HAIR ELEMENTS

DOCTOR'S DATA INC.

PATIENT: Number 235
SEX: Female
AGE: 49
LOCATION: Saginaw, Texas, USA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT µg/g	REFERENCE RANGE
Aluminum	**2.9**	< 7.0
Antimony	**0.013**	< 0.050
Arsenic	**0.024**	< 0.060
Barium	**0.94**	< 2.0
Beryllium	**< 0.01**	< 0.020
Bismuth	**0.016**	< 2.0
Cadmium	**0.042**	< 0.050
Lead	**0.14**	< 0.60
Mercury	**0.10**	< 0.80
Platinum	**< 0.003**	< 0.005
Thallium	**< 0.001**	< 0.002
Thorium	**< 0.001**	< 0.002
Uranium	**0.077**	< 0.060
Nickel	**0.11**	< 0.30
Silver	**0.02**	< 0.15
Tin	**0.03**	< 0.30
Titanium	**0.39**	< 0.70
Total Toxic Representation		

PERCENTILE: 68th, 95th

ESSENTIAL AND OTHER ELEMENTS

ELEMENTS	RESULT µg/g	REFERENCE RANGE
Calcium	**807**	300- 1200
Magnesium	**50**	35- 120
Sodium	**16**	20- 250
Potassium	**9**	8- 75
Copper	**16**	11- 37
Zinc	**210**	140- 220
Manganese	**0.13**	0.08- 0.60
Chromium	**0.30**	0.40- 0.65
Vanadium	**0.024**	0.018- 0.065
Molybdenum	**0.025**	0.020- 0.050
Boron	**0.15**	0.25- 1.5
Iodine	**0.32**	0.25- 1.8
Lithium	**< 0.004**	0.007- 0.020
Phosphorus	**201**	150- 220
Selenium	**0.82**	0.55- 1.1
Strontium	**3.0**	0.50- 7.6
Sulfur	**54100**	44000- 50000
Cobalt	**0.012**	0.005- 0.040
Iron	**9.2**	7.0- 16
Germanium	**0.032**	0.030- 0.040
Rubidium	**0.009**	0.007- 0.096
Zirconium	**0.046**	0.020- 0.42

PERCENTILE: 2.5th, 16th, 50th, 84th, 97.5th

SPECIMEN DATA

COMMENTS:

Date Collected: **12/20/2008**
Date Received: **12/23/2008**
Date Completed: **12/26/2008**
Client Reference:
Methodology: **ICP-MS**

Sample Size: **0.201 g**
Sample Type: **Head**
Hair Color: **Blond**
Treatment:
Shampoo: **Earthscience**

V010.08

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	**16.1**	4- 30
Ca/P	**4.01**	1- 12
Na/K	**1.78**	0.5- 10
Zn/Cu	**13.1**	4- 20
Zn/Cd	**> 999**	> 800

Health history for Hair test 235

1) What are your current symptoms and health history?
MCS for 17 years - developed a few months after last child was born. MCS worsened after mold exposure 12 years ago. Perfumed products affect my breathing (not asthmatic) and causes flu like symptoms with achiness and fatigue which can last up to four or five days. The last 1 1/2 years I seem to have chronic fatigue and fibromyalgia pain almost continually with a few good days occasionally.

2) Dental history (wisdom teeth removed? First root canal placed? Braces? First amalgam etc...)
I had eight amalgams put in all at once before I started first grade - these were all put into baby teeth which eventually fell out. Before I was twenty I had eight more fillings placed into permanent teeth. All four wisdom teeth removed at age 23. One of these teeth broke and has made its way through the gum along with a fifth wisdom tooth. I plan to have these removed as soon as possible since I have had trouble with them the last few years.

3) What dental work do you currently have in place? What part of the dental cleanup have you completed?
I had all eight amalgams removed in September 2008 and replaced with composite. Two were removed one week and then the other six done the following week. I think the dentist somewhat followed the Huggins Protocol. He used gauze instead of a rubber dam saying that they found that when they removed the dam that they would find mercury pieces so that is why they didn't use it any more. I also did not have a separate air supply. Other than these two things, which I now know may have made a difference for my recovery, I was very pleased with the dentist I used. He has not used amalgam in his practice since the 80's and he also gave me a protocol of supplements to take - starting before the removals that was continued until 30 days after removal.

