

Ordering Provider:
Precision Analytical

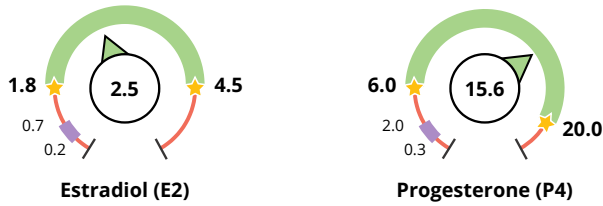
Anna, Dysmenorrhea
123 A Street
Sometown, CA 90266

Hormone Testing Summary

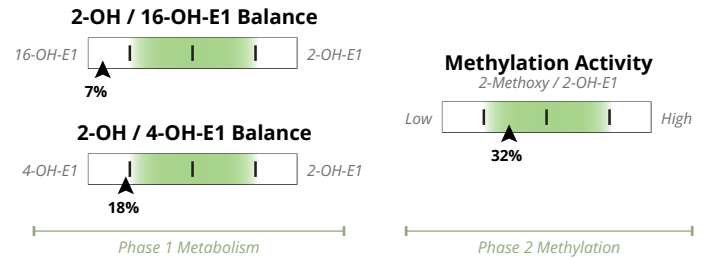
● Optimal Luteal Range ● Postmenopausal Range ● Out of Range ★ Edge of Range

For an expanded view of results, see pages 2 through 6. For interpretive support, see *About Your Results* pages.

