

2018 03 27 411 S



Samples Arrived: 03/27/2018  
Report Date: 04/02/2018

Samples Collected:

Saliva: 03/21/18 06:51  
Saliva: 03/21/18 10:58  
Saliva: 03/21/18 17:15  
Saliva: 03/21/18 22:35

Menses Status: Pre-Menopausal  
Gender: Female

Last Menses: 03/15/2018  
DOB: 3/5/1979 (39 yrs) Patient Ph#: 7035211451

BMI: 21.1  
Height: 5 ft 7 in  
Weight: 135 lb  
Waist: 28 in

Test Name	Result	Range
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### Salivary Steroids

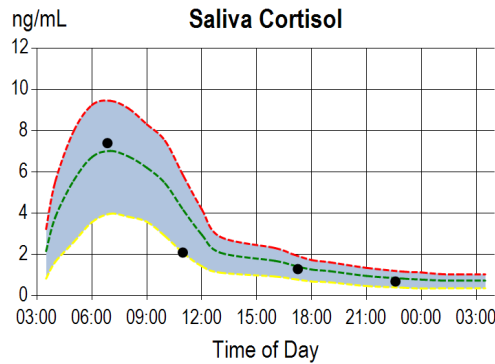
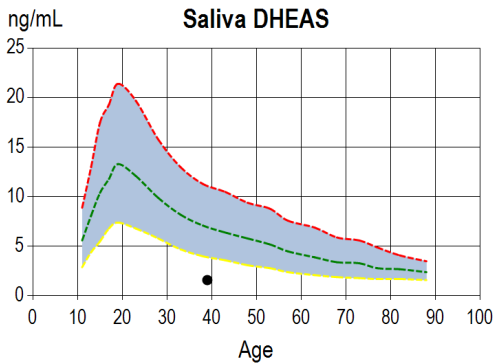
DHEAS	1.6	L 2-23 ng/mL (Age Dependent)
Cortisol	7.4	3.7-9.5 ng/mL (morning)
Cortisol	2.1	1.2-3.0 ng/mL (noon)
Cortisol	1.3	0.6-1.9 ng/mL (evening)
Cortisol	0.7	0.4-1.0 ng/mL (night)