4) What dentistry did your mother have at any time before or during pregnancy?
Two wisdom teeth pulled while pregnant - no amalgams.

5) What vaccinations have you had and when (including flu and especially travel shots)?
A series of three DPT shots at two, four, and six months, small pox at eight months. At ten months I was exposed to the measles and was given a gamma globulin shot but got the measles anyway.

6) Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken.
These are the supplements that the dentist gave me to take starting one week prior to the first removal and I continued for 30 days after the last filling was replaced. These were taken during the 4 1/2 to 3 months before my hair test. (six weeks total)
Vit. A (Nutritionals) 10,000 IU from Pollack liver oil,
Vit. C (by Matrix Inc.) 1gram 3x a day,
Transmix (by Matrix Inc,) 3x a day - one includes: 50mg Magnesium, 5mg Manganese, 8mg. zinc, 1mg Chromium, and 50mg. Potassium.
X-IT (by Matrix Inc.) 3x a day - one includes: 40mg Vit. C, 50 IU Vit.E acetate, 15mg Thiamine, 800mcg Folate, 150mcg Iodine,10mg Zinc, 25mcg Selenium, 5mg Manganese, 22mg Sulfur
Formula IV (Nutritionals) two a day - two includes: 4000 IU Vit. A, 90mg Vit. C, 400 IU Vit. D, 10 IU Vit. E, 10mg Thiamine, 10mg Riboflavin, 50mg Niacin, 10mg Vit. B6, 400mcg Folic Acid, 10mcg Vit. B12, 10mg Pantothenic Acid, 25mg Iron, 100mcg Iodine, 35mg Magnesium, 2mg Copper, 10mg Manganese, 10mg Potassium, 176mg Linoleic Acid, 65mg Inositol, 35mg Lecithin, 30mg para-Aminobenzoic Acid, 10mg Betaine Hydrochloride, 1mg mixed non-alpha tocopherols, 450mg TRE-EN-EN grain concentrate blend (Rice Bran Oil, Soya Bean Oil, Wheat Germ Oil), 45mg Phyto Enzyme Blend (Lipase, Protease, Diatease,Amylase)
Eater's Digest (by Matrix Inc.) 2-3x day - one includes: 130mg Betaine HCl, 130mg L-Glutamic Acid, 65mg Amylase, 65mg Pepsin NF, 32mg Ox Bile Extract, 32mg Pencreatin 4X, 32mg Pepain NF

7) Other information you feel may be relevant?
I did a homeopathic metal detox about four or five years ago and was never able to get up to the recommended dose which was 10 drops 3x a day. I started with one drop 3x a day. The next day two drops 3x a day. The third day I got a bad headache the second time I took the drops. I went ahead and took it the third time and it put me in bed with a migraine. Talked with the doctor the next day letting him know of the migraine and that I felt that metal was being removed from my teeth. My gums, teeth, and jaw all hurt very badly. He told me to stop taking the drops until I had no more symptoms and then resume starting with one drop 3x a day. I was to stop at whatever dose began to show symptoms and continue with this dose for a total of ten days.

8) What is your location - city & country (so that we can learn where certain toxins are more prevalent). Saginaw, Texas USA for the past 14 years.

Comments
PATIENT AGE: 050 / -06 / -06

UPIN: 1336212729
PHY NAME: DAVIS, A

Tests Requested Creatinine Clearance

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
Creatinine, Serum	**1.04**	**HIGH**	mg/dL	0.57-1.00	01
Glom Filt Rate, Est	**56**	**LOW**	mL/min/1.73	>59	01
If African-American	>59		mL/min/1.73	>59	01
Note: Persistent reduction for 3 months or more in an eGFR <60 mL/min/1.73 m2 defines CKD. Patients with eGFR values >/=60 mL/min/1.73 m2 may also have CKD if evidence of persistent proteinuria is present. Additional information may be found at www.kdoqi.org.					
Creatinine, Urine	88.4		mg/dL	15.0-278.0	01
Creatinine, Ur 24hr	1414.4		mg/24 hr	800.0-1800.0	01
Creatinine Clearance	94		mL/min	88-128	01
The above range is based on 1.73 square meter average body surface area.					

