

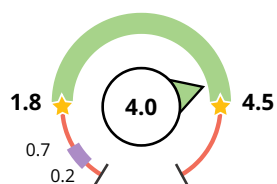
DUTCH Complete Female Report

Ordering Provider:

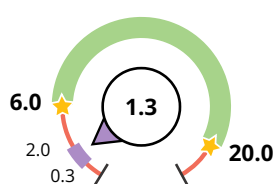
Precision Analytical

Hormone Testing Summary

ESTROGEN & PROGESTERONE



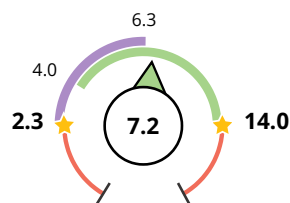
Estradiol (E2)



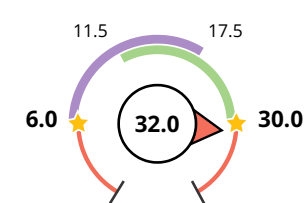
Progesterone

Serum Equivalent*, ng/mL

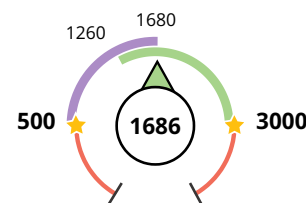
ANDROGENS



Testosterone



5a-Androstenediol

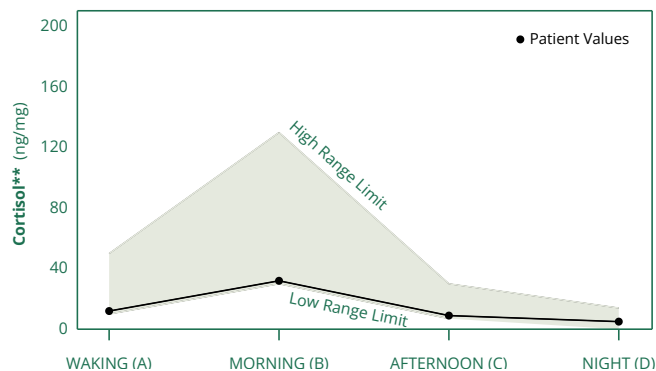


Total DHEA Production

DHEA-S + Etiocholanolone + Androsterone

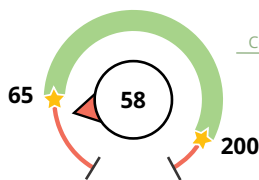
CORTISOL

Daily Free Cortisol Pattern



Cortisol Clearance Rate

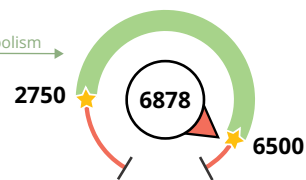
THF + THE / Cortisol + Cortisone



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.

**Accession # 01035999**Female Sample Report
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	

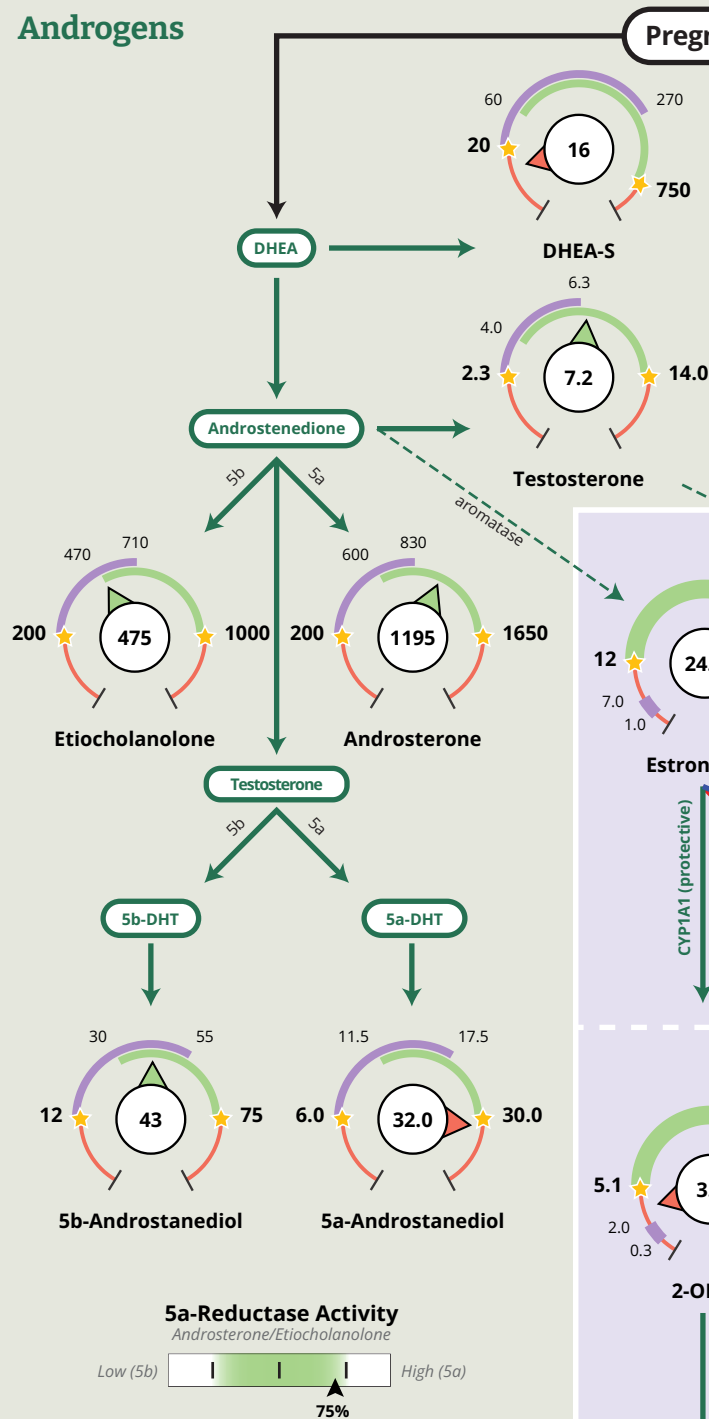
* The Luteal Range represents the expected premenopausal luteal range, collected menstrual cycle days 19-22 of a 28-day cycle. If your patient noted taking oral progesterone, the reference range represents the expected range on 100 - 200 mg of oral micronized progesterone (OMP). The ranges in the table 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

