 # 2018 09 28 333 SB

Ordering Provider:
Jane Getuwell, DO

Samples Received
09/28/2018

Report Date
10/04/2018

Samples Collected
Saliva - 09/22/18 09:34
Saliva - 09/22/18 15:06
Saliva - 09/22/18 18:50
Saliva - 09/25/18 00:45
Blood Spot - 09/09/18 12:49
Blood Spot - 09/22/18 09:46

Patient Name:
Patient Phone Number:

Gender	Last Menses	Height	Waist
Female	09/19/2018	5 ft 4 in	30 in
DOB	**Menses Status**	**Weight**	**BMI**
5/17/1980 (38 yrs)	Pre-Menopausal	131 lb	22.5

TEST NAME	RESULTS | 09/09/18	RANGE
Salivary Steroids		
Cortisol	13.2 H	3.7-9.5 ng/mL (morning)
Cortisol	1.6	1.2-3.0 ng/mL (noon)
Cortisol	2.6 H	0.6-1.9 ng/mL (evening)
Cortisol	1.0	0.4-1.0 ng/mL (night)
Blood Spot Steroids		
Estradiol	60	43-180 pg/mL Premeno-luteal or ERT
Progesterone	2.4 L	3.3-22.5 ng/mL Premeno-luteal or PgRT
Ratio: Pg/E2	40 L	Pg/E2 (bloodspot-optimal 100-500)
Testosterone	34	20-130 ng/dL Premeno-luteal or TRT
SHBG	88	15-120 nmol/L
DHEAS	58	40-290 µg/dL
Blood Spot		
LH	11.8 H	1.6-9.3 U/L Premenopausal-follicular
FSH	14.4 H	2.4-9.3 U/L Premenopausal-follicular
Blood Spot Thyroids		
Free T4*	1.1	0.7-2.5 ng/dL
Free T3	3.7	2.4-4.2 pg/mL
TSH	1.8	0.5-3.0 µU/mL
TPOab*	10	0-150 IU/mL (70-150 borderline)

