

Test Results

2017 05 05 001 S



Ordering Provider:

Samples Arrived: 05/04/2017
Date Closed: 05/05/2017

Samples Collected:
Saliva: 05/02/17 07:15
Saliva: 05/02/17 12:00
Saliva: 05/02/17 17:30
Saliva: 05/02/17 21:45

Getuwell Clinic
8605 SW Creekside Pl
Beaverton, OR 97008

Jane Doe

Menses Status: Pre-Menopausal
Gender: Female

Last Menses: Unspecified
DOB: 1/16/1959 (58 yrs) Patient Ph#: Unspecified

BMI: 22.3
Height: 5 ft 4 in
Weight: 130 lb
Waist: 28 in

Test Name	Result	Range
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Salivary Steroids

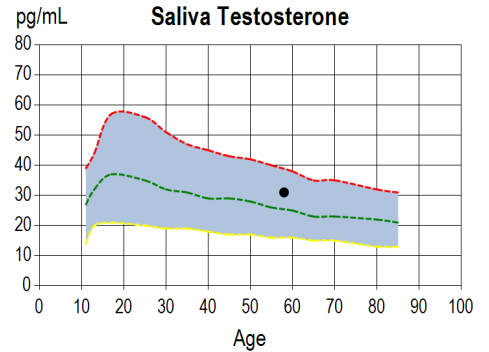
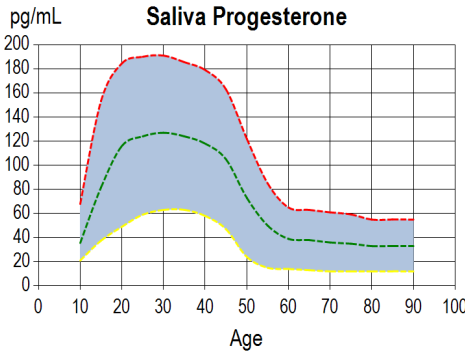
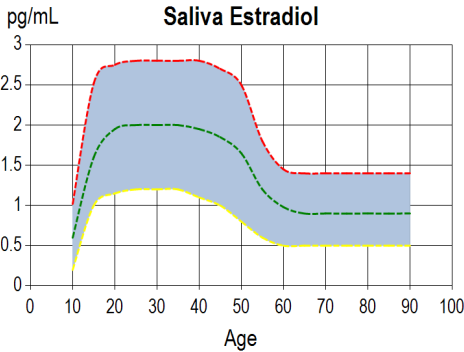
Estradiol	4.6	0.8-12 pg/mL Estrogen Rplcmnt (optimal 1.3-3.3)
Progesterone	70	30-300 pg/mL Oral Progesterone (100-300 mg)
Ratio: Pg/E2	15	L Optimal: 100-500 when E2 1.3-3.3 pg/mL
Estriol	433.8	H 10-200 pg/mL Topical, 10-80 Oral
Estrone	13.8	H 0.9-3.1 pg/mL Postmenopausal
Testosterone	31	16-55 pg/mL (Age Dependent)
DHEAS	5.6	2-23 ng/mL (Age Dependent)
Cortisol	9.7	H 3.7-9.5 ng/mL (morning)
Cortisol	1.5	1.2-3.0 ng/mL (noon)
Cortisol	0.3	L 0.6-1.9 ng/mL (evening)
Cortisol	0.1	L 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.

Therapies

1mg topical Biestrogen (1:1 50/50 E3 + E2) (compounded) (24 Hours Last Used); 100mg oral Progesterone (compounded) (12 Hours Last Used)

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

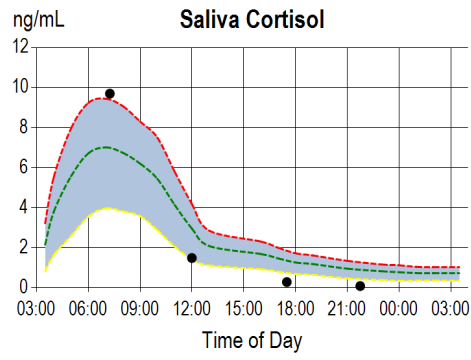
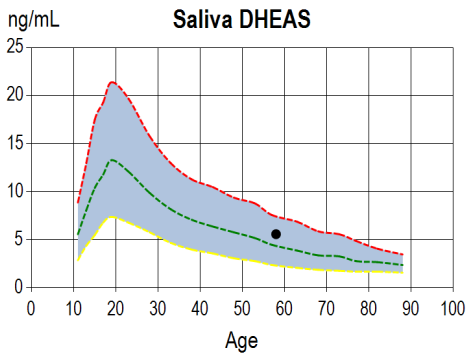


The above results and comments are for informational purposes only and are not to be construed as medical advice. Please consult your healthcare practitioner for diagnosis and treatment.