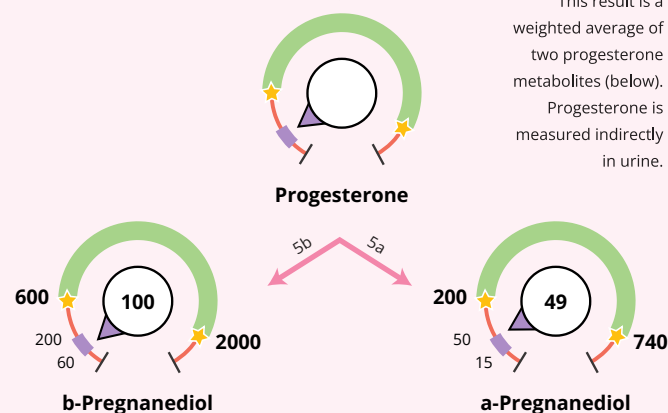
● Optimal Luteal Range ● Postmenopausal Range ● Out of Range ★ Edge of Range

Androgens

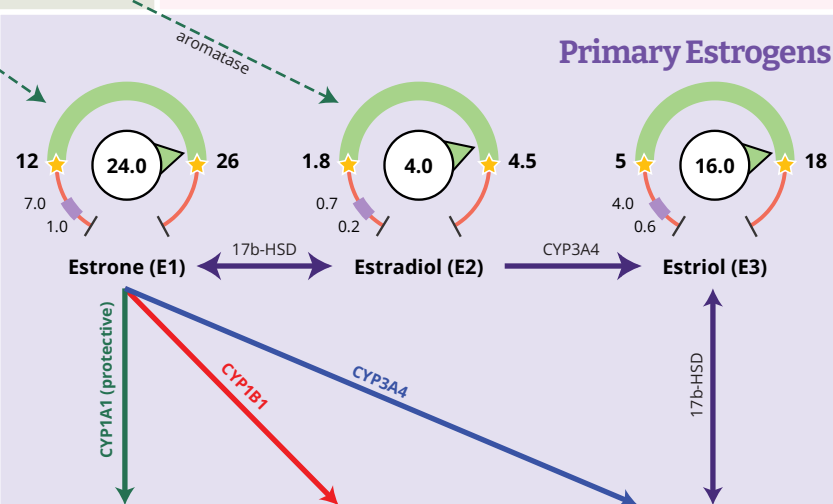


Progesterone

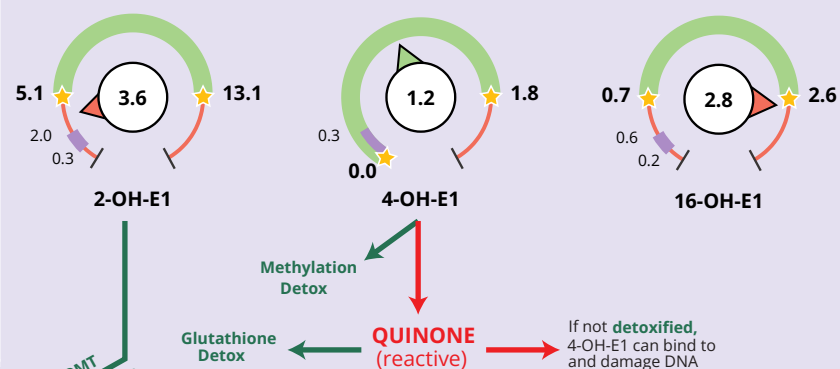
This result is a weighted average of two progesterone metabolites (below). Progesterone is measured indirectly in urine.