TEST NAME	RESULTS	09/09/18	RANGE

*<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.   H = High.   L = Low.   * For research purposes only.*
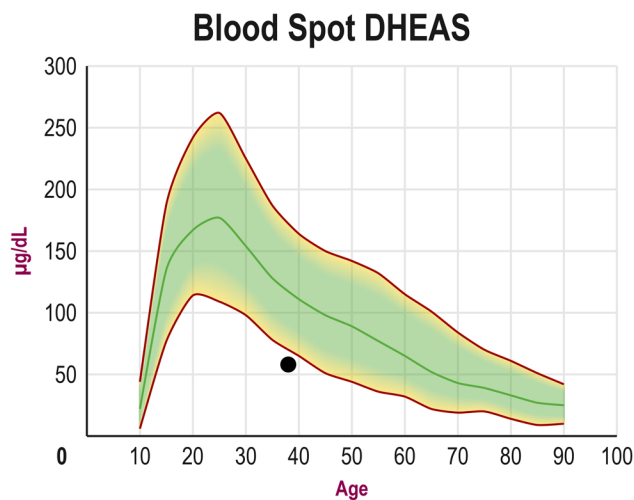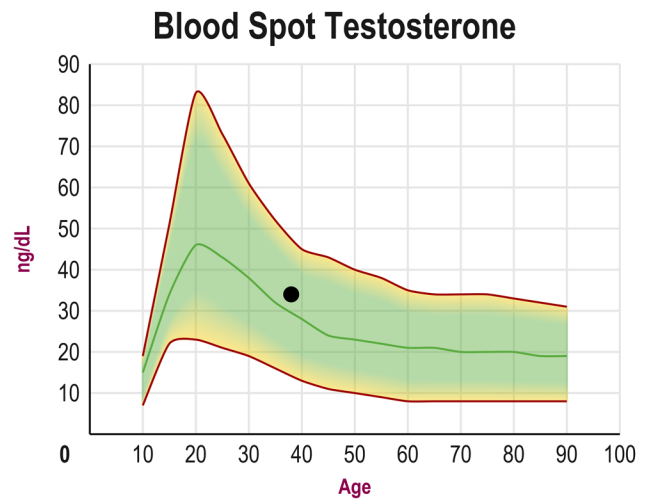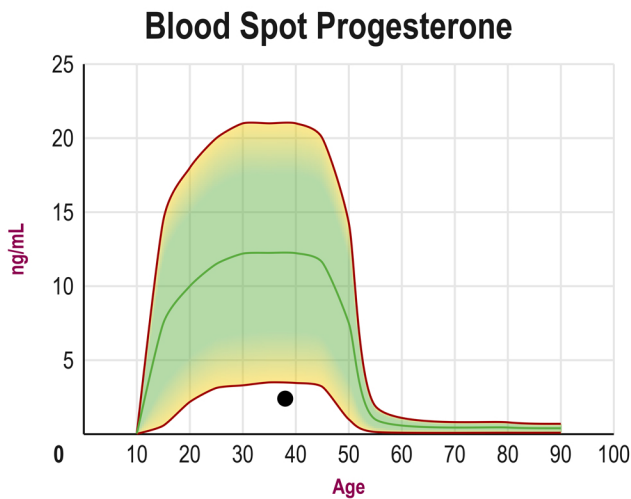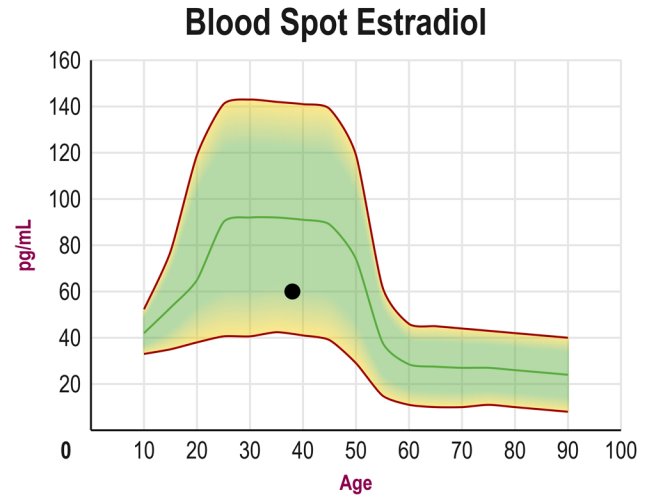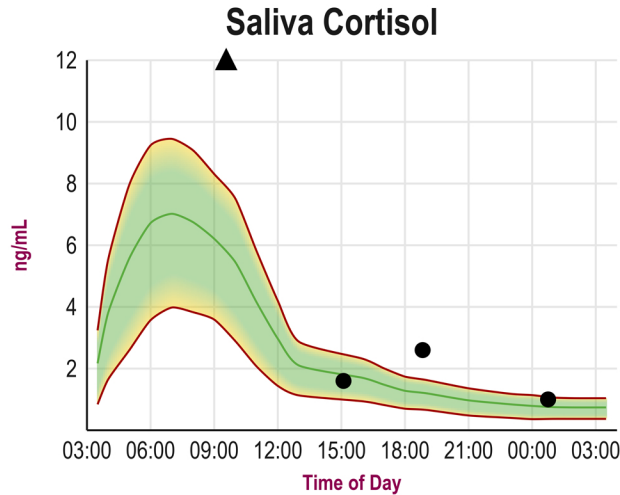
Therapies
Desvenlafaxine Prozac Ziprasidone Lamotragine (Lamictal)

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 Cortisol

Blood Spot Estradiol

Blood Spot Progesterone

Blood Spot Testosterone

Blood Spot DHEAS

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.

SYMPTOM CATEGORIES	RESULTS | 09/09/18
Estrogen / Progesterone Deficiency	32%
Estrogen Dominance / Progesterone Deficiency	21%
Low Androgens (DHEA/Testosterone)	50%
High Androgens (DHEA/Testosterone)	4%
Low Cortisol	48%
High Cortisol	43%
Hypometabolism	32%
Metabolic Syndrome	0%

SYMPTOM CHECKLIST

Symptom	MILD	MODERATE	SEVERE
Aches and Pains			severe
Acne	mild		
Allergies			severe
Anxious			severe
Bleeding Changes	mild		
Blood Pressure High	mild		
Blood Pressure Low	mild		
Blood Sugar Low	mild		
Body Temperature Cold	mild		
Bone Loss	mild		
Breast Cancer	mild		
Breasts - Fibrocystic	mild		
Breasts - Tender	mild		
Chemical Sensitivity	mild		
Cholesterol High	mild		
Constipation	mild		
Depressed			severe
Fatigue - Evening			severe
Fatigue - Morning			severe
Fibromyalgia	mild		
Foggy Thinking			severe
Goiter	mild		
Hair - Dry or Brittle	mild		
Hair - Increased Facial or Body	mild		
Hair - Scalp Loss	mild		
Headaches	mild		
Hearing Loss	mild		
Heart Palpitations	mild		
Hoarseness	mild		
Hot Flashes	mild		
Incontinence	mild		
Infertility	mild		
Irritable		moderate	
Libido Decreased		moderate	
Memory Lapse			severe
Mood Swings		moderate	
Muscle Size Decreased	mild		
Nails Breaking or Brittle	mild		
Nervous			severe
Night Sweats	mild		
Numbness - Feet or Hands	mild		

