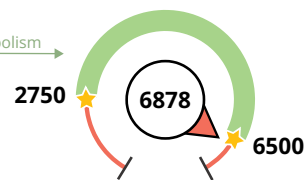
THF + THE / Cortisol + Cortisone



24hr Free Cortisol

A + B + C + D

Cortisol Metabolism



Metabolized Cortisol

Total Cortisol Production (THF + THE)

Optimal Luteal Range Postmenopausal Range Out of Range Edge of Range

*Progesterone Serum Equivalent is a calculated value based on urine pregnanediol.

**Free cortisol best reflects tissue levels. Metabolized cortisol best reflects total cortisol production.

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123 A Street
Sometown, CA 90266**Collection Times:**2022-06-13 04:00AM (U)
2022-06-13 06:00AM (U)
2022-06-13 03:00PM (U)
2022-06-13 08:00PM (U)**DOB:** 1976-01-01**Age:** 46**Sex:** Female**Last Menstrual Period:**

2022-05-25

Ordering Provider:

Precision Analytical

Sex Hormones & Metabolites

TEST		RESULT	UNITS	LUTEAL*	POSTMENOPAUSAL
Progesterone Metabolites (Urine)					
b-Pregnanediol	Below luteal range	100.0	ng/mg	600 - 2000	60 - 200
a-Pregnanediol	Below luteal range	49.0	ng/mg	200 - 740	15 - 50
Estrogens and Metabolites (Urine)					
Estrone (E1)	High end of luteal range	24.01	ng/mg	12 - 26	1.0 - 7.0
Estradiol (E2)	High end of luteal range	4.00	ng/mg	1.8 - 4.5	0.2 - 0.7
Estriol (E3)	High end of luteal range	16.0	ng/mg	5 - 18	0.6 - 4.0
2-OH-E1	Below luteal range	3.58	ng/mg	5.1 - 13.1	0.3 - 2.0
4-OH-E1	Within luteal range	1.20	ng/mg	0 - 1.8	0 - 0.3
16-OH-E1	Above luteal range	2.80	ng/mg	0.7 - 2.6	0.2 - 0.6
2-Methoxy-E1	Below luteal range	1.35	ng/mg	2.5 - 6.5	0.3 - 1.4
2-OH-E2	Within luteal range	0.74	ng/mg	0 - 3.1	0 - 0.52
4-OH-E2	Within luteal range	0.41	ng/mg	0 - 0.52	0 - 0.12
Total Estrogen	Within range	54.1	ng/mg	35 - 70	3.5 - 15
Metabolite Ratios (Urine)					
2-OH / 16-OH-E1 Balance	Below range	1.28	ratio	2.69 - 11.83	
2-OH / 4-OH-E1 Balance	Below range	2.98	ratio	5.4 - 12.62	
2-Methoxy / 2-OH Balance	Below range	0.38	ratio	0.39 - 0.67	
Androgens and Metabolites (Urine)				Range	
DHEA-S	Below range	16.0	ng/mg	20 - 750	
Androsterone	Within range	1195.0	ng/mg	200 - 1650	
Etiocholanolone	Within range	474.6	ng/mg	200 - 1000	
Testosterone	Within range	7.16	ng/mg	2.3 - 14	
5a-DHT	High end of range	6.2	ng/mg	0 - 6.6	
5a-Androstanediol	Above range	32.0	ng/mg	6 - 30	
5b-Androstanediol	Within range	42.6	ng/mg	12 - 75	
Epi-Testosterone	Within range	8.6	ng/mg	2.3 - 14	