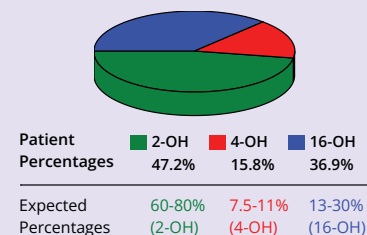
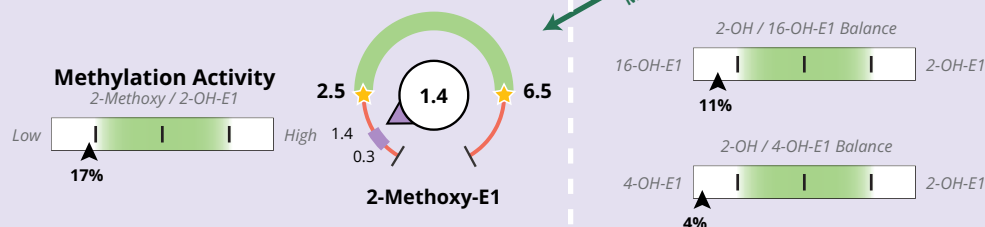
Primary Estrogens



Phase 1 Estrogen Metabolism



Phase 2 Estrogen Metabolism



**Accession # 01035999**Female Sample Report
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

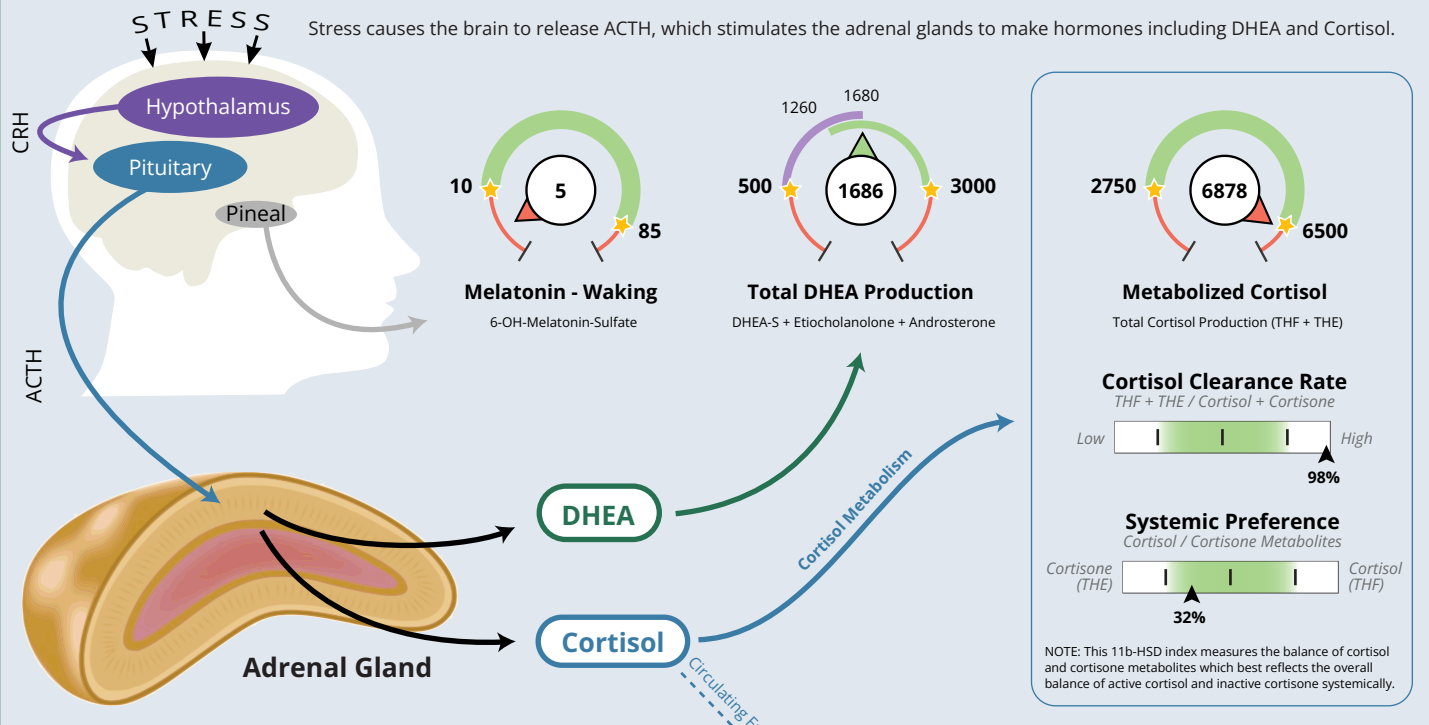
Ordering Provider:

Precision Analytical

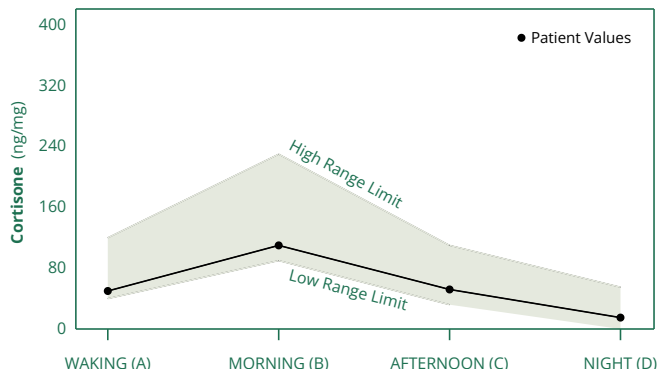
Adrenal Hormones & Metabolites

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

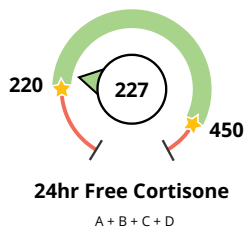
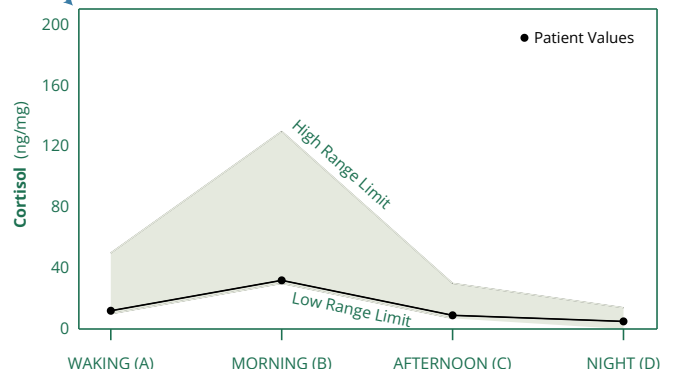
ADRENAL HORMONES & METABOLITES



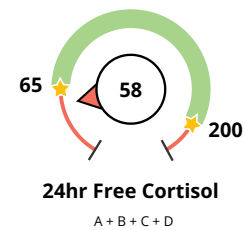
Daily Free Cortisone Pattern



Daily Free Cortisol Pattern



Cortisol and Cortisone interconvert (11b-HSD)



**Accession # 01035999**Female Sample Report
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

Organic Acid Tests (OATs)

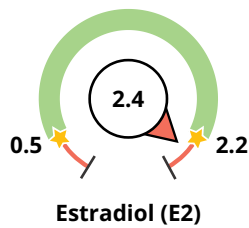
TEST		RESULT	UNITS	NORMAL RANGE
Nutritional Organic Acids (Urine)				
Vitamin B12 Marker - May be deficient if high				
Methylmalonate (MMA)	Above range	4.9	ug/mg	0 - 2.5
Vitamin B6 Markers - May be deficient if high				
Xanthurenate	Above range	1.23	ug/mg	0.12 - 1.2
Kynurenate	Above range	5.4	ug/mg	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				
Quinolinatate	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

DUTCH Complete Male Report

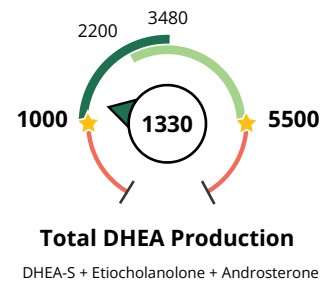
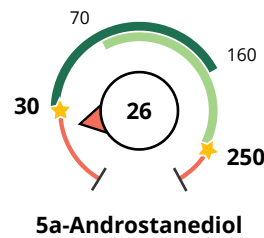
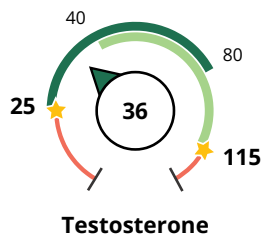
Ordering Provider:
Precision Analytical