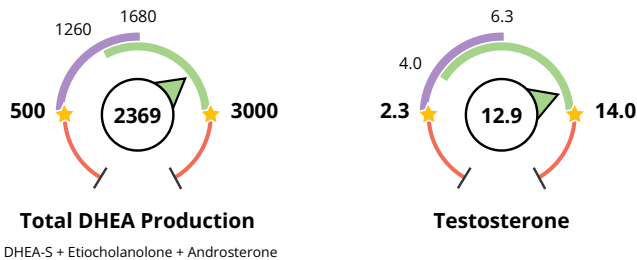
ESTROGEN & PROGESTERONE PRODUCTION



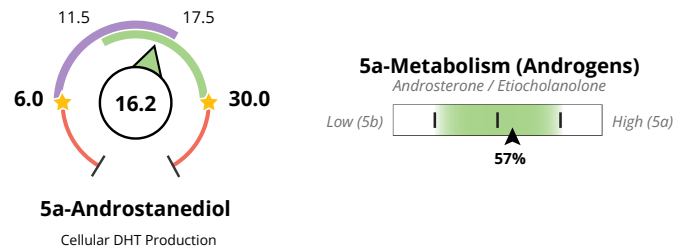
ESTROGEN METABOLISM



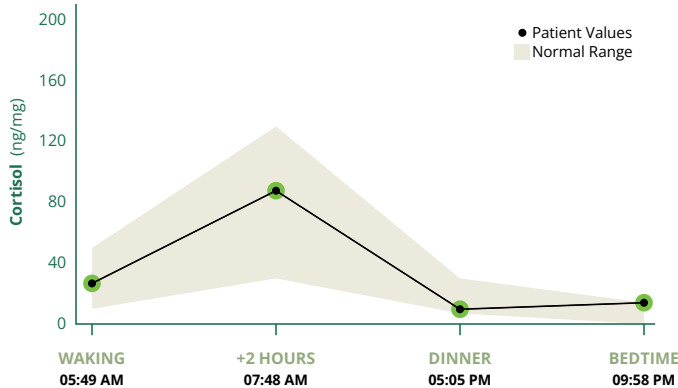
ANDROGEN PRODUCTION



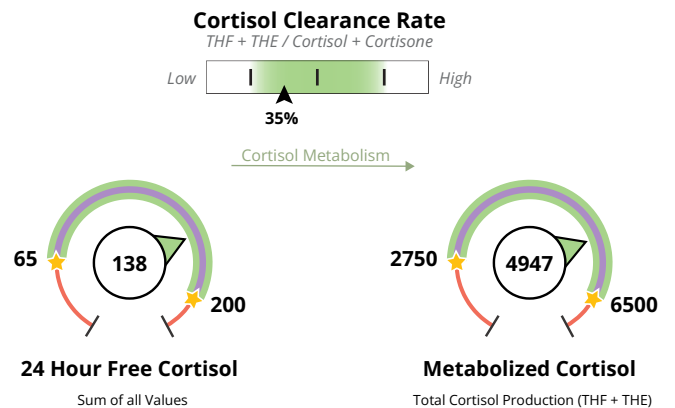
ANDROGEN METABOLISM



DAILY FREE CORTISOL PATTERN



CORTISOL METABOLISM

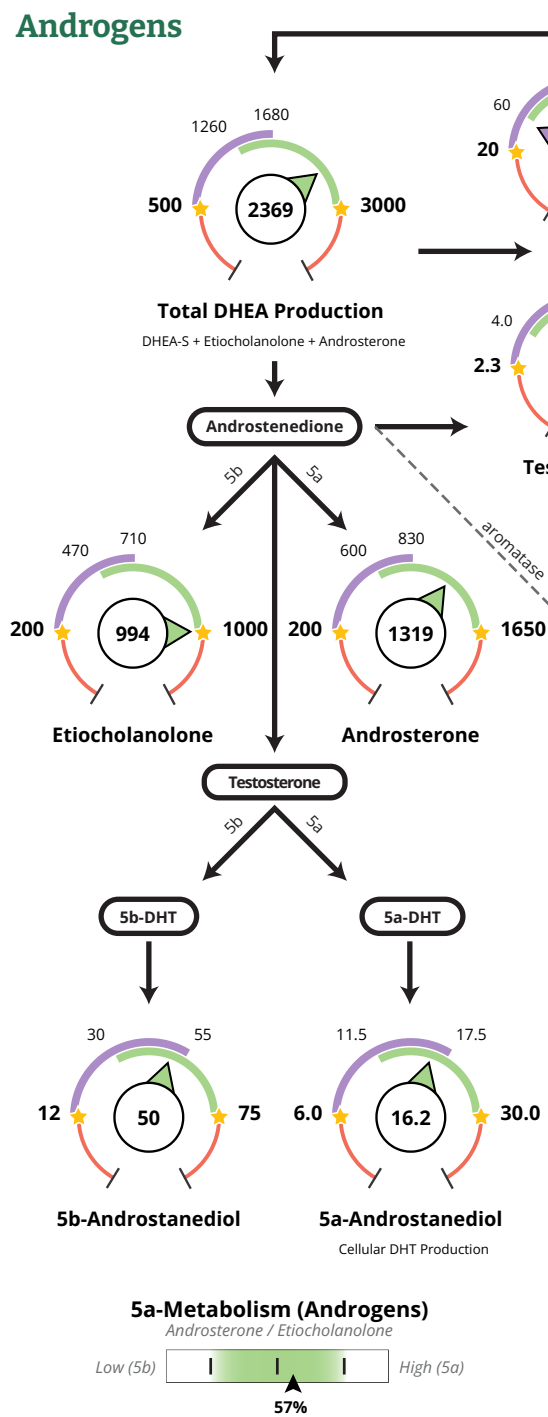


Organic Acid Tests (OATs) Suggests the Following Possible Imbalances | see page 6 for details

● Watch ● Needs Attention

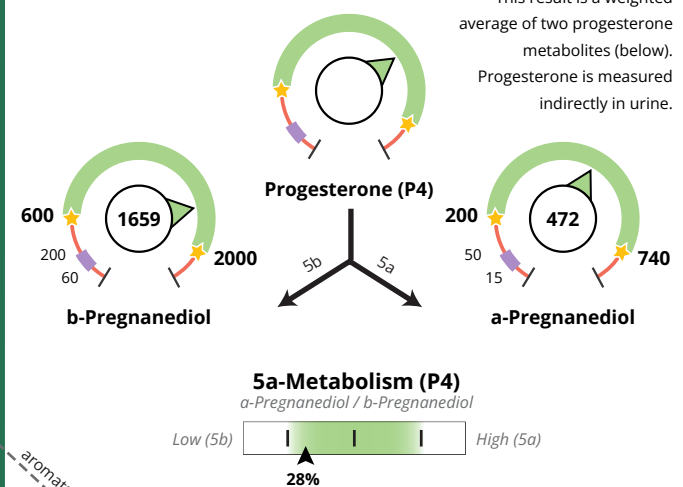
● B12 Deficiency ● B6 Deficiency ● GI Dysbiosis ● Oxidative Stress

Androgens

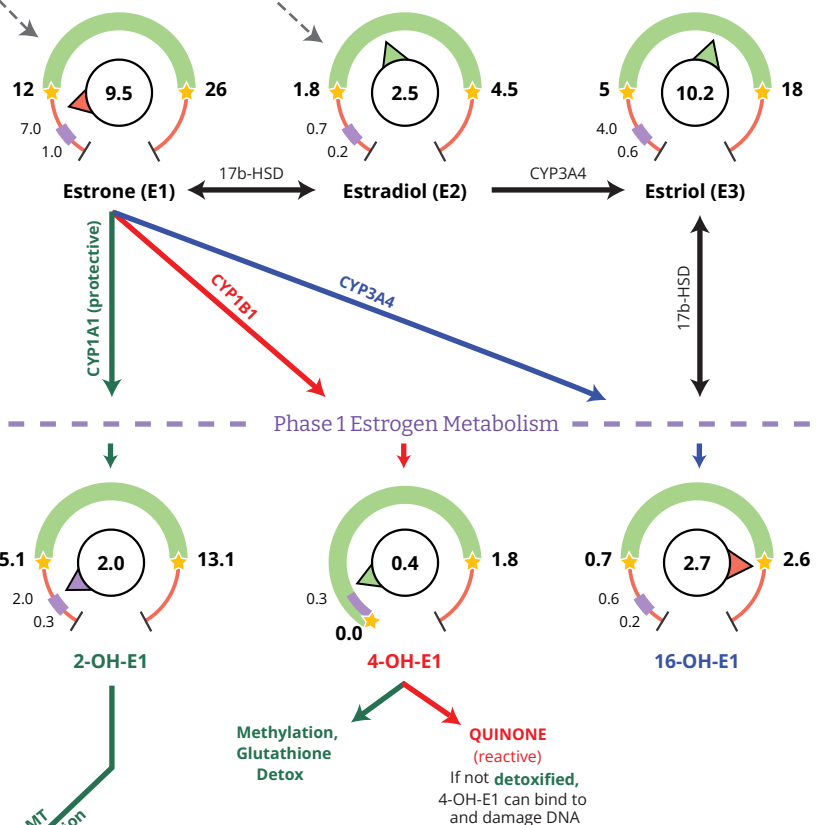


Progesterone

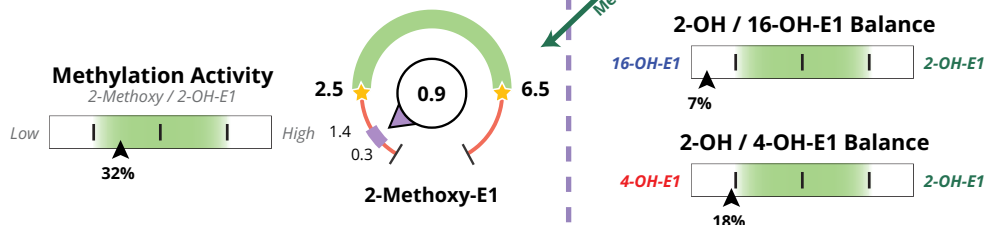
This result is a weighted average of two progesterone metabolites (below). Progesterone is measured indirectly in urine.



Primary Estrogens



Phase 2 Estrogen Metabolism



The Phase 1 Estrogen Metabolism Pie Chart has been replaced by the 2-OH/16-OH-E1 and 2-OH/4-OH-E1 slider bars (left). See this [video](#) for an explanation with examples. This change aligns the DUTCH report best with published scientific research. See our recent publication in [Menopause](#).