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

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

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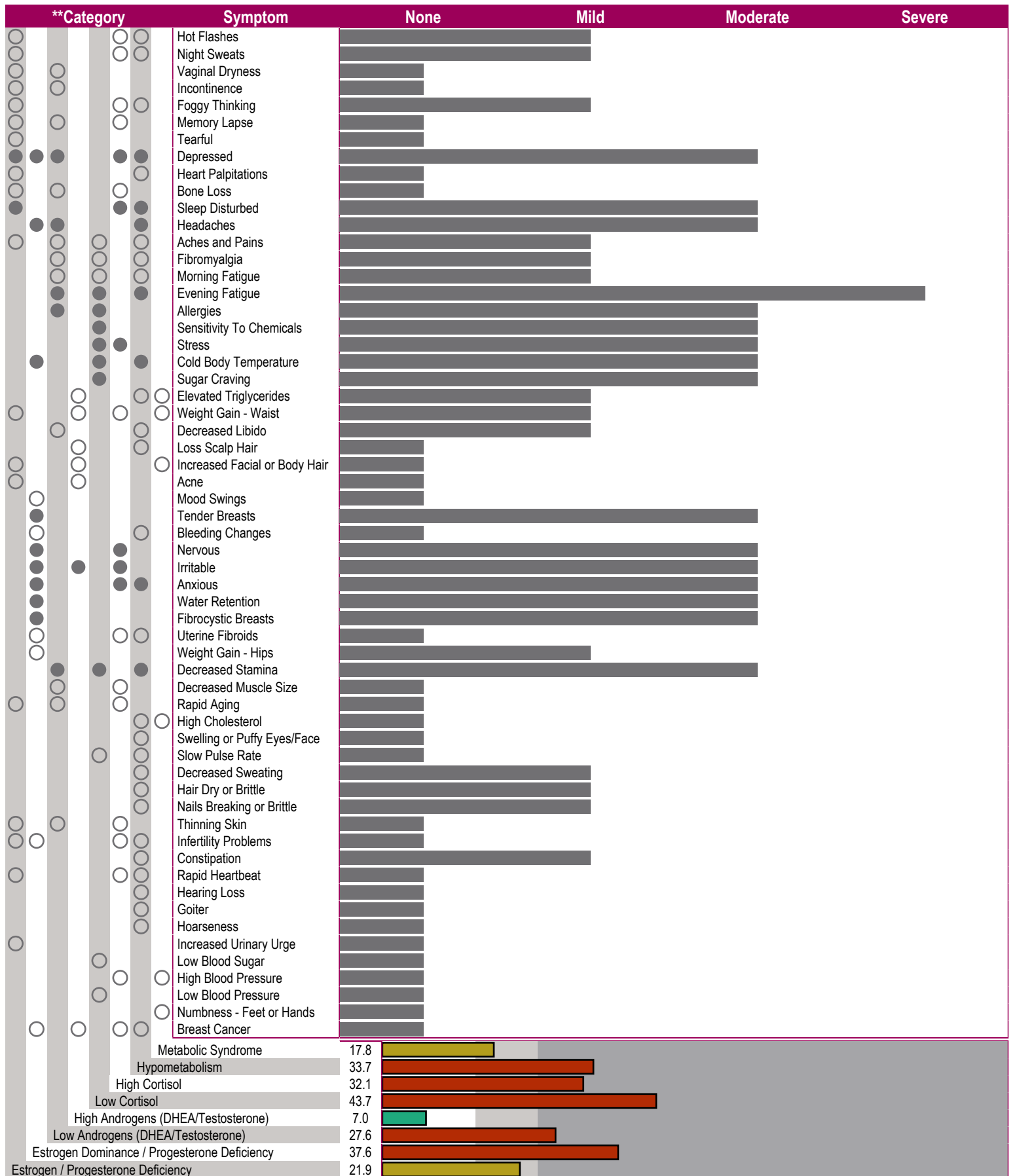


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**Category refers to the most common symptoms experienced when specific hormone types (eg estrogens, androgens, cortisol) are out of balance, i.e., either high or low.

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Lab Comments

Estradiol is within the observed range for most forms of estrogen replacement therapy (0.8-12 pg/ml), but higher than the observed range seen in premenopausal women (1.3 to 3.3 pg/ml). Symptoms indicate estrogen dominance based on self-reporting. Therefore, it would be worthwhile to consider one or more of the following: lower the estrogen dose; increase estrogen clearance with exercise, herbs, diet (higher fiber and less red meat), and/or nutritional supplements such as cruciferous vegetable extracts; balance the higher estrogen with natural progesterone supplementation, which is a natural anti-estrogen and also helps with safe estrogen clearance.