Hormone Testing Summary

ESTROGEN

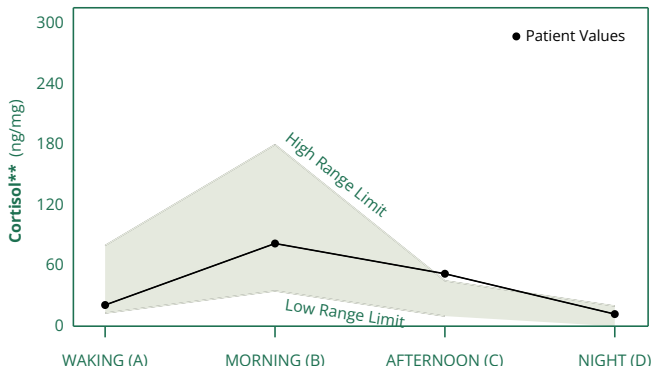


ANDROGENS

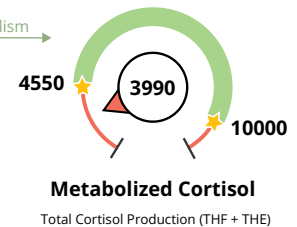
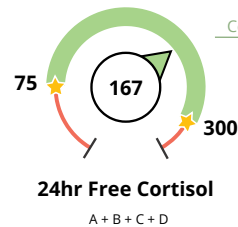
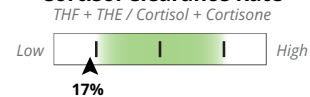


CORTISOL

Daily Free Cortisol Pattern



Cortisol Clearance Rate



Normal
Out of Range
Age 18 - 40 (Androgens)
Age 41 - 60+ (Androgens)

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

Ordering Provider:

Precision Analytical

Sex Hormones & Metabolites

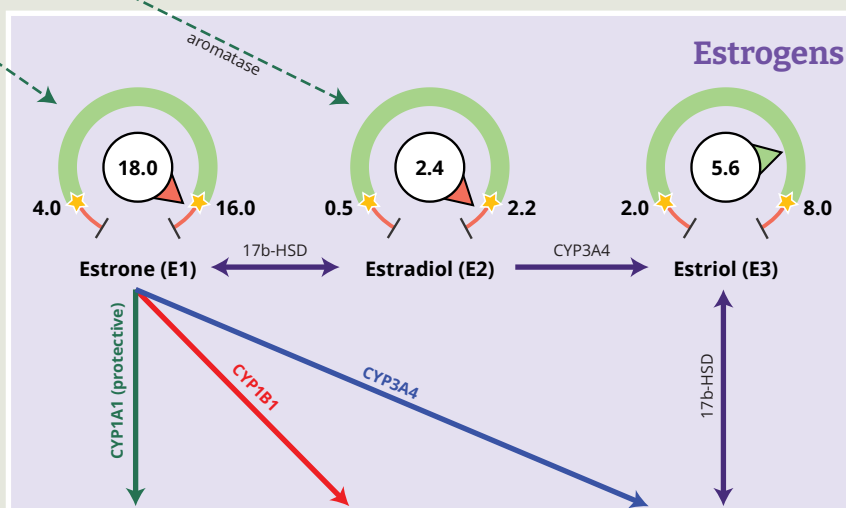
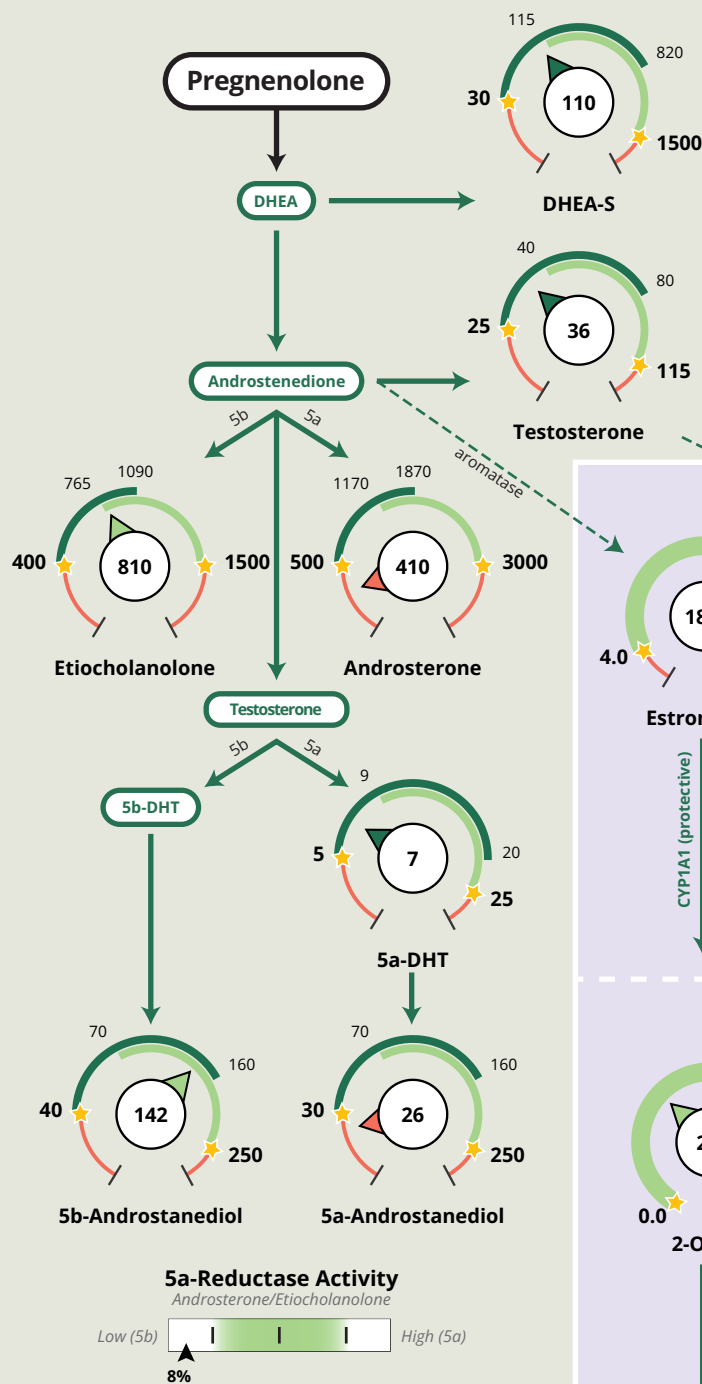
TEST		RESULT	UNITS	NORMAL RANGE
Progesterone Metabolites (Urine)				
b-Pregnanediol	Within range	175.7	ng/mg	75 - 400
a-Pregnanediol	Low end of range	24.0	ng/mg	20 - 130
Estrogens and Metabolites (Urine)				
Estrone (E1)	Above range	17.96	ng/mg	4 - 16
Estradiol (E2)	Above range	2.42	ng/mg	0.5 - 2.2
Estriol (E3)	Within range	5.6	ng/mg	2 - 8
2-OH-E1	Within range	2.08	ng/mg	0 - 5.9
4-OH-E1	Within range	0.60	ng/mg	0 - 0.8
16-OH-E1	Within range	1.00	ng/mg	0 - 1.2
2-Methoxy-E1	Within range	1.25	ng/mg	0 - 2.8
2-OH-E2	Within range	0.31	ng/mg	0 - 1.2
4-OH-E2	Within range	0.21	ng/mg	0 - 0.25
Total Estrogen	Within range	31.4	ng/mg	10 - 34
Metabolite Ratios (Urine)				
2-OH / 16-OH-E1 Balance	Below range	2.06	ratio	2.85 - 9.88
2-OH / 4-OH-E1 Balance	Below range	3.43	ratio	6.44 - 12.6
2-Methoxy / 2-OH Balance	Within range	0.61	ratio	0.4 - 0.7
Androgens and Metabolites (Urine)				
DHEA-S	Low end of range	110.0	ng/mg	30 - 1500
Androsterone	Below range	410.0	ng/mg	500 - 3000
Etiocholanolone	Within range	809.7	ng/mg	400 - 1500
Testosterone	Low end of range	36.03	ng/mg	25 - 115
5a-DHT	Low end of range	7.0	ng/mg	5 - 25
5a-Androstanediol	Below range	26.0	ng/mg	30 - 250
5b-Androstanediol	Within range	142.0	ng/mg	40 - 250
Epi-Testosterone	Low end of range	41.2	ng/mg	25 - 115

