

TEST NAME	RESULTS   05/04/19	RANGE
-----------	--------------------	-------

### Salivary Steroids

Estradiol	1.0 L	1.3-3.3 pg/mL Premenopausal (Luteal)
Progesterone	16 L	75-270 pg/mL Premenopausal (Luteal)
Ratio: Pg/E2	16 L	Optimal: 100-500 when E2 1.3
Testosterone	20	16-55 pg/mL (Age Dependent)
DHEAS	7.6	2-23 ng/mL (Age Dependent)
Cortisol	5.1	3.7-9.5 ng/mL (morning) -3.3 pg/mL
Cortisol	1.4	1.2-3.0 ng/mL (noon)
Cortisol	0.6	0.6-1.9 ng/mL (evening)
Cortisol	0.5	0.4-1.0 ng/mL (night)

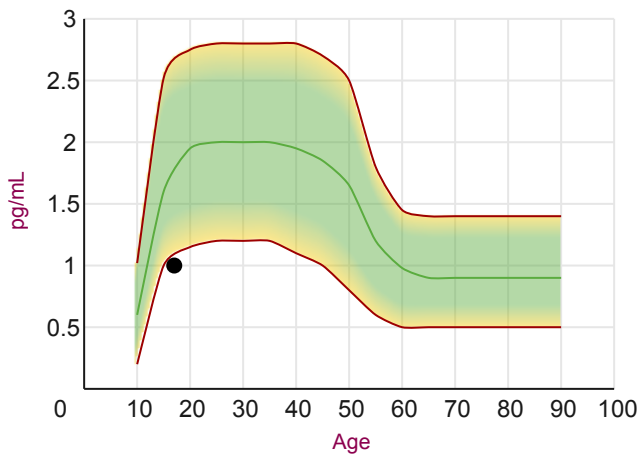
<dL = Less than the detectable limit of the lab. N/A = Not applicable; 1 or more values used in this calculation is less than the detectable limit

### Graphs

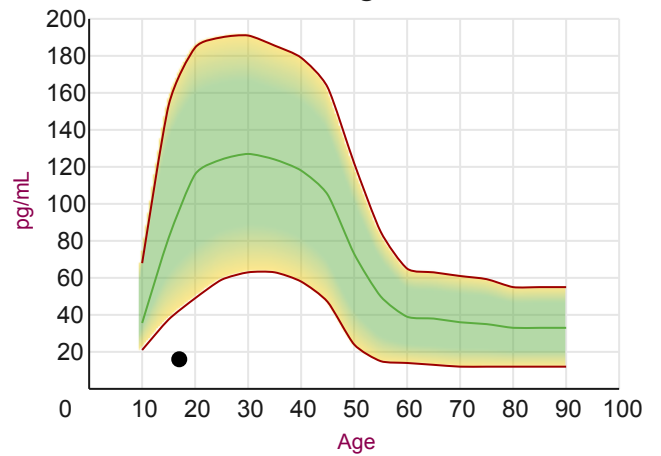
Disclaimer: Graphs below represent averages for healthy individuals not using hormones. Supplementation ranges may be higher. Please see supplementation ranges and lab comments if results are higher or lower than expected.