<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.  
H = High, L = Low

### Therapies

None Indicated

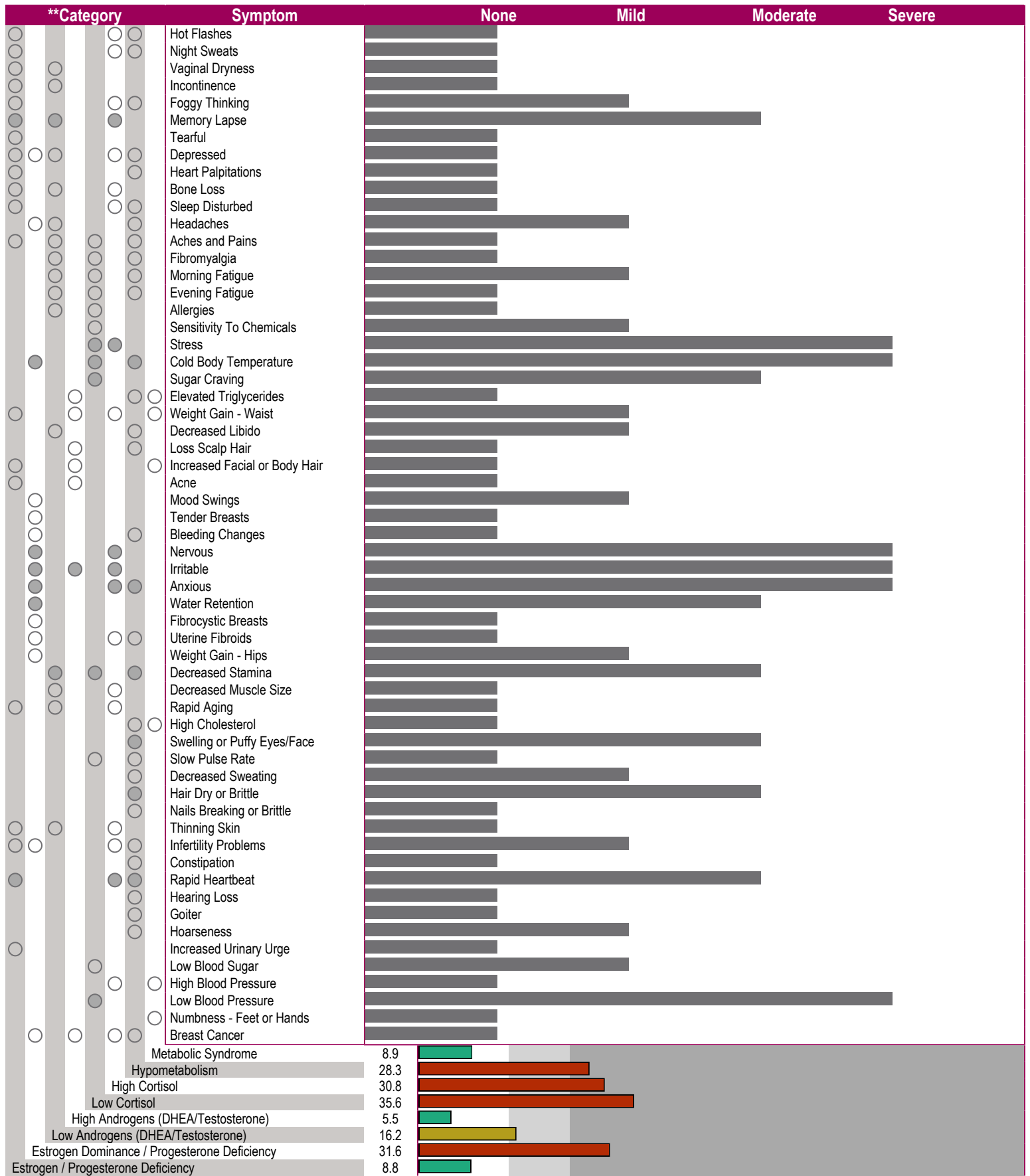
Disclaimer: Graphs below represent hormone levels in testers not using hormone supplementation and are provided for informational purposes only. Please see comments for additional information if results are higher or lower than expected. Graph key ---High ---Avg ---Low



### ZRT Laboratory 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
DHEAS - ng/mL	2-23 ng/mL (Age Dependent)
Cortisol - ng/mL	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)



\*\*Category refers to the most common symptoms experienced when specific hormone types (eg estrogens, androgens, cortisol) are out of balance, i.e., either high or low.

The above results and comments are for informational purposes only and are not to be construed as medical advice. Please consult your healthcare practitioner for diagnosis and treatment.

*David T. Zava*  
David T. Zava, Ph.D.  
(Laboratory Director)

*Alison McAllister, ND*  
Alison McAllister, ND  
(Ordering Provider unless otherwise specified on pg1)

## Lab Comments

DHEAS is lower than the expected age range. Chronic low DHEAS may suggest HPA axis dysfunction, particularly if cortisol is also low and symptoms are indicative of low adrenal function. 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 (2-9 ng/ml). Mid-life DHEAS levels in both males and females are usually in the range of 5-8 ng/ml. Low DHEAS may contribute to low androgen symptoms (decreased libido, depression, fatigue, memory lapses, and/or bone loss), since DHEAS is a testosterone precursor. In individuals with very low DHEAS (< 2 ng/ml), DHEA supplementation in the 5-25 mg dosing range usually raises DHEAS to levels seen in mid-life.

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, allergies (immune dysfunction), chemical sensitivity, cold body temp, and sugar craving. 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.