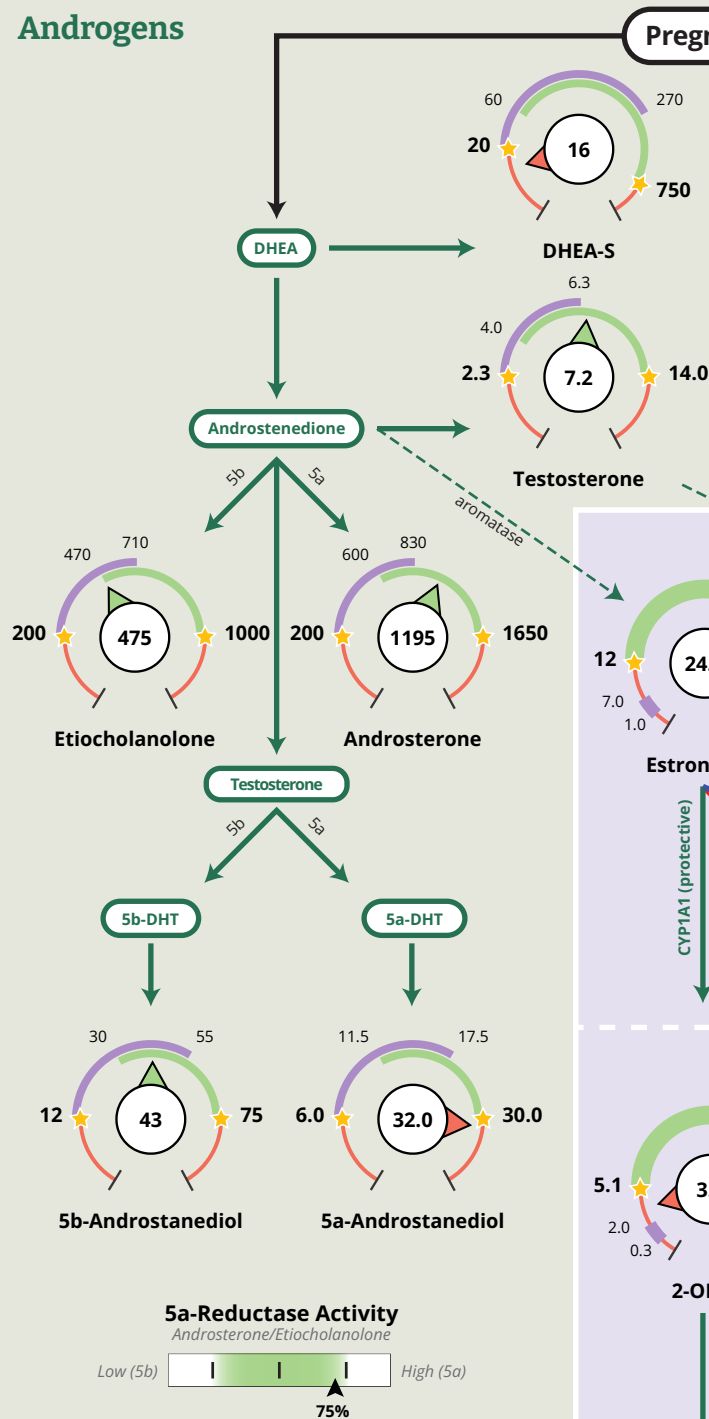
* The Luteal Range represents the expected premenopausal luteal range, collected menstrual cycle days 19-22 of a 28-day cycle. If your patient noted taking oral progesterone, the reference range represents the expected range on 100 - 200 mg of oral micronized progesterone (OMP). The ranges in the table below represent ranges in other times of the cycle your patient may have collected, such as follicular or ovulatory phases.

ADDITIONAL NORMAL RANGES	FOLLICULAR	OVULATORY	ON ORAL PG
b-Pregnanediol	100 - 300	100 - 300	2000 - 9000
a-Pregnanediol	25 - 100	25 - 100	580 - 3000
Estrone (E1)	4.0 - 12.0	22 - 68	N/A
Estradiol (E2)	1.0 - 2.0	4.0 - 12.0	N/A

SEX HORMONES & METABOLITES

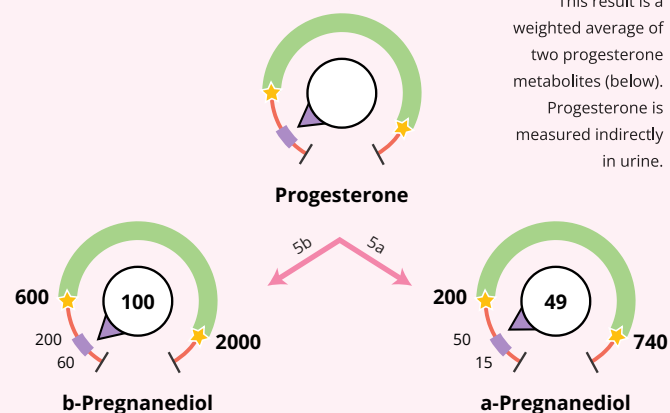
● Optimal Luteal Range ● Postmenopausal Range ● Out of Range ★ Edge of Range