— Average ▼▲ Off Graph

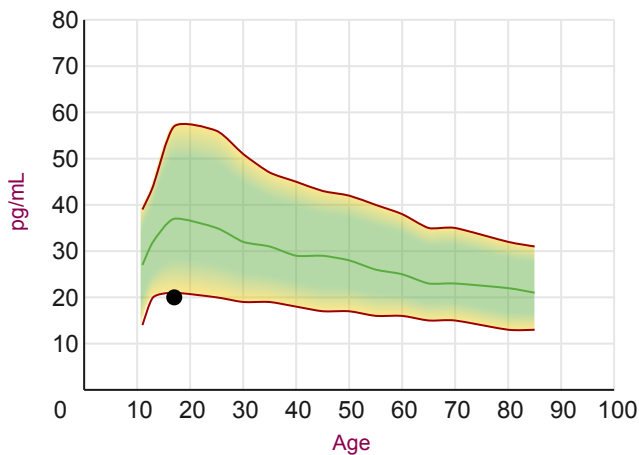
#### Saliva Estradiol



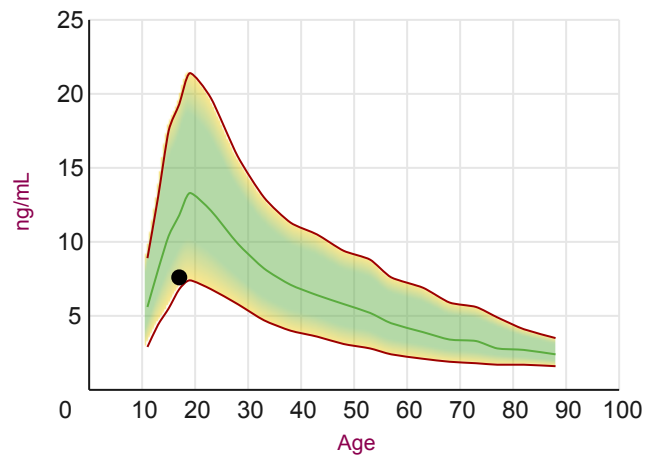
#### Saliva Progesterone



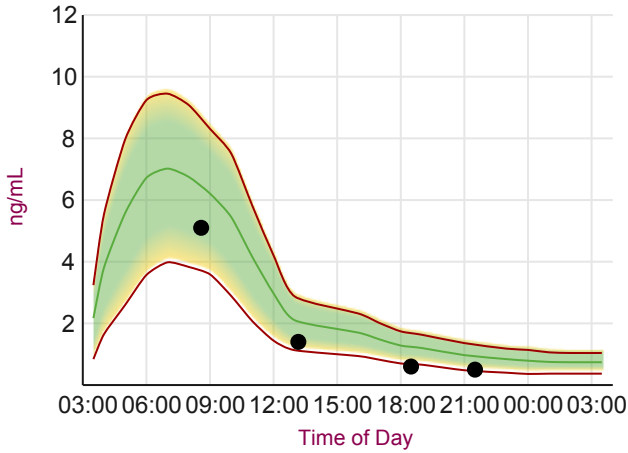
#### Saliva Testosterone



#### Saliva DHEAS



## Saliva Cortisol



## Reference Ranges

Disclaimer: Supplement type and dosage are for informational purposes only and are not recommendations for treatment. For a complete listing of reference ranges, go to [www.zrtlab.com/reference-ranges](http://www.zrtlab.com/reference-ranges).

TEST NAME	WOMEN
Estradiol	0.5-1.7 pg/mL Postmenopausal (optimal 1.3-1.7); 1.3-3.3 pg/mL Premenopausal (Luteal); 0.8-12 pg/mL Estrogen Rplcmt (optimal 1.3-3.3); 0.5-2.2 pg/mL (Synthetic HRT, BC); 0.5-1.7 pg/mL Premenopausal (Follicular); 1.1-4.8 Premeno-Ovulatory (2.0-4.8 optimal)
Progesterone	12-100 pg/mL Postmenopausal; 12-100 pg/mL Premenopausal (Follicular); 75-270 pg/mL Premenopausal (Luteal); 30-300 pg/mL Oral Progesterone (100-300 mg); 200-3000 pg/mL Topical, Troche, Vag Pg (10-30mg); 10-53 pg/mL Synthetic Progestins (HRT, BC); 11-59 pg/ml Premeno-Ovulatory
Ratio: Pg/E2	Optimal: 100-500 when E2 1.3-3.3 pg/mL
Testosterone	16-55 pg/mL (Age Dependent)
DHEAS	2-23 ng/mL (Age Dependent)
Cortisol	3.7-9.5 ng/mL (morning); 1.2-3.0 ng/mL (noon); 0.6-1.9 ng/mL (evening); 0.4-1.0 ng/mL (night)

## Patient Reported Symptoms

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](http://www.zrtlab.com/patient-symptoms).