"Normal" range shown above is the overall normal range across all ages (shown as between the stars on the dials). Age-dependent reference ranges are now included with the DUTCH dials on the next page.

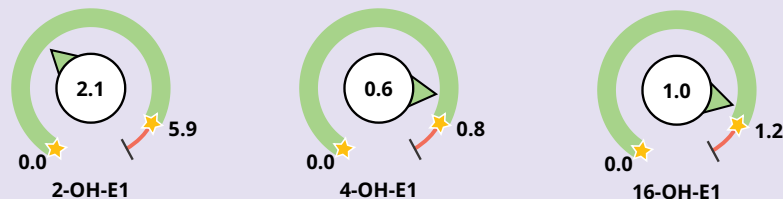
SEX HORMONES & METABOLITES

Androgens

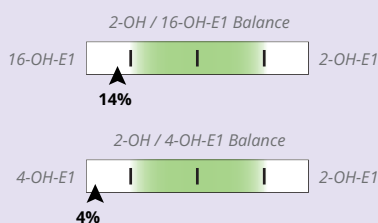
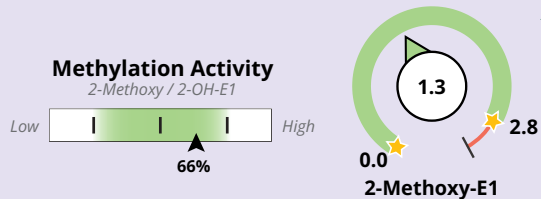
■ Normal
■ Out of Range ★ Edge of Range
■ Age 18 - 40 (Androgens)
■ Age 41 - 60+ (Androgens)



Phase 1 Estrogen Metabolism



Phase 2 Estrogen Metabolism



QUINONE (reactive)
 If not detoxified, 4-OH-E1 can bind to and damage DNA



Patient Percentages	2-OH	4-OH	16-OH
Expected Percentages	60-80% (2-OH)	7.5-11% (4-OH)	13-30% (16-OH)