Androgens

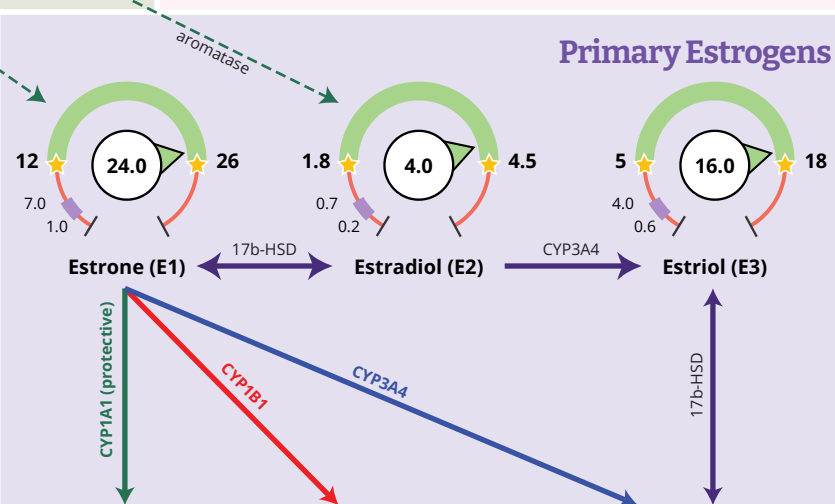


Progesterone

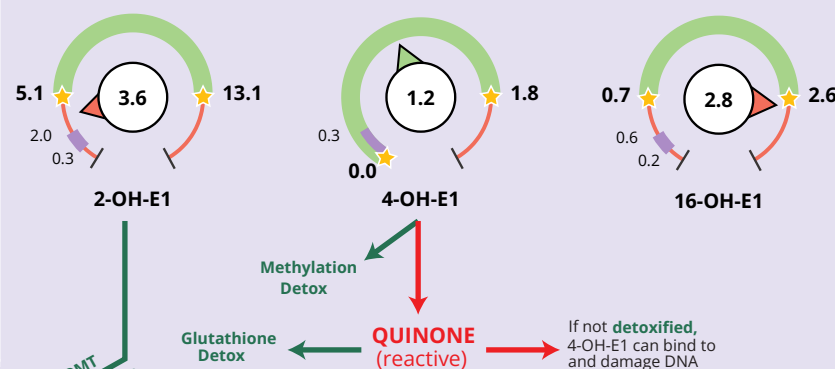
This result is a weighted average of two progesterone metabolites (below). Progesterone is measured indirectly in urine.



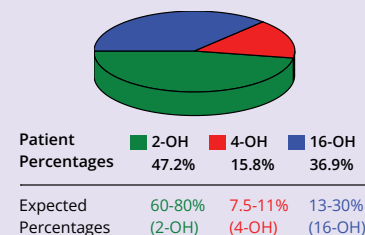
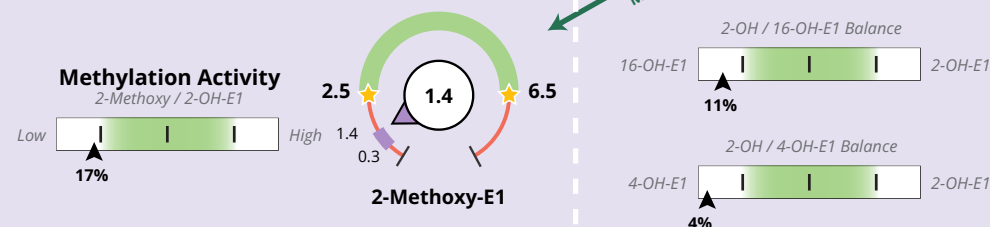
Primary Estrogens