Lab: 01 LabCorp Dallas
7777 Forest Lane Suite 350C , Dallas, TX 752300000
Director: Celeste Vardaman, MD

For inquires, the physician may contact: Branch 800-222-7566 Lab: 205-581-3500

LAST PAGE OF REPORT

Detoxification Profile (Standard)

Genova Diagnostics®
Innovative Testing for Optimal Health

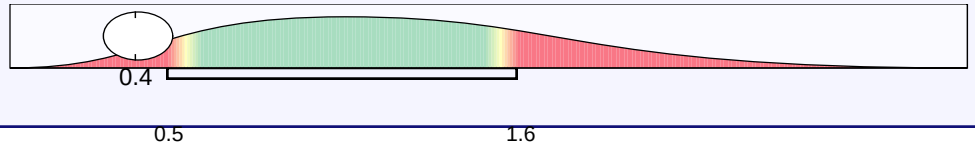
63 Zillicoa Street
Asheville, NC 28801

Patient:
Age: 49
Sex: F
MRN: 0001295650

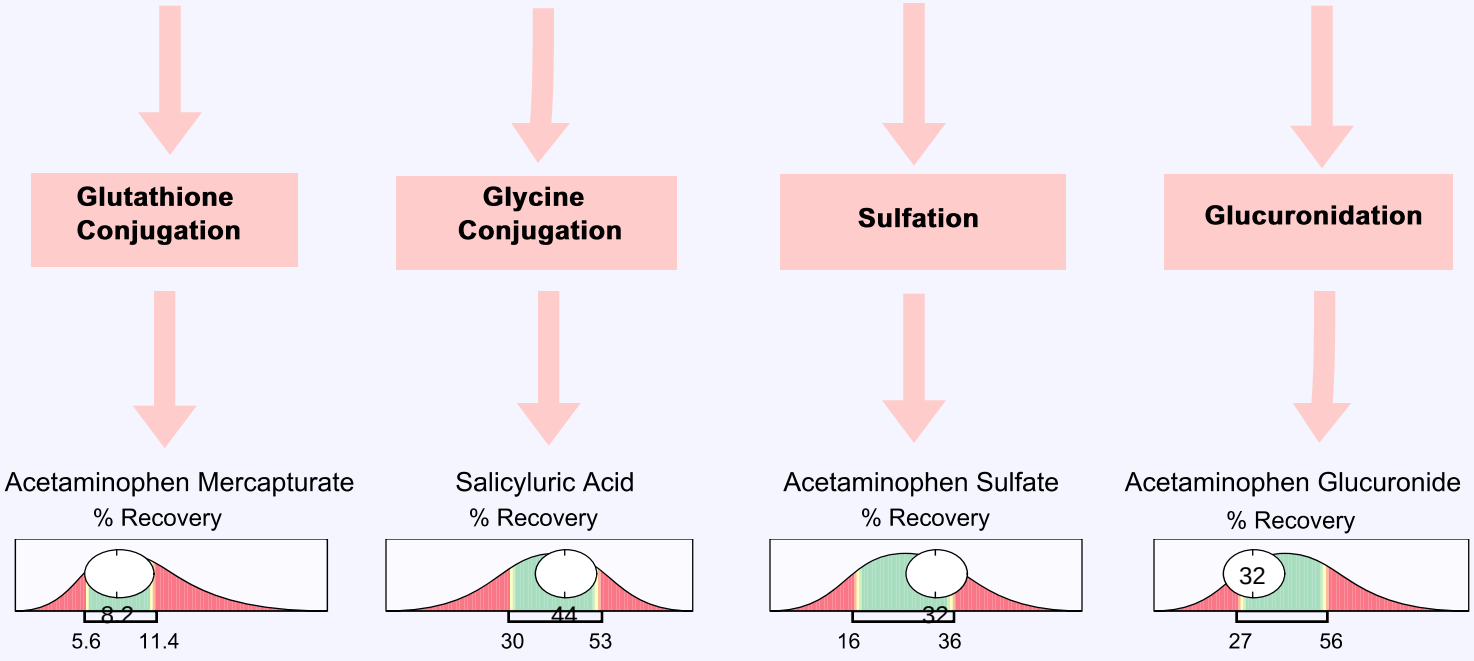
Order Number: B0240792
Completed: February 27, 2009
Received: February 24, 2009
Collected: February 23, 2009