SYMPTOM CATEGORIES		RESULTS   05/04/19
Estrogen / Progesterone Deficiency	13%	<div style="width: 13%; background-color: #4CAF50;"></div>
Estrogen Dominance / Progesterone Deficiency	20%	<div style="width: 20%; background-color: #FFEB3B;"></div>
Low Androgens (DHEA/ Testosterone)	19%	<div style="width: 19%; background-color: #FFEB3B;"></div>
High Androgens (DHEA/ Testosterone)	16%	<div style="width: 16%; background-color: #FFEB3B;"></div>
Low Cortisol	31%	<div style="width: 31%; background-color: #C00000;"></div>
High Cortisol	26%	<div style="width: 26%; background-color: #C00000;"></div>
Hypometabolism	18%	<div style="width: 18%; background-color: #FFEB3B;"></div>
Metabolic Syndrome	9%	<div style="width: 9%; background-color: #4CAF50;"></div>

**SYMPTOM CHECKLIST**

MILD

MODERATE

SEVERE

	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	■		

# Patient Reported Symptoms

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

Estradiol is slightly lower than the observed range for a premenopausal woman. A lower estradiol can be due to current or recent use of contraceptives (none indicated) but may also result from the consumption of nutritional supplements (e.g. Indole-3-Carbinol, an extract of cruciferous vegetables) and/or soy foods and green leafy vegetables that are natural aromatase inhibitors (the enzyme aromatase is present mostly in fat tissue and converts androgens, such as testosterone, to estrogens). Estrogen deficiency symptoms are minimal.

Progesterone is low, consistent with anovulatory cycles and/or a luteal phase deficiency. Low progesterone contributes to estrogen dominance symptoms (e.g., mood swings, fibrocystic breast changes and breast tenderness, water retention, and weight gain). Therapies that support and induce ovulation would likely be beneficial (i.e. cyclic progesterone, Vitex agnus castus).

Testosterone is within low-normal range but androgen deficiency symptoms are minimal. If symptoms of low androgens are or become problematic over time it would be worthwhile to retest testosterone and consider some form of androgen replacement therapy. Oophorectomy (removal of the ovaries), excessive chronic stress and associated high cortisol, cholesterol lowering drugs, and hormonal contraceptives contribute to lowering testosterone levels.

DHEAS is within mid-normal expected age range (7-23 ng/ml for age range 12-30). DHEAS is highest during the late teens to early twenties (10-20 ng/ml) and drops steadily with age to the lower end of range by age 70-80.

Cortisol is normal throughout the day; however, a significant number of symptoms commonly associated with low and/or high cortisol are reported. Under stress situations the adrenal glands respond by increasing cortisol output. However, when cortisol levels are within normal range under situations of excessive stress, as reported herein, this suggests that the adrenal glands may be overworking to keep up with the demands of the stressors, which could eventually lead to HPA axis dysfunction. HPA axis dysfunction is most commonly caused by stressors which include: psychological stress (emotional), sleep deprivation, poor diet (low protein-particularly problematic in vegetarians), nutrient deficiencies (particularly low vitamins C and B5), physical insults (surgery, injury), diseases (cancer, diabetes), chemical exposure (environmental pollutants, excessive medications), low levels of cortisol precursors (pregnenolone and progesterone) and pathogenic infections (bacteria, viruses and fungi). A normal daily output of cortisol is essential to maintain normal metabolic activity, help regulate steady state glucose levels (important for brain function and energy production), and optimize immune function. Depletion of adrenal cortisol synthesis by a chronic stressor, sleep deprivation, and/or nutrient deficiencies (particularly vitamins C and B5) often leads to symptoms such as fatigue,