**Case # 5**

Anna, Dysmenorrhea
123 A Street
Sometown, CA 90266

DOB: 2005-01-01**Age:** 20**Sex:** Female**Last Menstrual Period:**

2025-09-16

Collection Times:

2025-10-08 05:49AM (U1)
2025-10-08 07:48AM (U2)
2025-10-07 05:05PM (U3)
2025-10-07 09:58PM (U4)

Ordering Provider:

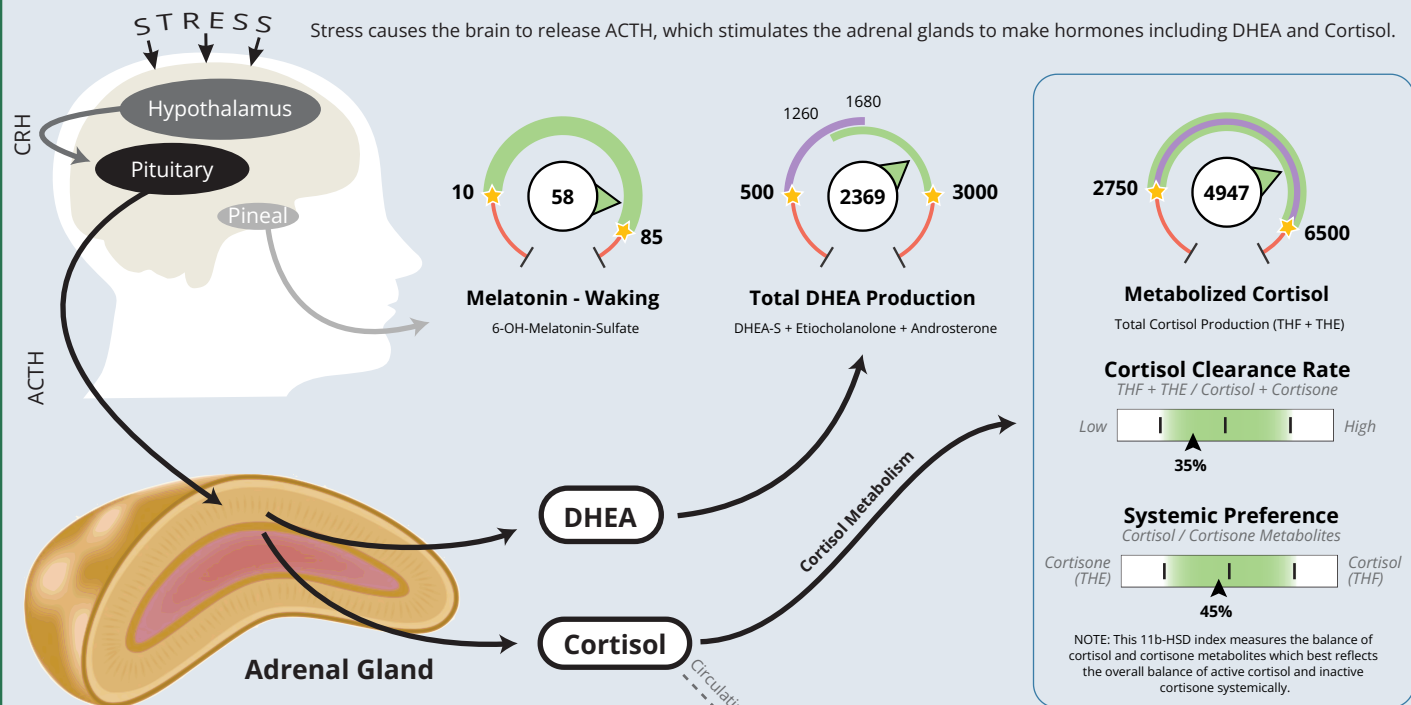
Precision Analytical

Sex Hormones & Metabolites

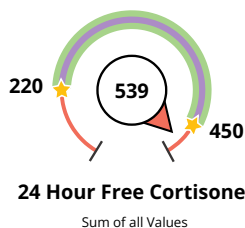
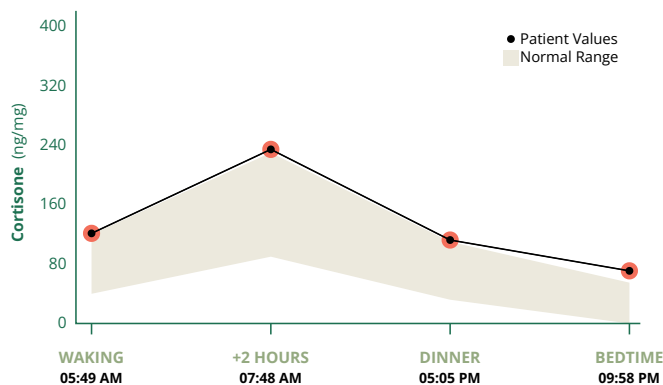
TEST		RESULT	UNITS	LUTEAL*	POSTMENOPAUSAL
Progesterone Metabolites (Urine)					
b-Pregnanediol	Within luteal range	1659.0	ng/mg	600 - 2000	60 - 200
a-Pregnanediol	Within luteal range	472.0	ng/mg	200 - 740	15 - 50
Estrogens and Metabolites (Urine)					
Estrone (E1)	Below luteal range	9.53	ng/mg	12 - 26	1.0 - 7.0
Estradiol (E2)	Within luteal range	2.50	ng/mg	1.8 - 4.5	0.2 - 0.7
Estriol (E3)	Within luteal range	10.2	ng/mg	5 - 18	0.6 - 4.0
2-OH-E1	Below luteal range	1.99	ng/mg	5.1 - 13.1	0.3 - 2.0
4-OH-E1	Within luteal range	0.38	ng/mg	0 - 1.8	0 - 0.3
16-OH-E1	Above luteal range	2.70	ng/mg	0.7 - 2.6	0.2 - 0.6
2-Methoxy-E1	Below luteal range	0.87	ng/mg	2.5 - 6.5	0.3 - 1.4
2-OH-E2	Within luteal range	0.86	ng/mg	0 - 3.1	0 - 0.52
4-OH-E2	Within luteal range	0.15	ng/mg	0 - 0.52	0 - 0.12
Total Estrogen	Below range	29.2	ng/mg	35 - 70	3.5 - 15
Metabolite Ratios (Urine)					
2-OH / 16-OH-E1 Balance	Below range	0.74	ratio	2.69 - 11.83	
2-OH / 4-OH-E1 Balance	Below range	5.24	ratio	5.4 - 12.62	
2-Methoxy / 2-OH Balance	Within range	0.44	ratio	0.39 - 0.67	
Androgens and Metabolites (Urine)				Range	
DHEA-S	Within range	55.6	ng/mg	20 - 750	
Androsterone	Within range	1318.8	ng/mg	200 - 1650	
Etiocholanolone	Within range	994.2	ng/mg	200 - 1000	
Testosterone	Within range	12.87	ng/mg	2.3 - 14	
5a-DHT	Within range	2.0	ng/mg	0 - 6.6	
5a-Androstanediol	Within range	16.2	ng/mg	6 - 30	
5b-Androstanediol	Within range	50.0	ng/mg	12 - 75	
Epi-Testosterone	Within range	12.6	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.