Direct Laboratory Services
Referring Laboratory
4040 Florida St
Ste 202
Mandeville, LA 70448

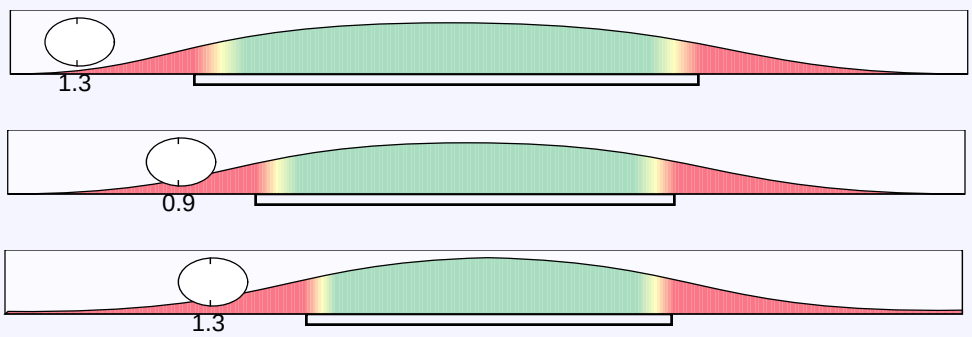
Phase I



Phase II



Ratios



This test was developed and its performance characteristics determined by GSDL, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration.

Urine Total Volume

mL per 10 hours: 1,175

Commentary

Commentary is provided to the practitioner for educational purposes, and should not be interpreted as diagnostic or treatment recommendations. Diagnosis and treatment decisions are the responsibility of the practitioner.

For the patient:

Our bodies must be able to detoxify, or neutralize, toxins from the external environment as well as those produced within our own bodies. This process takes place mostly in the liver, and consists of two phases. In Phase I toxins are activated, which means that they are altered in such a way that carrier molecules (Phase II) are able to transport them out of the body. A handy analogy is the bagging of our trash (Phase I), so that the garbage man can pick it up and cart it away (Phase II). Phase I is accomplished by a family of enzymes called "cytochrome P450", and Phase II takes place via a number of important mechanisms, four of which we measure in this test, with the help of the challenge substances, caffeine, acetaminophen and aspirin. Both Phase I and Phase II of detoxification must function adequately so that toxins are able to be neutralized, and the two phases must be in balance with each other so that the activated compounds from Phase I cannot accumulate in the body and cause damage.

For the clinician:

A reduced (slow) caffeine clearance is indicative of depressed Phase I (cytochrome P450) activity. This can result in difficulty in processing and removing toxins from the body. Reduced clearance may be a consequence of gut dysbiosis, nutritional insufficiency, certain inhibitory substances, or a very low xenobiotic exposure.

None of the Phase II pathways appear to be underfunctioning. Any value above the reference range reflects upregulated activity through that pathway, likely due to genetic influence or substrate exposure. Continued provision of Phase II nutrients is recommended.

The Phase I/Phase II ratios for sulfation, glycination and glucuronidation are all below the reference range. This is not considered to be clinically significant.