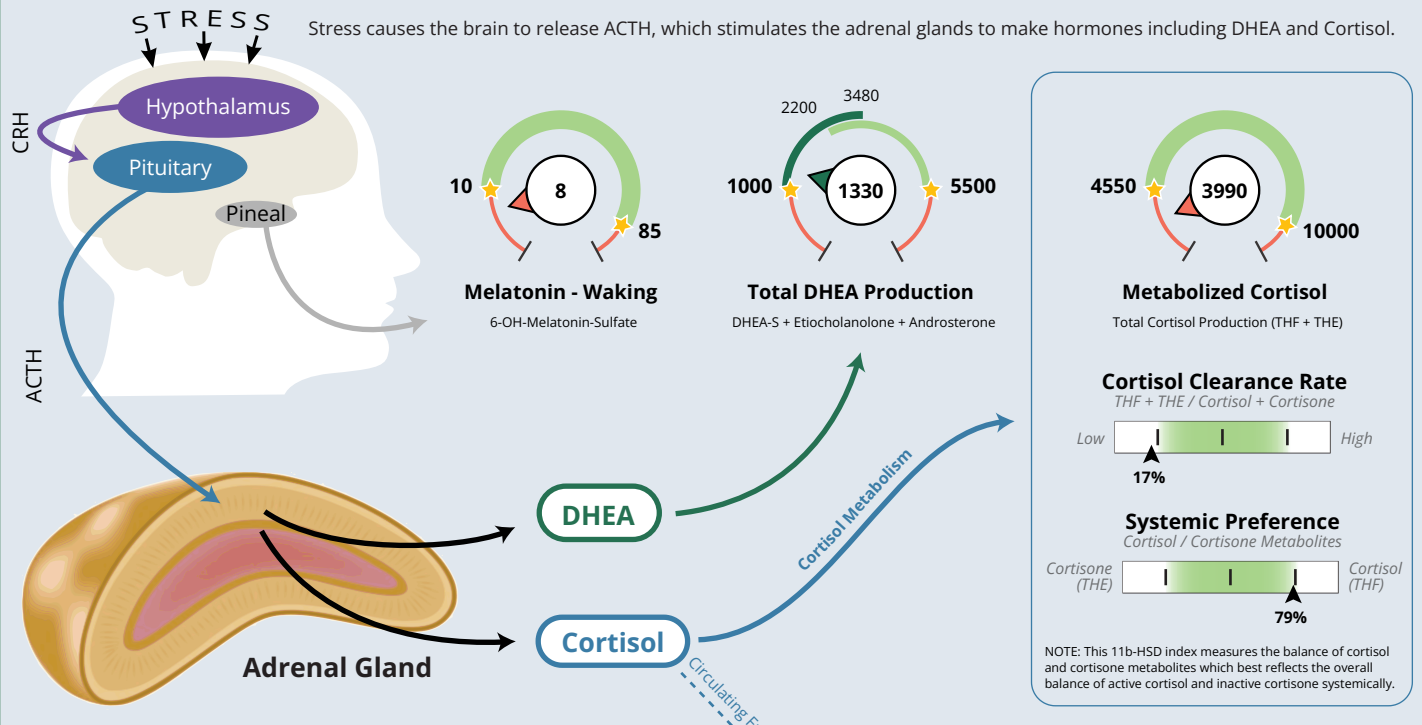
**Accession # 01036002**Male Sample Report
123 A Street
Sometown, CA 90266**Collection Times:**2022-06-13 04:00AM (U)
2022-06-13 06:00AM (U)
2022-06-13 03:00PM (U)
2022-06-13 08:00PM (U)**DOB:** 1976-01-01**Age:** 46**Sex:** Male**Ordering Provider:**