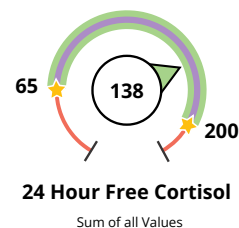
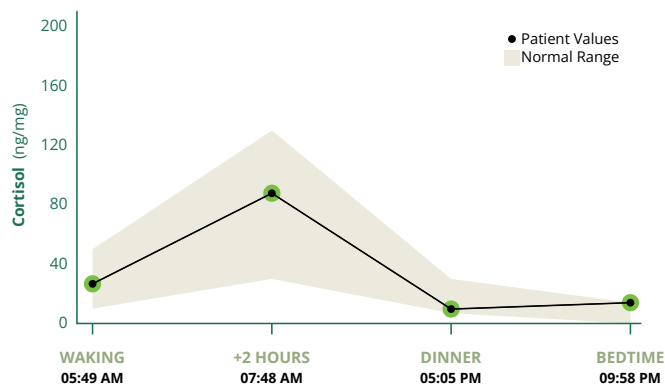
ADDITIONAL NORMAL RANGES	FOLLICULAR	OVULATORY	ON ORAL PG
b-Pregnanediol	100 - 300	100 - 300	2000 - 9000
a-Pregnanediol	25 - 100	25 - 100	580 - 3000
Estrone (E1)	4.0 - 12.0	22 - 68	N/A
Estradiol (E2)	1.0 - 2.0	4.0 - 12.0	N/A



Daily Free Cortisone Pattern



Daily Free Cortisol Pattern



Cortisol and Cortisone interconvert (11b-HSD)

**Case # 5**

Anna, Dysmenorrhea
123 A Street
Sometown, CA 90266

DOB: 2005-01-01**Age:** 20**Sex:** Female**Last Menstrual Period:**

2025-09-16

Collection Times:

2025-10-08 05:49AM (U1)
2025-10-08 07:48AM (U2)
2025-10-07 05:05PM (U3)
2025-10-07 09:58PM (U4)

Ordering Provider:

Precision Analytical

Adrenal Hormones & Metabolites

TEST		RESULT	UNITS	NORMAL RANGE
Daily Free Cortisol and Cortisone (Urine)				
Cortisol (U1) - Waking	Within range	26.7	ng/mg	10 - 50
Cortisol (U2) - +2 Hours	Within range	87.7	ng/mg	30 - 130
Cortisol (U3) - Dinner	Low end of range	9.7	ng/mg	7 - 30
Cortisol (U4) - Bedtime	High end of range	14.0	ng/mg	0 - 14
Cortisone (U1) - Waking	Above range	121.4	ng/mg	40 - 120
Cortisone (U2) - +2 Hours	Above range	234.5	ng/mg	90 - 230
Cortisone (U3) - Dinner	Above range	112.4	ng/mg	32 - 110
Cortisone (U4) - Bedtime	Above range	70.9	ng/mg	0 - 55
24 Hour Free Cortisol (Sum of all Values)	Within range	138.1	ng/mg	65 - 200
24 Hour Free Cortisone (Sum of all Values)	Above range	539.2	ng/mg	220 - 450
Creatinine (Urine)				
Creatinine (U1) - Waking	Within range	1.80	mg/ml	0.2 - 2
Creatinine (U2) - +2 Hours	Within range	1.98	mg/ml	0.2 - 2
Creatinine (U3) - Dinner	Within range	1.37	mg/ml	0.2 - 2
Creatinine (U4) - Bedtime	Above range	2.22	mg/ml	0.2 - 2
Cortisol Metabolites and DHEA-S (Urine)				
a-Tetrahydrocortisol (a-THF)	Within range	217.1	ng/mg	75 - 370
b-Tetrahydrocortisol (b-THF)	Within range	1897.2	ng/mg	1050 - 2500
b-Tetrahydrocortisone (b-THE)	Within range	2832.6	ng/mg	1550 - 3800
Metabolized Cortisol (THF + THE)	Within range	4947.0	ng/mg	2750 - 6500
DHEA-S	Within range	55.6	ng/mg	20 - 750
Cortisol Clearance Rate (CCR)	Within range	7.3		6 - 12.5

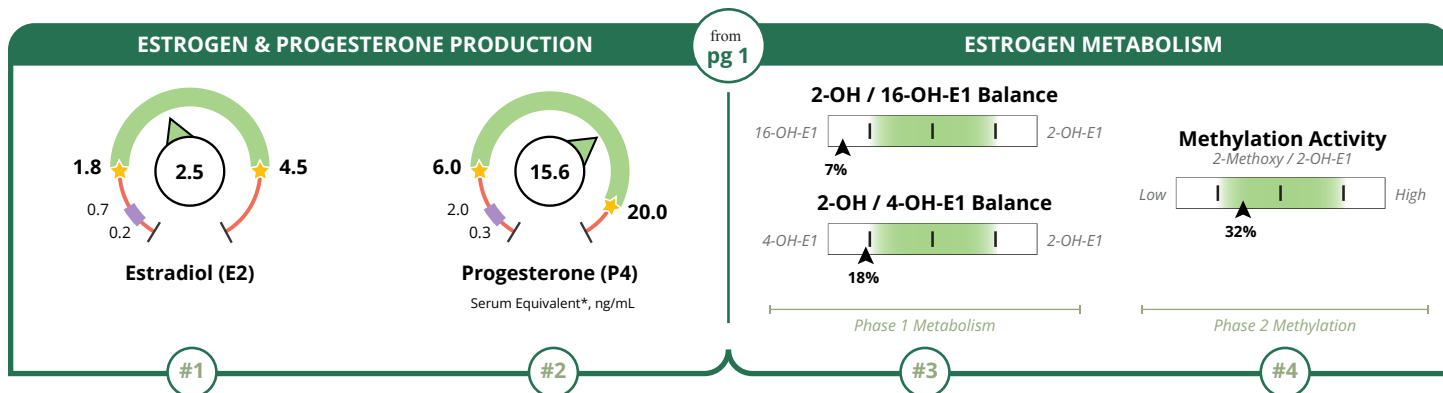
Organic Acid Tests (OATs)