Hormone Evaluation

Version: 3.5.0.520

ZRT Laboratory
8605 SW Creekside Place
Beaverton, OR 97008
Phone: 503-466-2445 Fax: 503-466-1636
info@zrtlab.com http://www.salivatest.com

009 02 06 240 SB Samples Arrived: 02/06/2009 Samples Collected: A 02/01/09 07:30 AM Date Closed: 02/12/2009 B 02/01/09 12:40 PM C 02/01/09 05:45 PM D 02/01/09 10:30 PM E 02/01/09 08:00 AM

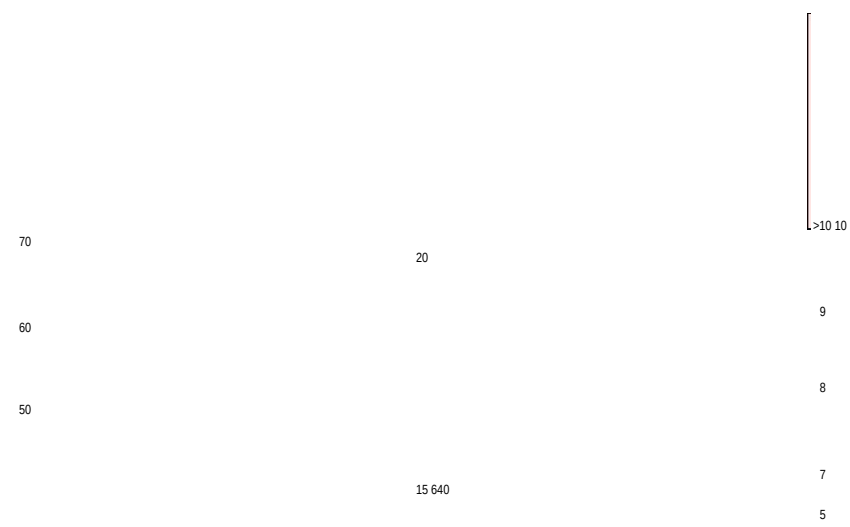
Gender: Female Client Phone: Menopausal Status: Pre-Menopausal Age: 49 DOB: 8/30/1959

Hormone Test	In Range	Out Of Range	Units	Range
Estradiol (saliva)	1.8		pg/ml	1.3-3.3 Premenopausal (Luteal)
Progesterone (saliva)		70L	pg/ml	75-270 Premenopausal (Luteal)
Ratio: Pg/E2 (saliva)		39L		Optimal: 100-500 when E2 1.3-3.3 pg/ml
Testosterone (saliva)		13L	pg/ml	16-55 (Age Dependent)
DHEAS (saliva)	6.9		ng/ml	2-23 (Age Dependent)
Cortisol Morning (saliva)	5.2		ng/ml	3.7-9.5
Cortisol Noon (saliva)		3.7H	ng/ml	1.2-3.0
Cortisol Evening (saliva)		2.1H	ng/ml	0.6-1.9
Cortisol Night (saliva)	0.7		ng/ml	0.4-1.0
Free T4 (blood spot)	1.5		ng/dL	0.7-2.5
Free T3 (blood spot)	2.5		pg/ml	2.5-6.5
TSH (blood spot)		5.1H	uU/ml	0.5-3.0
TPO (blood spot)*	22		IU/ml	0-150 (70-150 borderline)

*for research purposes ONLY

Current Hormone Therapies

oral Vitamin D (unknown type) (OTC) (daily Last used);



30

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0

10 4

0 0

3 520

2

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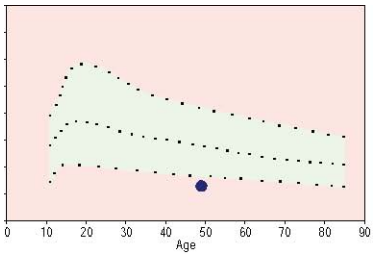
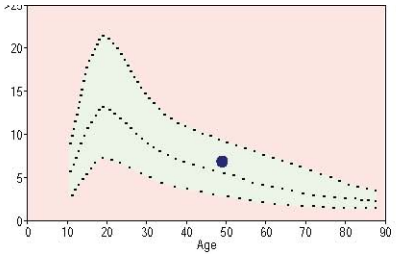
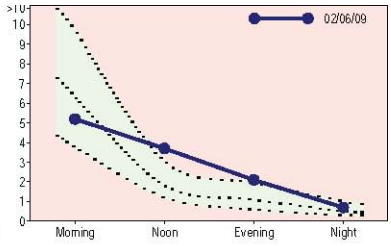