Precision Analytical

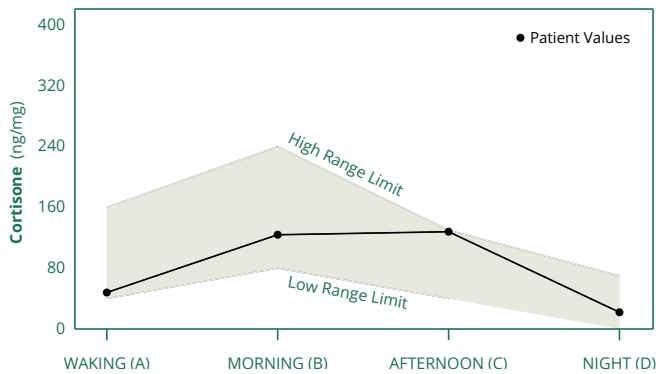
Adrenal Hormones & Metabolites

TEST		RESULT	UNITS	NORMAL RANGE
Daily Free Cortisol and Cortisone (Urine)				
Cortisol A - Waking	Low end of range	21.0	ng/mg	13 - 80
Cortisol B - Morning	Within range	82.0	ng/mg	35 - 180
Cortisol C - Afternoon	Above range	52.0	ng/mg	10 - 45
Cortisol D - Night	Within range	12.0	ng/mg	0 - 20
Cortisone A - Waking	Low end of range	48.0	ng/mg	40 - 160
Cortisone B - Morning	Within range	124.0	ng/mg	80 - 240
Cortisone C - Afternoon	High end of range	128.0	ng/mg	40 - 130
Cortisone D - Night	Within range	22.0	ng/mg	0 - 70
24hr Free Cortisol	Within range	167.0	ng/mg	75 - 300
24hr Free Cortisone	Within range	322.0	ng/mg	220 - 550
Creatinine (Urine)				
Creatinine A - Waking	Within range	0.50	mg/ml	0.3 - 3
Creatinine B - Morning	Within range	0.72	mg/ml	0.3 - 3
Creatinine C - Afternoon	Within range	0.48	mg/ml	0.3 - 3
Creatinine D - Night	Within range	0.34	mg/ml	0.3 - 3
Cortisol Metabolites and DHEA-S (Urine)				
a-Tetrahydrocortisol (a-THF)	Below range	140.0	ng/mg	175 - 700
b-Tetrahydrocortisol (b-THF)	Low end of range	1900.0	ng/mg	1750 - 4000
b-Tetrahydrocortisone (b-THE)	Below range	1950.0	ng/mg	2350 - 5800
Metabolized Cortisol (THF + THE)	Below range	3990.0	ng/mg	4550 - 10000
DHEA-S	Low end of range	110.0	ng/mg	30 - 1500
Cortisol Clearance Rate (CCR)	Below range	8.2		8.5 - 17.5

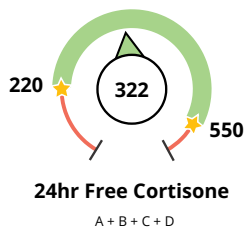
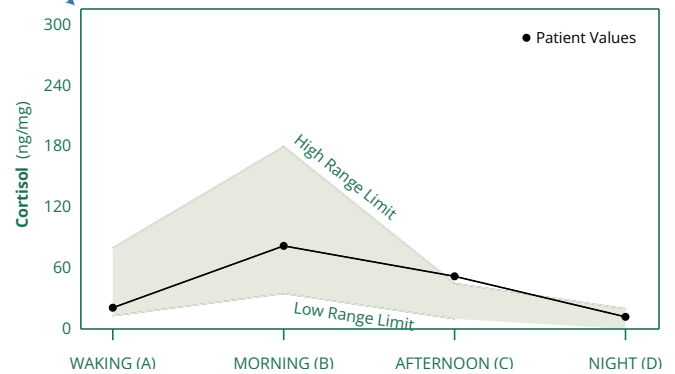
ADRENAL HORMONES & METABOLITES



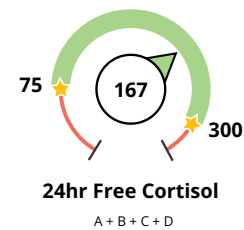
Daily Free Cortisone Pattern



Daily Free Cortisol Pattern



Cortisol and Cortisone interconvert (11b-HSD)



Ordering Provider:

Precision Analytical

Organic Acid Tests (OATs)

TEST		RESULT	UNITS	NORMAL RANGE
Nutritional Organic Acids (Urine)				
Vitamin B12 Marker - May be deficient if high				
Methylmalonate (MMA)	Within range	2.9	ug/mg	0 - 3.5
Vitamin B6 Markers - May be deficient if high				
Xanthurenate	Above range	2.20	ug/mg	0.2 - 1.9
Kynurenate	High end of range	6.4	ug/mg	1 - 6.6
Biotin Marker - May be deficient if high				
b-Hydroxyisovalerate	Above range	23.0	ug/mg	0 - 18
Glutathione Marker - May be deficient if low or high				
Pyroglutamate	Within range	62.0	ug/mg	38 - 83
Gut Marker - Potential gut putrefaction or dysbiosis if high				
Indican	Within range	90.4	ug/mg	0 - 131
Neuro-Related Markers (Urine)				
Dopamine Metabolite				
Homovanillate (HVA)	Low end of range	4.4	ug/mg	4 - 16
Norepinephrine/Epinephrine Metabolite				
Vanilmandelate (VMA)	High end of range	7.3	ug/mg	2.5 - 7.5
Neuroinflammation Marker				
Quinolate	Within range	9.1	ug/mg	0 - 12.5
Additional Markers (Urine)				
Melatonin - Waking				
6-OH-Melatonin-Sulfate	Below range	7.8	ng/mg	10 - 85
Oxidative Stress / DNA Damage				
8-Hydroxy-2-deoxyguanosine (8-OHdG)	Within range	3.7	ng/mg	0 - 8.8