TEST		RESULT	UNITS	NORMAL RANGE
Nutritional Organic Acids (Urine)				
Vitamin B12 Marker - May be deficient if high				
Methylmalonate (MMA)	High end of range	2.4	ug/mg	0 - 2.5
Vitamin B6 Markers - May be deficient if high				
Xanthurenate	Above range	1.34	ug/mg	0.12 - 1.2
Kynurenate	Above range	4.7	ug/mg	0.8 - 4.5
Biotin Marker - May be deficient if high				
b-Hydroxyisovalerate	Within range	8.5	ug/mg	0 - 12.5
Glutathione Marker - May be deficient if high				
Pyroglutamate	Within range	40.0	ug/mg	28 - 58
Gut Marker - Potential gut putrefaction or dysbiosis if high				
Indican	Above range	103.4	ug/mg	0 - 100
Neuro-Related Markers (Urine)				
Dopamine Metabolite				
Homovanillate (HVA)	Within range	7.8	ug/mg	3 - 11
Norepinephrine/Epinephrine Metabolite				
Vanilmandelate (VMA)	Within range	4.2	ug/mg	2.2 - 5.5
Neuroinflammation Marker				
Quinolate	Within range	4.1	ug/mg	0 - 9.6
Additional Markers (Urine)				
Melatonin - Waking				
6-OH-Melatonin-Sulfate	Within range	57.8	ng/mg	10 - 85
Oxidative Stress / DNA Damage				
8-Hydroxy-2-deoxyguanosine (8-OHdG)	Above range	5.9	ng/mg	0 - 5.2

- Both the xanthurenate and kynurenate are above the range. This may indicate vitamin B6 deficiency. B6 is important for phase 2 methylation (estrogen detox), neurotransmitter synthesis, and other key processes. Tryptophan taken within 72 hours before testing can also raise these markers without indicating a true B6 deficiency.
- The indican is above the range. This can indicate gut dysbiosis. Gut dysbiosis can affect estrogen metabolism, inflammation, and malabsorption of nutrients. Further GI testing may be indicated.
- The 8-hydroxy-2'-deoxyguanosine (8-OHdG) is above the normal range. This can result from oxidative damage to DNA. This may indicate a need for reducing oxidative damage, reactive oxygen species, and improving antioxidant status.

About Your Results | Estrogen & Progesterone

The following *About Your Results* sections include key DUTCH report elements from page 1 to aid your interpretation.



Estrogen-related Patient or Sample Comments:

- The patient reported collecting samples on Cycle Day 22. Estrogen and progesterone levels would be expected to reflect luteal phase values if the onset of her next menstrual cycle occurred 4-10 days after sample collection.

#1. Assess estrogen levels given the patient's reproductive status. More information is available [here](#).

- Estradiol (the most potent estrogen) is **2.50 ng/mg**, which is within the optimal luteal range.

#2. Assess progesterone levels given the patient's reproductive status. More information is available [here](#).

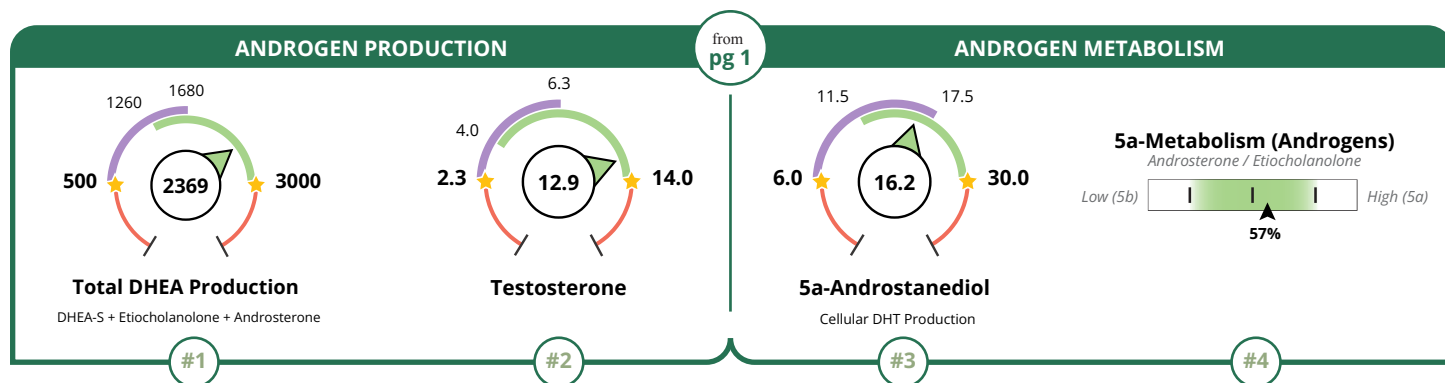
- The progesterone serum equivalent is **15.6 ng/mL**, which is within the optimal luteal range. This indicates that the patient ovulated.

#3. Assess 2-OH preference in phase 1 estrogen metabolism. More information is available [here](#).

- The 2-OH/16-OH-E1 is higher than only **7.0%** of the population, which is below the optimal range. This indicates a preference for the estrogenic 16-OH-E1 metabolite compared to the beneficial 2-OH-E1 metabolite. The 16-OH preference may be associated with estrogenic activity and high estrogen symptoms.
- The 2-OH/4-OH-E1 is higher than only **18.0%** of the population, which is below the optimal range. This indicates a preference for the potentially genotoxic (DNA damaging) 4-OH-E1 metabolite compared to the beneficial 2-OH-E1 metabolite. The 4-OH preference may be associated with oxidative stress.