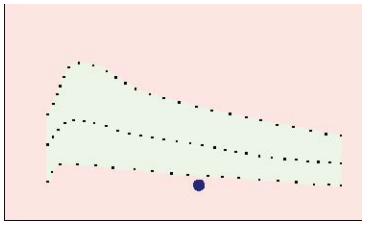


Laboratory Director

David T. Zava, Ph.D. Date: 02/12/2009 CLIA Lic # 38D0960950

David T. Zava, Ph.D.
Laboratory Director

Date: **02/12/2009**
CLIA Lic # 38D0960950



The above results and comments are for informational purposes only

Composed by 1099319367 at 02/25/09 05:08:46 PM and

are not to be construed as medical advice. Please consult your LabAsst www.SalivaTest.com

healthcare practitioner for diagnosis and treatment.

ZRT Laboratory Saliva Observed Reference Ranges

Disclaimer: Supplement type and dosage are for provider information and are ***not*** recommendations for treatment. Reference ranges are observed ranges based on collected laboratory data. For more information, see www.zrtlab.com or contact info@zrtlab.com.

			Observed Reference Ranges (1/07)	Old Ranges
WOMEN				
Estradiol	**Premenopausal**		1.3-3.3	1-5
	Postmenopausal		0.5-1.7	1-1.5
	Supplement (12-24 Hrs.)	Estradiol Patch (0.05 mg)	0.8-2	
		Hormonal Contraceptives	0.5-2.2	
		Oral Estradiol (.5-1.0 mg)	1.2-3.9	1.5-10
		Oral Premarin*(0.625 mg)	0.9-3.7	
		Topical Bi-est 4:1, (0.6-1.25 mg)	2.4-11.6	1.5-10
		Topical Estradiol (0.5-1.0 mg)	2.9-35.5	
Progesterone	**Premenopausal**	Luteal	75-270	100-600
		Follicular	12-100	
	Postmenopausal			25-100
	Supplement (12-24 Hrs.)	Hormonal Contraceptives	10-53	
		Oral Progesterone (100 mg)	30-300	100-1000
		Topical Progesterone (20 mg)	200-3000	500-3000
Testosterone		All Ages	16-55	20-50
		Ages 16-30	18-55	
		Ages > 30	16-47	
	Supplement (12-24 Hrs.)	Hormonal Contraceptives	13-45	
		Topical Testosterone (0.3-0.5 mg)	22-86	n/a
DHEA-S		All Ages	2-19	3-10
		Ages 16-30	6.4-18.6	
		Ages 31-45	3.9-11.4	
		Ages 46-60	2.7-8	
		Ages 61-75	2-6	
	Supplement (12-24 Hrs.)	Oral DHEA (5-10 mg)	2.8-8.6	
		Topical DHEA (5 mg)	3-8	
Estrone			1.6-5	2-10
Estriol	**Premenopausal**		<7	3-7
	Postmenopausal			
	Supplement (12-24 Hrs.)	Oral Estriol	5-20	5-20
		Topical Estriol	5-100	5-100
MEN				
Estradiol			0.8-2.2	0.5-1.5
Progesterone			15-100	25-100
		Topical Progesterone (5-10 mg)	42-650	
Testosterone		All Ages	44-148	50-200
		Ages 16-30	72-148	
		Ages 31-50	58-120	
		Ages 51-70	44-94	
		Ages > 70	30-77	
	Supplement (12-24 Hrs.)	Androgel® (25-50 mg)	1300-3700	
		Topical Testosterone (5-10 mg)	115-800	200-500
DHEA-S		All Ages	2-23	3-10
		Ages 16-30	7-23	
		Ages 31-45	6-18	
		Ages 46-60	4-11.5	
		Ages 61-75	2.4-7.5	
	Supplement (12-24 Hrs.)	Oral DHEA (25 mg)	6-17	
		Topical DHEA (10 mg)	4-15	
Estrone			0-3	0-3
Estriol			0-3	0-3
WOMEN AND MEN				
Cortisol	**C1**	Morning	3.7-9.5	3-8
	C2	Noon	1.2-3	2-4
	C3	Evening	0.6-1.9	1-2
	C4	Night	0.4-1	0.5-1.5

*Other names and brands may be claimed as the property of others.