Progesterone is within expected range with oral progesterone supplementation. Oral supplementation results in a more rapid clearance of progesterone with levels usually within the lower limits of the observed range > 12 hrs following supplementation. Within 12-24 hr progesterone levels have usually returned to baseline level seen prior to progesterone supplementation. Oral progesterone is usually more effective when used at night just before bed because metabolites formed in the gastrointestinal tract from progesterone (allopregnanolone) help with sleep. In this case it is best to collect saliva in the morning to allow a 6-10 hr time frame from last use of progesterone. If symptoms of estrogen/progesterone imbalance are not resolved with oral progesterone therapy it would be worthwhile to consider changing dosage or mode of delivery (e.g. transdermal progesterone instead of oral). If symptoms of estrogen imbalance remain problematic with the oral progesterone, it would be worthwhile to consider increasing or decreasing the estrogen level (assuming greater than the optimal range of 1.3-3.3 pg/ml) or change the mode of progesterone delivery (eg. topical) to achieve an optimal Pg/E2 ratio of 100-500 (note: if estradiol is within optimal range this optimal Pg/E2 ratio is likely achieved during the first 8 hours of oral progesterone supplementation).

Estradiol is higher than observed range with biestrogen therapy, suggesting high dosage for this individual, short time interval from last use, or slow clearance. Estradiol does not bind the serum estradiol/testosterone binding protein SHBG, rendering it more bioavailable to estrogen target cells than estradiol. At very high bioavailable levels, estradiol serves as an estrogen agonist, where it binds to and activates cellular estrogen receptors in a manner identical to the more potent estrogen estradiol. The bioactivity of estradiol is approximately 1/10th that of estradiol. At approximately 10x the bioavailable (i.e. salivary) estradiol concentration, estradiol serves as an estradiol antagonist (mild anti-estrogen) where it mutes estradiol's growth-promoting actions. However, when greater than 10x the bioavailable estradiol concentration, estradiol begins to act as an estrogen agonist and can cause the same estrogen excess symptoms as estradiol. Consider dosage reduction if estradiol levels are excessive and symptoms of estrogen dominance are problematic.

Estrone is high. This may reflect supplementation with estradiol (none indicated), increased conversion from testosterone to estrogens through aromatase enzyme activity, and/or increased conversion from endogenous estradiol in body fat. High estrone, like estradiol, may contribute to symptoms of estrogen dominance (weight gain, breast tenderness, moodswings, fibrocystic breasts).

Testosterone is within normal range but symptoms of androgen deficiency persist. This may be due to poor tissue response to the testosterone, which can be caused by excessive estrogen (down-regulates tissue androgen receptors and increases SHBG, which lowers testosterone bioavailability to tissues), high stress/high cortisol (note: stress is reported as moderate/severe) or low thyroid. Testosterone is an anabolic hormone essential for creating energy, maintaining optimal brain function (memory), regulating the immune system, and building and maintaining the integrity of structural tissues such as skin, muscles, and bone. Chronic low testosterone is often associated with one or more of the following symptoms: low libido, incontinence, vaginal dryness, fatigue, memory lapses, depression, and bone loss.

DHEAS is within the mid observed range following DHEA therapy. 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. Higher than normal age-range DHEAS levels are common in welltrained athletes and individuals supplementing with DHEA or adrenal adaptogens that stimulate adrenal production of DHEA. High DHEAS may be associated with high androgen symptoms (loss of scalp hair, increased facial/body hair, acne) when the DHEA is converted to testosterone and dihydrotestosterone directly in the pilosebaceous gland of the skin.

Cortisol is high in the morning, normal in the afternoon and then drops to lower levels the remainder of the day, indicating adrenal exhaustion. This is likely caused by adrenal stressors, a cortisol precursor deficiency (pregnenolone and progesterone), and/or nutritional deficiencies (low vitamins C and B5, low protein diet). The most common adrenal stressors include psychological stress, sleep deprivation, physical insults (surgery, injury, diseases), chemical exposure (environmental pollutants, excessive medications), and pathogenic infections (bacterial, viral, fungal). In a healthy individual the adrenal glands initially respond to stressors by increasing cortisol output. However, if the stressor persists the adrenal glands either continue to meet the demands of the stressor with high cortisol output, or become exhausted, wherein cortisol levels fall below normal, as seen in these test results. Depletion of cortisol by a chronic stressor often leads to symptoms such as fatigue, allergies (immune dysfunction), chemical sensitivity, cold body temp, and sugar craving. Adrenal support is worthwhile considering, which includes adequate sleep, gentle exercise, naps, meditation, proper diet (adequate protein), natural progesterone, adrenal extracts, herbs, and nutritional supplements (vitamins C and B5). For additional information about strategies for adrenal support 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.

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