#4. Assess methylation of 2-OH catechol estrogens. More information is available [here](#).

- The methylation activity is higher than **32.0%** of the population, which is within the optimal range. This indicates optimal estrogen methylation, which is beneficial for efficient estrogen detoxification.



Androgen-related Patient or Sample Comments:

#1. Assess adrenal androgen levels (Total DHEA). More information is available [here](#).

- The total DHEA production is **2,369 ng/mg**, which is within the optimal premenopausal range. These three DHEA metabolites represent about 75% of adrenal androgens, which are typically the source of more than half a woman's circulating testosterone and a significant portion of circulating estrogens.

#2. Assess testosterone levels. More information is available [here](#).

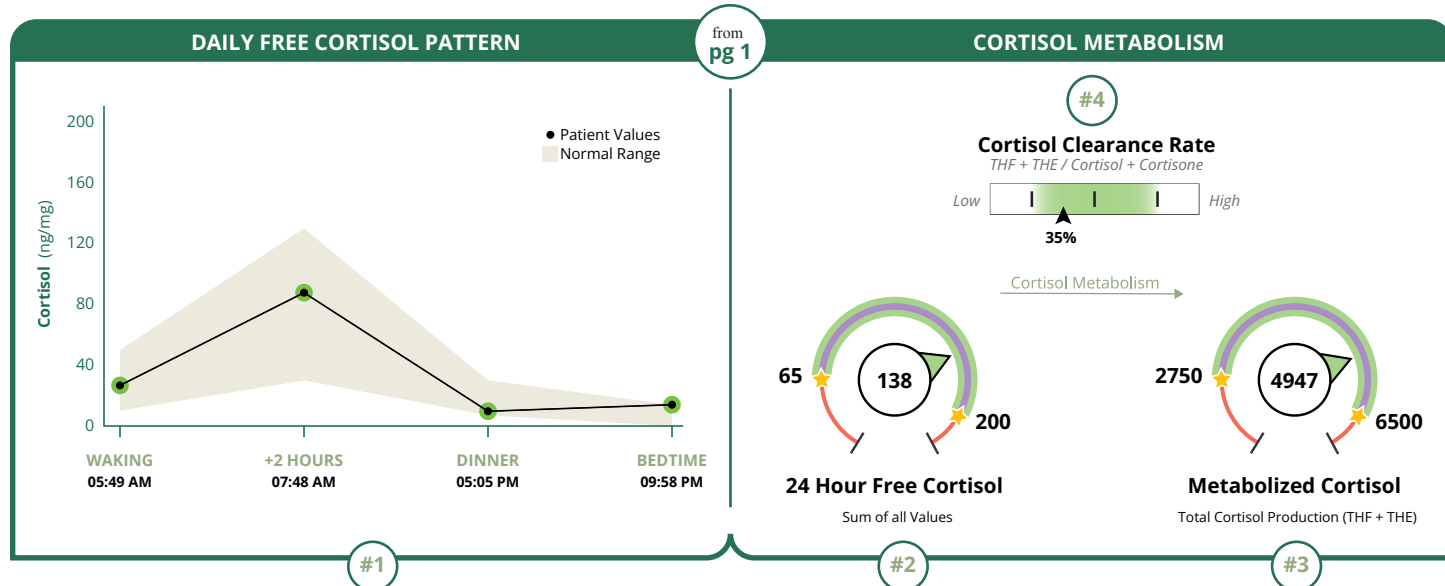
- Testosterone is **12.9 ng/mg**, which is within the optimal premenopausal range. In most cases, 25-50% of testosterone comes from the ovaries and the rest from adrenal androgen production (see above). Testosterone is a strong androgen and can become 3x more potent if metabolized to 5a-DHT (see below) within target tissue.

#3. Assess cellular production of 5a-DHT via 5a-androstenediol. More information is available [here](#).

- 5a-Androstenediol is **16.2 ng/mg**, which is within the optimal premenopausal range, but towards the low end. 5a-Androstenediol reflects the tissue activity of 5a-DHT (the most potent androgen).

#4. Assess if there is a preference for the more potent alpha metabolism of the androgens. More information is available [here](#).

- 5a-Metabolism of androgens is higher than **57.0%** of the population, which is within the range. This indicates balanced metabolism of androgens.



Cortisol-related Patient or Sample Comments:

#1. Assess the daily free cortisol pattern. More information is available [here](#).

- All points on the Daily Free Cortisol Pattern are within the optimal range. Cortisol levels should follow a rhythm that is higher in the morning and lower at night.

#2. Assess the daily total of free cortisol in circulation (24hr Free Cortisol). More information is available [here](#).

- The 24hr Free Cortisol is **138 ng/mg**, which is within the optimal range.

#3. Assess the total cortisol produced by the adrenal glands (Metabolized Cortisol). More information is available [here](#).

- The Metabolized Cortisol, which reflects the total cortisol output for the day, is **4,947 ng/mg**, which is within the optimal range.

#4. Assess the rate of cortisol clearance from the body. More information is available [here](#).

- The Cortisol Clearance Rate is higher than **35.0%** of the population, which is within the optimal range. This indicates that cortisol and cortisone are being metabolized at a normal rate.

The previous "About Your Results" pages look at core insights for the DUTCH report shown on the Hormone Testing Summary page, all of which are worth considering for most patients. Next, "Advanced Insights" cover additional features within the DUTCH test that require reviewing the pages after the summary page. These concepts are more complex but can be highly relevant for some patients. Review the concepts and look for patient-specific comments, when notable, in bullets.

ESTROGEN & PROGESTERONE

#1. Assess whether E1, E3, or Total Estrogen levels add more insight into overall estrogenic activity.

While E2 is the most potent estrogen, other estrogens such as estrone (E1), and sometimes estriol (E3), also contribute to overall estrogenic activity. Additionally, examining Total Estrogens (listed on the Sex Hormones & Metabolites page) can provide insight into overall estrogen production, which may not be fully reflected in the E2 result alone.