SYMPTOM CHECKLIST		MILD	MODERATE	SEVERE
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

Infertility is a complicated syndrome involving hormonal and physical dysfunction for both men and women that cannot be fully assessed by ZRT testing alone. The number of months a couple has been trying may determine the amount of warranted workup. On average 1 year of trying for a woman under the age of 35 is suggested and 6 months for women over the age of 35 is recommended. Additional evaluation may include physical disorders including: assessing whether the fallopian tubes are open, presence of uterine fibroids or uterine polyps, uterine septum or ovarian cysts. Men may be assessed for sperm quality and quantity. In addition, immunological, genetic or blood clotting issues may also be a factor in infertility for couples not achieving pregnancy for unknown reasons.

Salivary cortisol is fluctuating from high to normal throughout the day suggesting stressors causing HPA axis dysfunction and/or poor regulation of blood sugar levels (dysglycemia-common in individuals with insulin resistance/metabolic syndrome). Acute situational stressors (e.g., anxiety over unresolved situations, travel, work-related problems, wedding, holiday season, etc.) can raise cortisol levels, which is a normal response to the stressor. Symptoms commonly associated with high cortisol include sugar craving, fatigue, sleep disturbances, anxiety, and depression. If cortisol remains elevated throughout the day (usually associated with a high night cortisol) and over a prolonged period of time (months/years) excessive breakdown of normal tissues (muscle wasting, thinning of skin, bone loss) and immune suppression can eventually result. Adequate sleep, gentle exercise, naps, meditation, proper diet (adequate protein), natural progesterone, adrenal extracts, herbs such as licorice, and nutritional supplements (vitamins C and B5) are some of the natural ways to help support adrenal function (consult with a health care provider for proper dosing). For additional information about strategies for supporting adrenal health and reducing stress(ors), the following books are worth reading: "Adrenal Fatigue", by James L. Wilson, N.D., D.C., Ph.D.; "The Cortisol Connection", by Shawn Talbott, Ph.D.; "The End of Stress As We Know It" by Bruce McEwen; "Awakening Athena" by Kenna Stephenson, MD.

Estradiol (blood spot) is within mid-normal observed range for a premenopausal woman. Although estradiol is within observed range, it is not well balanced with progesterone (low progesterone/estradiol ratio). Estradiol at this level during the luteal phase of the menstrual cycle should be well balanced with progesterone (ideal progesterone/estradiol ratio 100-500) to help prevent estrogen dominance.

Progesterone (blood spot) is lower than observed range for a premenopausal woman during luteal phase of the menstrual cycle. Assuming the blood was collected during mid-luteal phase of the menstrual cycle (days 19-22 of a 28 day cycle), a low progesterone may indicate anovulation (no egg produced), luteal insufficiency (egg produced but poor production of progesterone by the corpus luteum), or use of synthetic hormones (e.g. hormonal contraceptives-none indicated) that suppress endogenous ovarian synthesis of progesterone. Because symptoms of estrogen deficiency are self-reported as problematic, consider creating a more balanced progesterone/estradiol ratio (ideal ratio 100-500) with progesterone and/or estrogen/progesterone supplementation (assuming no contraindications).

Testosterone (blood spot) is within normal range but symptoms of androgen deficiency persist. This may be due to other hormonal imbalances with symptom profiles similar to low androgens, which include low thyroid or low cortisol caused by excessive stressors. Note that symptoms of both low thyroid and low cortisol are self-reported as problematic.

SHBG (Sex Hormone Binding Globulin) is within the high-normal range. SHBG is a protein produced by the liver and released into the bloodstream in response to inceasing levels of estrogens. SHBG is a relative index of overall exposure to any form of estrogens (endogenous, pharmaceutical-ERT, xeno-estrogens-pollutants). As the estrogen levels increase there is a proportional increase in SHBG in normal individuals. Excess thyroid medication, or hyperthyrodism, is also associated with elevated SHBG. High insulin (insulin resistance), high androgens, and high glucocorticoids (cortisol) lower SHBG, all of which increase the bioavailability of estradiol and the likelihood of estrogen dominance