8605 SW Creekside Place, Beaverton, Oregon 97008 Phone: 503-466-2445 Fax: 503-466-1636

Created: 2/7/07

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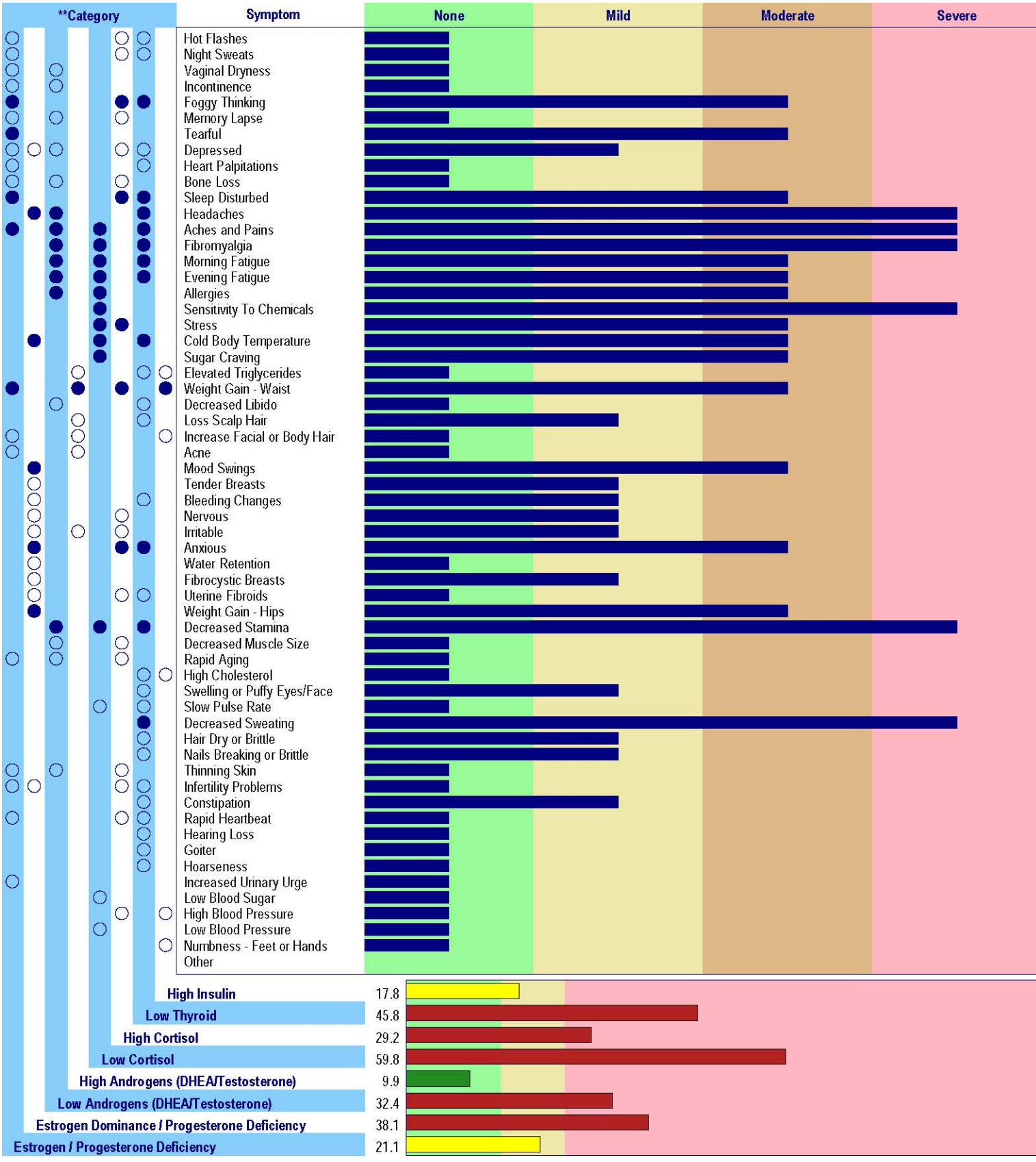
2009 02 06 240 SB



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2009 02
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SB