E1 is 10% as potent as E2 but is typically more abundant, about 5x higher in premenopausal women and 10x higher in postmenopausal women. This makes it a significant contributor to estrogenic symptoms (high or low), especially in menopause. While all estrogens are potent immune stimulators, E1 may promote more inflammatory cytokine production than other estrogens. Reviewing the relative level of E1 to E2 may give further insight into estrogenic symptoms (high or low) and long-term outcomes, especially in menopause. In cases where E1 is significantly different from E2, a note will be here describing the potential impact.

E3 is a weak estrogen that may have anti-inflammatory properties. In most conditions, E3 is not a significant contributor to estrogenic symptoms. However, when supplemented, checking levels may be helpful. Since the route of administration can influence how the test result is interpreted, notes on E3 supplements (such as creams or pills) will be shown here, if applicable.

The Total Estrogen level should be viewed secondarily to the most potent estrogen levels like E1 and E2, which typically match the patient presentation best. For example, Total Estrogen can be high with robust, healthy estrogen metabolism. Therefore, its levels do not always indicate a cause for high or low estrogen-related symptoms. If out of range, the Total Estrogen level will be noted here.

- The E1 is relatively lower in its reference range compared to E2. A lower E1 may indicate less overall estrogenic activity than implied by the E2 level alone. In this case, the E2 is within the optimal range. Depending on the symptoms, this finding may not be significant for the patient.
- The Total Estrogen result is 29.2 ng/mg, which is below the optimal range. Review carefully for the timing of the test within the cycle, as this range is set for the luteal phase. Also review for estrogen metabolism and reported low estrogen symptoms. Some estrogens included in this result are more potent and some are weak.

#2. Assess if there is a preference for alpha metabolism of progesterone. More information is available [here](#).

The slider bar for 5a-metabolism of progesterone metabolites reflects the balance between a-pregnanediol and b-pregnanediol. Most progesterone is typically metabolized to b-pregnanediol, but a-pregnanediol is an active metabolite that can bind to GABA receptors in the central nervous system. A higher result on the 5a-metabolism (P4) slider indicates that available progesterone has a greater potential for impact on GABA receptors.

- 5a-metabolism of progesterone is higher than **28.0%** of the population, which is in the normal range. This indicates that the patient does not have an extreme metabolic preference for either pathway. 5a progesterone metabolites are active on GABA receptors and may impact mood and sleep. This is most relevant when patients have luteal levels of progesterone or higher, and especially relevant for those on oral/sublingual progesterone.

#3. Assess estrogen clearance through phase 1 and 2. More information is available [here](#).

About Your Results | Advanced Insights (continued)

By looking at the parent estrogens (E1, E2) and their breakdown products (2OH, 4OH, 16OH, and 2MeOHE1), we can see how quickly estrogen is being metabolized. If the parent estrogens are higher than the breakdown products, it means estrogen is clearing more slowly, which increases risk of estrogen excess symptoms. Balanced levels show normal clearance, while lower parent estrogens compared to breakdown products suggest faster clearance, decreasing the risk of estrogen excess symptoms.

- The phase 1 estrogen metabolites are low compared to the primary estrogens (E1, E2). This indicates the primary estrogens may be metabolized more slowly through phase 1, which can be associated with a higher risk of estrogen excess conditions. This is most clinically relevant with high estrogens or estrogen excess symptoms.

#4. Assess whether any of the estrogen-related organic acids are out of range. More information is available [here](#).

Estrogen levels, metabolites, and metabolism patterns can be influenced by nutrient status, oxidative stress, and gut health. Imbalances in glutathione, B12, B6, gut dysbiosis, and oxidative stress markers will be commented on here, if relevant for the patient. This may help identify contributing factors affecting estrogens.

- Indican is **103 ug/mg**, which is above the optimal range. High urinary indican is a marker of dysbiosis (bacterial imbalance) and intestinal permeability. If paired with high E2 or suboptimal estrogen metabolism, this may contribute to poor estrogen detoxification through the GI tract.
- 8-Hydroxy-2-deoxyguanosine (8-OHdG) is **5.9 ng/mg**, which is above the optimal range. When paired with a high 4-OH-E1 or a low 2-OH/4-OH-E1 ratio, this may indicate a higher oxidative stress burden.

ANDROGENS

#1. Assess if the DHEA-S is relatively lower than the Total DHEA. More information is available [here](#).

DHEA-S is primarily produced in the adrenals through sulfation. Inflammation can inhibit sulfation, lowering DHEA-S levels and diverting DHEA metabolism toward 5a- and 5b-reductase pathways, resulting in higher etiocholanolone (5b-metabolite) and androsterone (5a-metabolite) levels relative to DHEA-S. Review the patient's results to assess if this pattern is present.

#2. Assess the androgen pattern to determine if urine testosterone may not accurately reflect systemic levels (UGT2B17 deletion). More information is available [here](#).

- This advanced topic is only relevant if the patient has low testosterone (T) with other specific patterns of androgen metabolites, especially when levels of Epi-T (see page 3) are much higher than T on the DUTCH Test. In patients that do have a suspicious pattern, urine testosterone may underestimate true testosterone levels. This patient's results do NOT indicate a reason to be suspicious of the urine testosterone levels. For information on this topic, see this [video](#).

#3. While 5a-androstenediol best represents cellular 5a-DHT production, assess if 5a-DHT offers additional insight into androgenic activity. More information is available [here](#).

5a-DHT is testosterone's active metabolite and is three times more potent than testosterone. If elevated it may contribute to androgen excess symptoms. Research shows 5a-androstenediol may be a better marker of 5a-DHT tissue activity, but the 5a-DHT result may provide additional insight. Review the 5a-DHT result in context of other androgens and androgenic symptoms for a deeper understanding of the androgen results.

#4. Assess whether any of the androgen-related organic acids are out of range. More information is available [here](#).

Androgen levels can be influenced by inflammation and nutrient status. Imbalances in B6 and neuroinflammation markers will be commented on here, if relevant for this patient's androgens. This may help identify factors contributing to androgen imbalances, if present.

ADRENAL

#1. Assess if cortisone (inactive) adds more insight to the free cortisol assessment. More information is available [here](#).