Phase 1 Estrogen Metabolism



Phase 2 Estrogen Metabolism



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2022-05-25

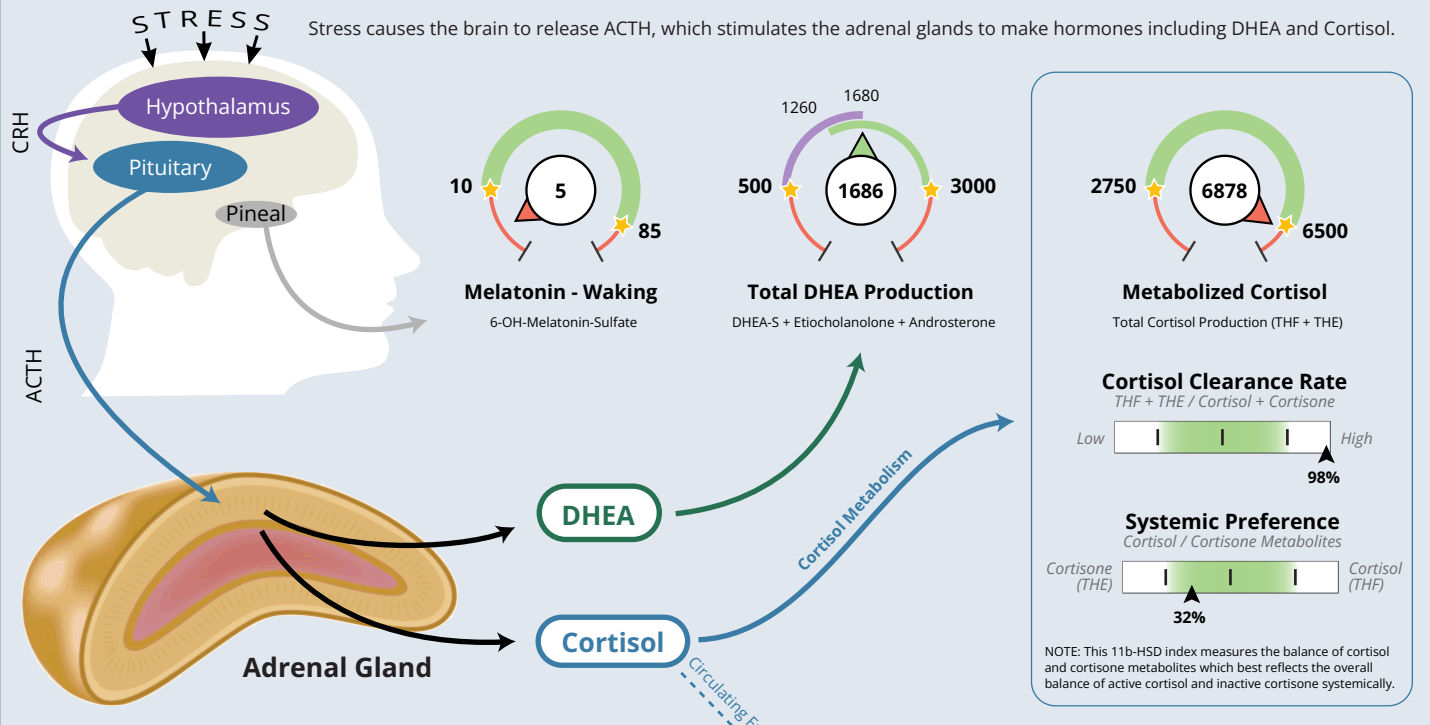
Ordering Provider:

Precision Analytical

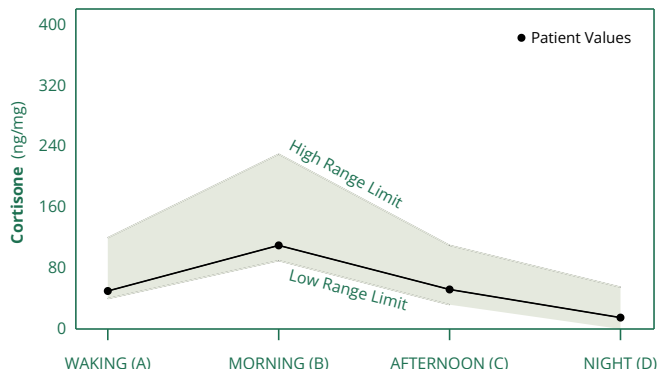
Adrenal Hormones & Metabolites

TEST		RESULT	UNITS	NORMAL RANGE
Daily Free Cortisol and Cortisone (Urine)				
Cortisol A - Waking	Low end of range	12.0	ng/mg	10 - 50
Cortisol B - Morning	Low end of range	32.0	ng/mg	30 - 130
Cortisol C - Afternoon	Low end of range	9.0	ng/mg	7 - 30
Cortisol D - Night	Within range	5.0	ng/mg	0 - 14
Cortisone A - Waking	Low end of range	50.0	ng/mg	40 - 120
Cortisone B - Morning	Low end of range	110.0	ng/mg	90 - 230
Cortisone C - Afternoon	Within range	52.0	ng/mg	32 - 110
Cortisone D - Night	Within range	15.0	ng/mg	0 - 55
24hr Free Cortisol	Below range	58.0	ng/mg	65 - 200
24hr Free Cortisone	Low end of range	227.0	ng/mg	220 - 450
Creatinine (Urine)				
Creatinine A - Waking	Within range	0.50	mg/ml	0.2 - 2
Creatinine B - Morning	Within range	0.72	mg/ml	0.2 - 2
Creatinine C - Afternoon	Within range	0.48	mg/ml	0.2 - 2
Creatinine D - Night	Within range	0.34	mg/ml	0.2 - 2
Cortisol Metabolites and DHEA-S (Urine)				
a-Tetrahydrocortisol (a-THF)	Above range	464.0	ng/mg	75 - 370
b-Tetrahydrocortisol (b-THF)	Within range	2318.9	ng/mg	1050 - 2500
b-Tetrahydrocortisone (b-THE)	Above range	4095.1	ng/mg	1550 - 3800
Metabolized Cortisol (THF + THE)	Above range	6878.0	ng/mg	2750 - 6500
DHEA-S	Below range	16.0	ng/mg	20 - 750
Cortisol Clearance Rate (CCR)	Above range	24.1		6 - 12.5

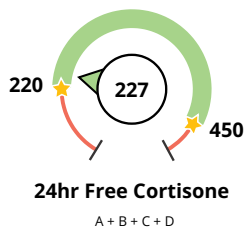
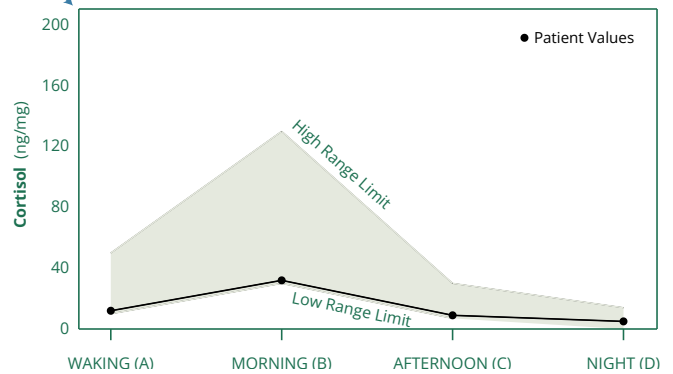
ADRENAL HORMONES & METABOLITES



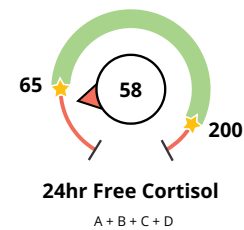
Daily Free Cortisone Pattern



Daily Free Cortisol Pattern



Cortisol and Cortisone interconvert (11b-HSD)



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Precision Analytical

DOB: 1976-01-01**Age:** 46**Sex:** Female**Last Menstrual Period:**

2022-05-25

Organic Acid Tests (OATs)

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 low or 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				
Quinolate	Above range	13.2	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