Estradiol is within observed range of 1.3-3.3 pg/ml for a premenopausal woman during the luteal phase of the menstrual cycle. Progesterone is lower than expected range and low ratio of progesterone/estradiol is consistent with symptoms of estrogen dominance. A relative excess of estrogen, unopposed by adequate progesterone, often leads to a functional thyroid deficiency and one or more of the following symptoms: cold hands and feet, low basal body temperature, low libido (despite normal/high testosterone), fatigue-particularly in the evening, low stamina, depression, foggy thinking, anxiety, fibromyalgia, brittle nails and hair, hair loss, puffy eyes, decreased sweating, and constipation. Some of these symptoms are listed on the requisition form. It may be worthwhile to consider creating a better progesterone/estradiol balance by increasing the level of progesterone with natural progesterone supplementation and/or lowering the level of estrogens (only if estradiol is above optimal range) with exercise, diet, herbs, and/or nutritional supplements such as cruciferous vegetable extracts.

Testosterone is lower than expected range, consistent with symptoms of low androgens. 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. 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. Low salivary and serum testosterone has been correlated with low bone mass in both perimenopausal and postmenopausal women (Oronzo et al. Eur J Epidemiology 16: 907-912, 2000; Slemenda et al. J Clin Invest 97: 14-21, 1996). Because testosterone is low, it would be worthwhile to evaluate bone density periodically (yearly) and if bone loss is indicated to consider hormone supplementation, including androgens, to prevent long term health issues, particularly osteoporosis and increased fracture risk. Low dose transdermal testosterone therapy has been shown to significantly improve sexual function and psychological well-being in women with low testosterone levels (N Engl J Med 2000: 343: 682-8).

DHEAS is within normal range but symptoms of androgen deficiency persist. Testosterone is low-normal suggesting that conversion of DHEAS to testosterone is poor. Symptoms attributed to androgen deficiency may also be caused by other hormonal imbalances such as adrenal fatigue (low or high cortisol) or low thyroid. 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. Mid life DHEAS levels in both males and females are usually in the range of 5-8 ng/ml.

Salivary cortisol is normal in the morning, rises to a high level at noon and in the evening and then drops back to normal level at night before bed. This abnormal circadian rhythm usually is caused by stressors, dysglycemia (low blood sugar), or the use of glucocorticoids (most likely hydrocortisone-cortisol). The most common stressors include: psychological stress (emotional-note stress is reported as moderate/severe), physical insults (pain, injury), chemical exposure (environmental pollutants, excessive medications), and infections (bacterial, viral, fungal). Adequate sleep, gentle exercise, naps, meditation, proper diet (adequate protein), natural progesterone, adrenal extracts, herbs, and nutritional supplements (particularly vitamins C and B5) are some of the natural ways to help support adrenal function (consult with a health care provider for proper types and 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.

Free T4 is within normal range.

Free T3, the most potent bioactive thyroid hormone, is low-normal and TSH is high, indicating a clinically hypothyroid state. Normal T4 and low T3 usually results from poor hepatic conversion of T4 to T3, which suggests one or more of the following: nutrient deficiency (e.g., zinc and/or selenium), heavy metal toxicity (mercury, lead, cadmium), liver damage (caused by viruses, alcohol, etc.), or steroid hormone imbalances (e.g., high cortisol). Testing for steroid hormones (estradiol, progesterone, testosterone, DHEAS, cortisol am/pm) also is worthwhile considering. Stress and associated high cortisol, can cause mineral deficiencies (zinc and selenium) important for liver conversion of T4 to T3. If conventional T4 therapy does not resolve symptoms of thyroid deficiency, consider combination T4/T3 replacement therapy or slow release T3 therapy alone. Because thyroid replacement increases the degradation rate of cortisol in the liver it is important that cortisol levels are within normal range before thyroid therapy is considered. Otherwise, thyroid therapy may further exacerbate low cortisol symptoms (hypoglycemia, sugar craving, and fatigue-

tired but wired feeling) and, in turn, compromise the actions of thyroid, which require normal physiological levels of cortisol.

Thyroid peroxidase antibodies (TPO) are low indicating that Hashimoto's thyroiditis is unlikely.

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