Cortisol is an active adrenal glucocorticoid, while cortisone is an inactive "storage" form. In the kidney, a significant amount of cortisol is converted to cortisone before excretion into urine. Therefore, urinary cortisone should be considered a reflection or "shadow" of systemic cortisol. The degree to which this happens in an individual may vary. If free cortisone is significantly higher than free cortisol, it may indicate free cortisol levels were higher in circulation (serum) than the urinary free cortisol implies. If free cortisone is lower than free cortisol, this may indicate free cortisol levels were not as high in circulation (serum) as urinary free cortisol implies.

If the cortisone is significantly different from cortisol, there will be a bulleted comment below.

- In this case, free cortisone is somewhat higher than the free cortisol. To the degree that this is true, this may indicate the free cortisol levels were higher in circulation (serum) than the cortisol levels in the urine imply.

#2. Assess if there is a whole-body preference for (inactive) cortisone or (active) cortisol. More information is available [here](#).

The Systemic Preference slider reflects the balance between cortisol (THF) and cortisone (THE) metabolites and is influenced by systemic cortisol needs. The balance between THF and THE is the best estimation of the systemic balance of cortisol to cortisone. As these metabolites are processed through the liver, the body may shift to cortisol (THF) in response to acute stressors (e.g., immune activation or infection), or toward cortisone (THE) with chronic stress (e.g., long-term inflammation or illness). Review the patient's result to determine if they are out of range.

- The Systemic Preference slider is higher than **45.0%** of the population, which is within the optimal range. This indicates the balance between systemic cortisone and cortisol is normal.

#3. Assess for anabolic-catabolic balance

Androgens such as DHEA (assessed as Total DHEA Production) support tissue growth and repair, while cortisol promotes tissue breakdown. When DHEA is significantly higher than cortisol, it may suggest an anabolic state (favoring tissue building and repair). When DHEA is significantly lower than cortisol, it may suggest a catabolic state (favoring tissue breakdown).

- The Total DHEA Production is balanced compared to the Total Cortisol Production. This indicates a balanced state for tissue repair and maintenance.

#4. Assess whether any of the cortisol-related organic acids are out of range. More information is available [here](#).

Cortisol can be impacted by inflammation, nutrient status, and sleep. Imbalances in B12, B6, melatonin, and neuroinflammation markers will be commented on here if relevant for the patient. This may help identify contributing factors affecting cortisol results.

Thank you for choosing DUTCH for your functional endocrinology testing needs!

Please review our DUTCH resources for information on reading the DUTCH test:

For DUTCH Overviews and Tutorials, click here: <https://dutchtest.com/tutorials>

To view the steroid pathway chart, click here: <https://dutchtest.com/steroid-pathway>

Finally, please review the patient's results along with their requisition form. It is designed to capture relevant medications, symptoms, diagnoses, sample collection, and notes that may be helpful in interpreting the results.

Additional Comments

Reference Range Percentiles

Reference ranges are developed by testing thousands of healthy individuals, while excluding results from outliers or those on impactful medications. A percentile approach is applied, as is done with most labs. Classic reference ranges use the 95th percentile as the upper end of range and the 5th percentile as the lower end of range. Our DUTCH ranges uses the percentiles found in the table below. We feel these ranges reflect the more optimal range sought in functional medicine practices. The table below shows the percentiles used for the reference range of each analyte on the DUTCH report:

Female Reference Ranges (Updated 10.15.2025)									
	Low%	High%	Low	High		Low%	High%	Low	High
b-Pregnanediol	20%	90%	600	2000	Cortisol U0 (Mid-Sleep)	0	90%	0	16
a-Pregnanediol	20%	90%	200	740	Cortisol U1 (Waking)	20%	90%	10	50
Estrone (E1)	20%	80%	12	26	Cortisol U2 (+2 Hours)	20%	90%	30	130
Estradiol (E2)	20%	80%	1.8	4.5	Cortisol U3 (Dinner)	20%	90%	7	30
Estriol (E3)	20%	80%	5	18	Cortisol U4 (Bedtime)	0	90%	0	14
2-OH-E1	20%	80%	5.1	13.1	Cortisone U0 (Mid-Sleep)	0	90%	0	59
4-OH-E1	0	80%	0	1.8	Cortisone U1 (Waking)	20%	90%	40	120
16-OH-E1	20%	80%	0.7	2.6	Cortisone U2 (+2 Hours)	20%	90%	90	230
2-Methoxy-E1	20%	80%	2.5	6.5	Cortisone U3 (Dinner)	20%	90%	32	110
2-OH-E2	0	80%	0	3.1	Cortisone U4 (Bedtime)	0	90%	0	55
4-OH-E2	0	80%	0	0.52	Cortisol Clearance Rate (CCR)	20%	80%	6	12.5
2-16-ratio	20%	80%	2.69	11.83	Melatonin (6-OHMS)	20%	90%	10	85
2-4-ratio	20%	80%	5.4	12.62	8-OHdG	0	90%	0	5.2
2Me-2OH-ratio	20%	80%	0.39	0.67	Methylmalonate	0	90%	0	2.5
DHEA-S	20%	90%	20	750	Xanthurenate	0	90%	0.12	1.2
Androsterone	20%	80%	200	1650	Kynurenate	0	90%	0.8	4.5
Etiocholanolone	20%	80%	200	1000	b-Hydroxyisovalerate	0	90%	0	12.5
Testosterone	20%	80%	2.3	14	Pyroglutamate	10%	90%	28	58
5a-DHT	0	80%	0	6.6	Indican	0	90%	0	100
5a-Androstenediol	20%	80%	6	30	Homovanillate	10%	95%	3	11
5b-Androstenediol	20%	80%	12	75	Vanilmandelate	10%	95%	2.2	5.5
Epi-Testosterone	20%	80%	2.3	14	Quinolinate	0	90%	0	9.6
a-THF	20%	90%	75	370	Calculated Values				
b-THF	20%	90%	1050	2500	Total DHEA Production	20%	80%	500	3000
b-THE	20%	90%	1550	3800	Total Estrogens	20%	80%	35	70
					Metabolized Cortisol	20%	90%	2750	6500
					24hr Free Cortisol	20%	90%	65	200
					24hr Free Cortisone	20%	90%	220	450
% = population percentile: Example - a high limit of 90% means results higher than 90% of the women tested for the reference range will be designated as "high."									